## Good example of technology research paper

Business, Company



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(Author)

Elon Musk

Elon Musk (full name: Elon Reeve Musk) is South African-born Canadian American businessman, space pioneer, and inventor. He is also the motivation for Tony Stark – Iron Man's superhero. He emigrated to Canada when he was 17 years old and then moved to U. S. He is the CEO, CTO and chief designer of California-based Company, Space Exploration Technologies (popularly known as "SpaceX"); Chairman, CEO and chief product architect of Tesla Motors, and chairperson of SolarCity.

## **Personality Traits**

Elon Musk has the fascination to explore and study new topics of interest. Ever since he was young his parents and brother describe him as very curious. Elon Musk likes technology from the very start of his life. He made his first computer game code when he was just 11 years old. He sold that game for \$500, and from there his entrepreneurial life started (Taulli 9). Musk has presented himself as a kind of a workaholic person. He works hard and has said he can work 80 to 100 hours a week for his companies.

According to his company history, he is working like this for years, more than a decade at the very least. Musk is passionate about his vision of future, and does not worry about other people telling him if something is impossible. He has an admirable quality to look further into the future, to develop future plans, and to set practical timelines for projects that look impossible. With hard work, Musk has the ability to sacrifice certain things.

Self-analysis and critical thinking skills are also important in his life. He has the habit of constantly thinking about how to do things better and in this regard he used to question himself. Elon Musk usually perform different experiments to improve his life, as for example he said that he has tried various experiments to live on less than \$1 per day without getting scurvy. Musk constantly remains in search of the next big thing, and this habit is helped him more than his intelligence and technical abilities. He is a dreamer and doer at the same time. Musk has an ability to see the interconnection and interdependence of things that others cannot see.

Musk has achieved many successes, but still he considers them only his means to achieve something bigger. He is talkative, friendly, and likes to talk about space exploration and climate change.

## **Major Works**

Major works of Elon Musk include the foundation of Space X, Tesla, and SolarCity. He pioneered two industries; Private space exploration and renewable energy. He has had numerous achievements to advance the industry. He has also proposed a new form of transportation, i. e. hyperloop. This new form of transportation will move from the Greater Los Angeles area to the San Francisco Bay Area. Tesla Motors is Elon Musk's main source of

income. Among his other investments are SolarCity, which is the publiclytraded solar panel operator, and privately-held spacecraft-maker SpaceX. SpaceX is Musk's third company founded in the mid of 2002. He utilized \$100 million of his fortune to develop SpaceX. SpaceX is involved in the production of space launch vehicles with primary focus on advancing the state of rocket technology. Falcon 1 and Falcon 9 rockets are the company's first two launch vehicles, and Dragon is the company's first multi-purpose spacecraft. SpaceX got a contract of \$1. 6 billion from NASA in 2008 for 12 flights of Falcon 9 rocket and Dragon spacecraft to resupply the International Space Station (ISS). In 2009, Falcon 1 rocket became the first privately funded liquid-fuelled vehicle to take the satellite into the orbit of the Earth. In 2012, SpaceX became the first commercial company to launch and dock a vehicle, i. e. Dragon vehicle, with the ISS, and bring the cargo back to Earth. SpaceX Dragon spacecraft full of NASA cargo, experiments and equipment was also launched in April this year. This spacecraft had 5, 000 pounds of material such as spacewalking suit for astronauts and other materials for scientific investigations (Siceloff, nasa. gov).

Musk also gave the concept of SolarCity that was co-founded by his cousins Lyndon and Peter Rive in 2006. SolarCity becomes the largest solar power systems provider in the U. S. SolarCity provides services such as designing, funding and establishing solar energy systems; auditing energy efficiency, and developing charging stations for different electric vehicles (EVs). This year Musk decided to increase the size of the solar plant and make it the largest solar energy plant in the U. S. The new project is referred to as the "Gigafactory" featuring self-sustaining renewable energy scheme by Musk.

SolarCity will grow from the development of 3, 300 megawatts of energy in 2012 to an expected 4, 300 megawatts of energy within the next few months.

Importance of developments made by Elon Musk. Elon Musk has worked on those aspects of science and business, which were not considered as practical by others. He has the first private space exploration company. He has built numerous rockets that outperform all others and are cost efficient. He takes satellites and cargo to space. He is working on exploring other planets as well. These things are clearly showing that he is the part of the huge and rapid commercialization of space. His discoveries in renewable energy have helped a lot both environmentally and economically. He is currently working on solar panels, electric powered vehicles, and batteries. In case of batteries, Musk is finding ways to reduce the cost of lithium-ion batteries by at least 30%. Musk is also working on the design of stationery battery packs that would last longer and highly safe having compact design. He is also working on Falcon heavy launch system, and novel liquid-methane-based rocket engine.

Musk worked on the SolarCity and Tesla with the concept of fighting with global warming. Companies of Musk are often important for one another as for example Tesla is also involved in providing batteries and battery pack technology to SolarCity that turn them into storage systems for consumers. Application of Musk's work. With space exploration technology, science would be able to take a huge number of people to different points in space. In fact, Musk wants to transport large numbers of people and cargoes to the Red Planet. He has visualized a colony of 80, 000 inhabitants of Earth on the

planet Mars within decades. Cheap and reliable services could help in taking a large number of people to Mars and Musk is working on these aspects of technology. He wants to minimize climate change and colonize on Mars within our lifetimes. In fact, he wants to have a few days on Mars even if those will be his last days.

Recently, SpaceX has come in a \$2. 6 billion taxi contract with NASA that will take astronauts to the ISS in 2017 (Pasztor, online. wsj. com). According to SpaceX, it will cost \$20 million per seat of astronaut. This amount is much lower than that offered by Russian Soyuz, which is approximately \$71 million for one seat. SpaceX is also doing work on the recyclable and reusable prototype rockets that can come to the Earth without being destroyed in the upper atmosphere. Successful achievement of this concept would help in creation of rockets that can be reused just like airplanes. It will also reduce the price of a space mission to just \$200, 000 for fuel. New Falcon heavy launch system by the company, based on Falcon 9 technology, will be the most powerful rocket in the world.

SolarCity introduced a new solar lease option for homeowners in 2008. This option can help homeowners to pay less for solar power than they pay for electricity. In 2009, SolarCity acquire the SolSource Energy business of Clean Fuel Connections, Inc. and started working on the electric car charging. In 2010, SolarCity started providing solar services to government sectors, private organizations, and non-profit costumers. In 2010, SolarCity acquired a software-enabled home energy audit firm, Building Solutions, to provide energy efficiency evaluations and upgrades such as efficient cooling/heating. In 2011, the company announced that it would install electric car chargers

that would be able to charge a number of EVs in different service territories. SolarCity has also revealed the plans to purchase Silevo, Silicon Valley based manufacturer of solar cells. It would be a giant step in technology of solar cells as it will help in increasing efficiency and decreasing costs. Most of the conventional cells are 14. 5% efficient in converting sunlight into energy. Silevo's cells show 18. 5% efficiency that could be increased to 24% with advanced manufacturing technology. With Silevo acquisition and expansion of factory, SolarCity has planned to produce 1 gigawatt of power within the next two years (Musk, Rive and Rive, blog. solarcity. com).

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