

MUSK MANIA

Patrick Davidson & Hans van der Loo

The reasonable man adapts himself to the world.

The unreasonable one persists in trying to adapt the world to himself.

Therefor progress depends on the unreasonable man.

George Bernard Shaw

For Sebas, Joran and Casper

Do what makes you happy. This will provide you with energy.

Do it often. You'll become good at it eventually.

And then you can make the impossible come true.

Not because you have to, but because you want to.

Hans and Patrick

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“Elon Musk changes the rules of the game. He aims for Mars and gives direction to innovation.” – Patrick van der Pijl, CEO of Business Model Inc., producer of the global bestseller *Business Model Generation* and co-author of *Design Better Business*

“A fascinating insight into one of the greatest inventors of our age.” – Steven Van Belleghem, author of the bestsellers *When Digital Becomes Human* and *Customers the day after tomorrow*

“What drives an inventor to realize the impossible? Read it in *Musk Mania*.” – Menno Lanting, author of the bestsellers *Oil Tankers and Speedboats*, *Everybody is a CEO* and *The Disruption Paradox*

“*Musk Mania* gives you inspiration to change both your department and the whole world!” – Arko van Brakel, entrepreneur and inspirational author

“Innovating without compromise is the only way forward and *Musk Mania* shows us how Elon Musk does it.” – Ferdinand Grapperhaus jr, CEO of PHYSEE

“Genius! A true recommendation for anyone who isn’t afraid to believe in himself!” – Thomas Blekman, professor of clinical education at the Erasmus University Rotterdam

“Miracles don’t happen overnight. This book shows the principles with which Elon Musk achieves the impossible.” – Jelle Drijver, host of the podcast Frankwatching

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Foreword

Deeply impressed. That's how I felt when leaving the Tesla factory in Fremont, situated on the other side of the bay of Silicon Valley, after visiting them for an article for *NRC Handelsblad*. A glittering white factory where people worked, supported by bright-red state-of-the-art robots, on producing Tesla's electric luxury sedan, the Model S. At the rear of the factory was a conveyor belt, where owners could take delivery of their personalized car, cheering loudly while doing so.

I visited the factory in early 2013. Only several thousand Teslas had been sold by this point and it was still completely unclear whether or not consumers dared the transition to electric cars. And yet, it quickly became clear to me that something extraordinary was going on here. Here were thousands of employees working on and believing wholeheartedly in the mission of founder Elon Musk: the car of the future is sustainable, luxurious, sexy and exquisite in every single way. All details were pointed out to me at an unrelenting pace and with unbridled enthusiasm: the enormous touchscreen! The trunk at the front, where normally you find the engine! And of course the incredibly powerful battery that allows the car to go from stationary to 100 kilometers an hour in 5.6 seconds!

Such infectious excitement about a product I had only seen previously with regards to Apple products. Elon Musk has therefore been designated the successor to Steve Jobs by Silicon Valley. Where Jobs reigned over Apple, Musk heads no less than two companies: Tesla and aerospace company SpaceX. Aside from ushering in a revolution in the area of sustainable energy, Musk also wants to colonize Mars, should the Earth ever become uninhabitable.

Realizing big dreams, that's the central theme of Elon Musk's life. At first glance, Musk's ambitions seem the dreams of little boys: fast cars and rockets. But those boyish dreams are driven by a much more expansive vision. You'll read it later on in this book.

We often snicker at such far-reaching vistas in the Netherlands. Nonetheless, it's worth your while to delve into Musk's philosophy. He not only has the biggest ambitions, but he's also quite adept at realizing a fair number of them. Just look at Tesla: shortly after my visit, the American Consumer Organization declared the Model S the best car ever made.

Elon Musk is a Wavemaker, or so write Hans van der Loo and Patrick Davidson. With a clear-cut vision, daring, willpower and the ability to move the people around him, he's changing the world. How it works exactly is something you'll read in this book. Because even if you can't run two businesses at the same time nor prefer dying on Mars, Elon Musk is someone who can inspire you to pursue your dreams. Using Musk's lessons, Hans and Patrick will show you: everyone can make the difference in the things we do.

Eva de Valk,

Tech journalist and author of *Silicon Valley*

Introduction

'Hey guys, I think we can build this rocket ourselves.'

Elon Musk

Elon Musk, the ultimate Wavemaker

The 1st of April, 2016: thousands of people are waiting in line all across the world to buy a car that only exists on paper. For a thousand dollars, they can consider themselves the virtual owner of an electric car which will be delivered in one to two years: the Tesla Model 3.

A few days later, Tesla starts operating the Gigafactory. This gigantic battery factory produces innovative batteries that are three times stronger and better than any available thus far. When the factory is in full swing, that differential should increase even further. And making Tesla the largest producer of batteries in the world. The latter is mostly a pleasant side effect. The factory is mainly a profit machine. The dream of a sustainable world is foremost. Tesla even makes the blueprints of the factory public, so that others can also work on the dream of sustainability.

A few days later, for the first time in history, the American company SpaceX succeeds in landing a rocket on a so-called drone ship floating in the sea. An expert said the achievement was comparable to 'shooting a pencil across the Empire State Building during a storm, and to then have it land on a shoebox'. The video images appear to show a 'normal' rocket launch, just in reverse. In the middle of the sea, a towering, slim rocket is flawlessly parked on the deck of a ship. Ready for the next return trip. Because that's what it's all about: reusing a rocket should become just as easy as starting your car.

The ultimate Wavemaker: dreamer, thinker and doer

Three amazing achievements in one week. With the same man as the driving force: the South African-born Canadian-American Elon Musk. Inventor, entrepreneur, investor and world-improver. The man who blazes into hermetically-sealed worlds and then proceeds to knock everyone off their feet with his achievements. Only few succeed as a newcomer in the automobile industry in gaining a foothold. With his Teslas, Musk unleashed a whirlwind revolution in the field of electric driving. His aerospace company SpaceX, with its recyclable and affordable rockets, competes successfully with the substantially closed-off bastions of NASA, Boeing, Lockheed Martin and the Russians.

During our intensive quest for Wavemakers (do read on to find out what we mean by that), Musk popped up again and again. To us, he is both the embodiment of and something larger than a Wavemaker. Musk is much more than just an inventor, entrepreneur and investor. He doesn't just thrive on the waves of change, he succeeds in creating waves himself. How incredible his ideas may sound, he sees opportunities to realize them. How? By following his heart and doing what he truly wants to do. To be fair, there are more people who do that. But Musk also possesses phenomenal mental and imaginative powers, which make him see what others pass by. Add to that the guts to admit his breathtaking ambitions, the ability to make his dreams work for him, the strength to work for ten or maybe even a hundred and the talent of drawing the greatest talents to him. Because Musk leaves the execution of those plans to people who believe in them just as strongly as he does. He demonstrates how you can change the world by yourself. By instigating a wave of renewal and taking others with you.

You either love him or hate him

Some find Musk's plans a little over the top. Others even call him megalomaniacal and reprehensible. As is often the case with outspoken personalities: you either love him or hate him. That first group is growing fastest. Everywhere he comes, people flock: officials considering him to be a new source of employment, managers who bask in his prophecies of the future and the general public, who can't get enough of his sayings and inspirational stories. Musk fires revolutionary idea after revolutionary idea at us – new methods for

generating energy, a hypersonic means of transportation, and a new way to dig tunnels. And more: he delivers as well.

Getting into the mind of Elon Musk

In this book, we'll expose the five guiding principles of the success of Wavemakers in general and those of Elon Musk in particular. Let's not pretend Elon Musk is an unwritten page, however. An extensive biography appeared in 2015. Thousands of blogs and videos circulate on the internet. He's been the subject of hundreds of articles. And yet, we still meet people who've never heard of him or can only name a few superficial facts: 'Oh, that's the guy with those electric cars' or 'Isn't that the weirdo who wants to go to Mars?'

Aside from quick and easy access to the wondrous world of Musk, you'll get the chance to get into his mind. Learn from him. Think big. Dare. Persevere. Be a Wavemaker. In your own way. There are few people who can or dare do what Musk does. And that's just fine. But in a time where the waves of renewal are churning and slamming into each other, it's imperative you light the flame of renewal within yourself.

When asked, only twenty per cent of the Dutch employees say they consider themselves an instigator of change. That must mean eighty per cent does not. We hope that reading this book will give you that spark. Let Musk be an example in allowing the Wavemaker principles to set your imagination on fire. And then take the step from dreaming and thinking to doing: use the principles to increase your own freedom of movement and achieve that which you deem unthinkable.

The five principles of making waves

1. Offer hope in fearful times
2. Be aware of all things
3. Aim for Mars
4. Play to win
5. Move people

To make a truly world-changing wave, a personal touch is a key ingredient. For Elon Musk, it's his exceptional personality profile and the unique combination of dreamer (vision), thinker (scientific reasoning) and doer (entrepreneur). No less important is the fact that he's driven by a kind of primal force. This is what we mean with 'mania'.

Meet Elon Musk and learn how he applies the five principles of the Wavemaker in his own inimitable way.

1 The turbulent world of the Wavemaker

'I think it is possible for ordinary people to choose to be extraordinary.'

Elon Musk

A half-naked boy dances on a hilltop. As he demonstrates the wickedest moves, a second dancer joins in. And another. Eventually the group of trendsetters is joined by an ever-increasing crowd of enthusiasts and before you know it, the hill has been transformed into a mass of dancing people. One lonely dancer who manages to get an entire crowd going... it seems like magic. And yet it isn't. It's the power of the Wavemaker.

Traditional leaders set out a stable course in an atmosphere of security and trust. But in these times of transience, insecurity and complexity, there is ever more a need for momentum as opposed to stability. For leaders who are quick to rise to action and are continually on the move. For people who thrive on waves, but also cause them. These are Wavemakers. Wavemakers are game changers, hope bringers, a driving force and disseminators. They break up existing structures and certainties and create new possibilities. They always look ahead, offer perspective and hope in fearful times. Not by looking at what's going wrong, but by seeing what's possible. They don't just inspire, but are also a driving force, people who aren't afraid to put themselves out there and work passionately on realizing their often sky-high ambitions. They do today what is needed tomorrow. This makes Wavemakers the driving force behind a plethora of new initiatives, new ideas and behaviors that spread across the globe en masse and as quick as can be. They have great influence on how others think and act. Including you. They thrive in a turbulent world. And they also keep that turbulence going. Because they know: when the waves are in, they are in.

'Wavemakers do today what is needed tomorrow.'

Tidal waves

If you know how it works, you can recognize the set roles, principles and patterns governing the creation and growth of movements. This applies equally to heady waves at sea and to ideas, behaviors, feelings, opinions and products. Or viruses. Just as one person becoming ill can start a flu epidemic, one person thinking differently can dislodge all encrusted axioms. Or one new invention that shakes the world at its very core. The pattern is always the same: it starts off small and grows and grows until it reaches massive size. And this is how one person is capable of setting off gigantic tidal waves. This is what Wavemakers do.

Wavemakers come in all shapes and sizes. Wavemakers are usually individuals, sometimes form a small group and very occasionally a full-sized organization or agency. Oftentimes, they are people with a small-scale, temporary impact. A very literal example can be seen in a stadium, where a lone person suddenly gets up off his seat and brings both arms up and down. Before you know it, a whole stadium is participating in his 'wave'. Another example: someone starts applauding loudly at a concert or a speech, and moments later the whole room breaks out in applause. The impact of these types of waves is limited. Both with regard to time (it'll calm down a few moments later), to scale (no one gets affected outside those present) and to effect (normality soon reasserts itself).

There are also Wavemakers who make true tidal waves. Tidal waves can sweep away in a matter of moments all that has been previously and painstakingly constructed. Roads and buildings, but traditions and winning formulas as well. At the same time, they create space for renewal. Elon Musk is a Wavemaker who know how to cause tidal waves.

Musk Mania: maniacally positive

He even stands at the cradle of a veritable Musk Mania. We mean two things by this. For starters, the maniacal fashion in which Elon Musk leaves his mark on the world. It's not just done with exceptional passion and enthusiasm, but at an astounding pace. The terms maniacal and mad are often used with regards to being mentally ill. We see maniacal and mad in a positive light: to us, these terms refer to passion, intractability and enthusiasm. And even if there are dark aspects to his character, Elon Musk is mostly maniacally positive. A modern and restless redeemer who wants to offer new hope to a torn and rampaging world. A positive remedy against feelings of apathy and fatalism, he wakes people up and gets them moving.

'Musk Mania' doesn't just refer to the maniacal tendencies of the man himself, but also to the phenomenal impact he currently has. Elon Musk is nearly singlehandedly capable of continually controlling the media channels, get dignitaries and investors to lose their senses and tempt consumers into irrational behavior. Like that purchase of a not-yet-produced car. Elon Musk is the half-naked dancer who gets the crowd moving. But then on an epic scale. Manic scenes we know, at sporting matches and with pop stars. The incredible images of the Beatles in the sixties were already termed Beatlemania. Nowadays, Bieber has his Beliebers. And racing talent Max Verstappen is also in line to develop a Max Mania. Musk makes this happen, too - and then some. He's capable of capturing masses of people. People who want to be close to him and be a part of his success. But it's mostly people who want to believe in him: Musketeers, and more than just three.

2 The flight of Elon Musk

‘Starting a company is like eating glass and staring into the abyss.’

Elon Musk

Elon 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 and, for now, final act of his life, is the ‘flight upwards’. Literally and figuratively. Musk conquers space, but also works away on solutions in the field of sustainable energy.

The flight from Africa: no match with his environment

Elon Musk was born on the 28th of June 1971, in the South-African city of Pretoria – the eldest in a family of three: his brother Kimbal and his sister Tosca. Mother Maye, once contender for Miss South Africa, is still active as a model, into her sixties. She also runs a dietary practice. Father Eroll owns a successful engineering company. The family does well financially from the get-go, but the interrelationships are stormy. When Elon is roughly 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. Surprising, as his mother said they got along well, but also because his father exhibited quite dominating and manipulative behavior. ‘It would certainly be accurate to say I did not have a good childhood’, Elon later says. ‘It was like misery. He’s good at making life miserable—that’s for sure.’ His brother Kimbal would later add: ‘He definitely has serious

chemical stuff [imbalances]. Which I am sure Elon and I have inherited.' Elon suffers even further from his social surroundings, more so than from the unstable home situation. 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, who prefer pulling pranks or sporting. He's teased and regularly beaten up. It's no wonder he later described his youth as 'non-stop horrible'.

His only solace is reading about inventors, futuristic worlds in galaxies far away and new machines and technologies. After school, he 'lives' in the local bookstore, where he disappears into the world of science fiction, fantasy and comic books. This way, he not only shuts out the big bad outside world, but grows even smarter. The young Elon seems at times lost in a trance. He gets this typical, distant look in his eyes. Anyone who talks to him can't seem to get through. This happens so often, his parents suspect him of being deaf. 'He goes into his brain, and then you just see he is in another world', says his mother. 'He still does that. Now I just leave him be because I know he is designing a new rocket or something.' This quality makes him even less popular at school than he already is: his absence is interpreted there as arrogant and somewhat deranged.

From a young age, Musk was an introvert thinker and dreamer. But was he already a doer? Not at school, if we're to believe his 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. 'It was like, "Whoa, holy shit!". I had to have that and then hounded my father to get the computer.' The computer came with a manual with enough material for six months. It takes Elon three days and nights to master it. His new hobby also gives him his first financial gains. At age twelve, he sells the software of his first videogame to a magazine. It earns him five hundred dollars.

The combination of computer knowledge and the commercial possibilities the surging Internet offers are the key to the second episode of Musk's life: successful entrepreneurship.

The flight forward: study and start-ups

Elon and South Africa do not get along. Even in his early teens, he dreams of leaving for the States, the land of boundless opportunity. As his mother is of Canadian descent, that country becomes a first stop. The urge to escape his early environment regardless of the cost must have been strong, for Musk leaves for Canada practically unprepared. 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 a hundred dollars in his pocket, Elon 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. He would systematically take up all these subjects in the years to follow.

In 1994, Elon and his brother make a road trip which takes them to Silicon Valley. The positive energy that prevails there, the sky-high ambitions that continually enflame people and the freedom to do whatever your mind thinks of: it moves them so much, the brothers decide to return the next summer. After Elon's graduating, it even becomes their home base.

Elon's attempt to get a job at the incredibly popular internet company Netscape fails: he walks in unannounced, waits rather clumsily in the lobby and is too shy to speak to anyone. He leaves matters unfinished.

Time for plan B: Elon and his brother found the internet company Zip2 together, publishing a kind of Yellow Pages online. No very sensational, but important for their first experiences as beginning entrepreneurs. It's a classic tale of burning the midnight oil while under great pressure and with no penny to spare, to force the desired success. Elon especially 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 307 million dollars. 22 million dollars of that amount goes to

Elon Musk's bank account. Only twenty-seven years old and already a member of the select group of dotcom millionaires.

Taking his earned riches and enjoy life to the fullest and relax? Not Musk. He's already set his sights on a new venture: an online bank. Thanks to an internship with a large bank, he purports to know that bankers are usually rich and complacent. Musk wants to wake up the financial world with an internet bank and deal with internet inefficiency. The result: PayPal. The company grows fast, but behind the scenes a huge battle of egos is being fought. Once again, Musk's personality encounters quite the 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 by them. While he remains one of the biggest owners, he has little to say on the direction the company goes in. Musk remarkably lays low. An attitude that is rewarded in 2001 with an amount of 180 million dollars, when eBay takes over the company.

The flight upwards: beyond the stars

By then, Elon Musk 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 start-ups is almost immediately invested in a new aerospace company, in a small producer of electric cars and in a company that makes solar panels. His friends say it's an impulsive gamble. But Musk does not gamble. He's systematically and level-headedly working on realizing his dreams. Those dreams have been relegated to the background in the previous years, what with all the demanding work. Now, with the confidence of a universally-celebrated entrepreneur and with sufficient resources to not be directly dependent on others in order to realize his dreams, Musk focuses on the vision from his teenage years, when he dreamt of spaceships that took people to other planets. Not a luxury to Musk, but a dire necessity. Due to the depletion of natural resources and the dangers of a possible nuclear war, humanity has little other choice than to one day pack its bags and move by rocket to other places in the universe.

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. Others

have more interest in a successful IPO or other ways of making a financial landslide. To Musk, this latter fact is an indication that Silicon Valley is not quite the right place for him. He feels that entrepreneurs there lack grand ideals and far-reaching ambitions, in order to have a lasting impact. They stubbornly cling to the internet. To Musk, it's only a waystation. His destination is space.

To get there, he firstly decides to move to Los Angeles. There he can surround himself with world-class aerospace specialists, to refine his ideas. He joins a local network of aerospace enthusiasts and is immediately noticed by his insistent manner in asking questions. A prominent member: 'He didn't know a lot about space, but he had a scientific mind'. Together, they developed a vision in 2001, Mars Oasis: transport a small greenhouse with seeds to Mars, supply them with water and thus enable 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. The team returns home discouraged and indulges in quite a few alcoholic beverages on the flight back. Except for Elon Musk. He works on his laptop, turns around and shows a spreadsheet. 'Hey guys, I think we can build this rocket ourselves.' For months, he's absorbed all the important knowledge of space experts like a sponge. As per usual, he's devoured dozens of books, only to discover that rockets can be manufactured much more cheaply.

He contacts several fanatical aerospace engineers. An old warehouse in a Los Angeles suburb is transformed into production facility and headquarters. The employees' desks are scattered throughout the factory, so that everyone – including Musk – can be easily approached and contact one another directly.

Shortly after embarking on his space adventure, Musk decides to pump a substantial part of his money into another revolutionary project: the production of cool, electric cars. With his company, Tesla – named after one of Musk's great examples, the famous inventor Nikola Tesla – he sets himself up as a champion for beautiful and fast cars based on sustainable energy. The strategy is to put electric cars on the map in three steps. First, the development of a luxury electric sports car, to prove that electric cars can be cool. Then, a luxury sedan to compete with prominent brands such as BMW and Mercedes. And for a

current encore: the production of a cheap, electric car for the general public. The money that's left was invested in SolarCity in 2006, a company specializing in the production of solar panels, which is run by his two cousins. By the end of 2016, Solar City is incorporated into Tesla Motors, which is rechristened as Tesla, an integrated energy company which not only produces cars but also batteries and products for energy generating.

Now, the creation of a new car concept and getting rockets into space might be less easy than you would think. In 2008, critics and sceptics seem to be in the right faster than they'd have thought. Not just the rocket launches turned out to be complete failures, the luxury sports car, too, is described in the media as the biggest high-tech failure in history. Furthermore, the world economy collapses and the auto industry is hard hit. Musk's funds are rapidly shrinking. His personal life is not fairing any better. His marriage to his college sweetheart Justine fails and ends in a fierce divorce battle, one the media is eager to report on.

Then, the fourth rocket launch succeeds and NASA closes a billion-dollar deal with SpaceX for the supply of its space stations. Later on, SpaceX is the only one that succeeds in sending rockets into space and having them return neatly to Earth. This cuts costs in half and makes it much cheaper to send freight, scientists and even tourists into space in the future.

Even since that fourth successful launch, Elon Musk has had everything going for him. What's more, it seems that, after getting over his low point in 2008, everything he touches turns to gold. But luck is made. Especially if your name is Elon Musk and you keep believing in your dreams. Even at the worst of times, the thought of bailing out and selling his companies doesn't even occur to him. This demonstrates so much resilience, fortune finds you again, seemingly of its own accord. That's when you have the ability to make a shining future.