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5 Ideas of Elon Musk

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Elon Musk, a South African business magnate, investor, engineer and inventor has a vision to change the world and humanity. Here are his five ideas.

1) Internet Satellites

Musk wants to offer low-cost and unfettered internet access for all. He means to do it by launching a fleet of satellites into space of course. Musk's space transport SpaceX is in the early stages of producing a number (as many as 700) of micro satellites that can operate together in large formations. Each satellite will weigh 113kg, and will come in at a total cost of \$1 billion [1, 3].

2) Hyperloop

Perhaps his plan to solve his own commuting frustrations on the east coast of America will do the trick. So, Musk frequently has to travel between San Francisco and Los Angeles to care to his dual duties at Tesla and SpaceX respectively. Musk's proposed solution is to *load yourself into an enormous shotgun shell and shoot yourself 400 miles across the state at 800 mph*. The Hyperloop would transport people in individual aluminium pods through specially constructed overground tubes [1].

3) Electric cars

Still, back in 2006, Musk's stated vision *to help expedite the move from a mine-and-burn hydrocarbon economy towards a solar electric economy*, seemed pretty lofty – even naive. Eight years on, it's easy to forget what a profound impact

Musk's work with Tesla Motors (which he funded using his vast fortune) has had on the perception and all-round viability of the electric car. Launched in 2008, the Tesla Roadster was the first fully electric sports car, and the first roadworthy all-electric vehicle to enter serial production in the US. Tesla cars aren't ugly, impractical prototypes, but classy, desirable, and perhaps most importantly practical vehicles. Tied into this is Musk's and Tesla's work in building an increasing network of charge stations around the US, and now in the UK and Europe as well. There are now 83 charging points across the European continent [1, 2].

4) Affordable space travel

Musk set up SpaceX in 2002, with a chunk of the proceeds from his \$1.5 billion sale of PayPal to eBay. SpaceX was to be something rather unusual – a private space transport company. SpaceX's goal is to dramatically lower the cost of space travel. This would help kickstart the flagging space programs of NASA and other institutions, and would even start to make space travel possible for normal citizens. This might sound fanciful, but SpaceX has already experienced some success here. The company's Falcon 1 rocket became the first privately funded, liquid fuelled craft to enter Earth's orbit in 2008. Then, in 2010, the company became the first to launch, orbit, and recover a spacecraft [4, 5].

5) Colony on Mars

Making space travel affordable might be an ambitious goal, but it isn't a particularly sexy one. Nor does it sound remotely crazy. Indeed, as Musk tells it, it's the idea that founded SpaceX. He wants to colonise Mars. The first stage in Musk's ambitious plan was to set up a kind of greenhouse on the red planet – to send life the furthest it's ever been. Images of lush foliage growing on the red planet would, in Musk's estimation, reignite humanity's thirst for space travel, and restore funding to major institutions like NASA. Musk long

ago realised that the problem in such a plan would be the cost of transport. That problem being on its way to resolution, he's again been turning his attention to the idea of colonising Mars. Musk expects to be able to commence his company's colonisation efforts in the mid-2030s, and to have a Mars colony up and running by 2040. If we have linear improvement in technology, as opposed to logarithmic, then we should have a significant base on Mars, perhaps with thousands or tens of thousands of people. This initial batch of people will need to pay their own way to Mars, but at an estimated \$500,000, it may not be as expensive as you might have expected. Elon Musk founded SpaceX with the long-term goal of developing the technologies that will enable a self-sustaining human colony on Mars. In 2015 he thought of sending a person to Mars in 11 or 12 years. According to Richard Branson, it would be absolutely realistic over the next 20 years to take literally hundreds of thousands of people to space. Buzz Aldrin, American engineer and former astronaut, and the second person to walk on the Moon, presented a *master plan*, for NASA consideration, for astronauts, with a *tour of duty of ten years*, to colonize Mars before the year 2040 humans could travel to Mars as early as 2024 with the aim of building a colony on the red planet. Musk's space exploration company SpaceX has laid out ambitious plans to establish a base on Mars after it unveiled a reusable rocket that could travel at speed so up to 27,000 kilometres per hour [1, 4, 5].

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