It'll take more than tech for Elon Musk to pull off audacious new Tesla master plan

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Tesla Model S

Elon Musk – CEO of Tesla Motors – has just revealed the second part of his master plan for the company. And it's a doozy. Not content with producing sleek electric cars (which to be fair, was only ever a stepping stone to greater things), Musk wants to fundamentally change how we live our lives. But the road to Musk's techno-utopia may be rocky.

In 2006, Musk announced his "Secret Tesla Motors Master Plan." Steps one to three were simple and elegant:

- Build [a] sports car
- Use that money to build an affordable car
- Use *that* money to build an even more affordable car.

But cutting through these was a fourth step that had a much stronger social goal in sight: to develop and "provide zero emission electric power generation options."

This desire to change the world for the better is apparent in "part deux" of the master plan. Steps one to three of the new plan are superficially technological goals:

- Create stunning solar roofs with seamlessly integrated battery storage
- Expand the electric vehicle product line to address all major segments
- Develop a self-driving capability that is 10X safer than manual via massive fleet learning.

Yet underpinning them is a revolutionary vision for transforming society. Elon Musk doesn't just want to fast-track the transition to renewable energy and self-driving cars – he wants to rewrite the rulebook on how we build a futuristic sustainable society.

Shifting the culture with new technologies

This comes through loud and clear in his fourth step in the new master plan. Once there are enough privately owned fully autonomous Teslas on the road, Musk wants to co-opt them into the "Tesla shared fleet." The concept is as simple as it is audacious: Instead of your Tesla sitting idle in the garage or parking lot when not in use, it would become part of a network of fully autonomous ride-share vehicles – providing driverless lifts for customers on-demand and income for individual vehicles'

owners.

Musk's concept is a natural fusion of several trends in technology: autonomous vehicles, the internet of things, artificial intelligence, the sharing economy, to name just a few. Technologically, it makes perfect sense – especially when you throw in innovative solar and battery technologies to keep the fleet mobile and energy-efficient.

Yet to succeed, it would require a seismic shift in modern culture – not only in how we live our lives, but also how we think about possessions and ownership. Importantly, this brave new world would have to navigate our existing values and cultural norms.

And here's the rub: While Musk and his teams have the technical know-how to implement the master plan, it's not clear yet whether they have the social and political savvy to make it work.

Engineering the social and political landscape

We recently saw a hint of what's to come when a [Tesla driver was killed](#) while his car ran on autopilot. Through a combination of factors, neither the driver nor the car's autonomous systems managed to detect and avoid a tractor-trailer across the road, leading to a fatal crash. Despite claims of the [autopilot feature reducing the chances of crashes occurring](#), the incident has got people thinking about the socially acceptable use of cars that remove responsibility for life-and-death decisions from their occupants.

Just going by the numbers, Tesla's autopilot technology makes sense. [According to Musk](#), Tesla occupants using the autopilot feature are statistically safer than those not using it. And the more the feature is used, the better it will get at ensuring the car's occupants are safe – thanks to the machine learning that is constantly [enhancing the fleet's](#)

auto-capabilities.

But when it comes to technology innovation, numeric logic is often trumped by what we intuitively think and feel is important. As we've seen in discussions around autonomous vehicles, how many people are likely to be killed or injured is often less important than *who* might be killed (whether driver, passengers or pedestrians), how, and who (or what) makes the decisions. Here, even the argument that autonomous vehicles save lives (and are safer than human-driven vehicles) faces an uphill struggle.

That's not to say that the hurdles Tesla and Musk face in implementing their master plan are insurmountable – they're not. But as Musk begins to implement part two of the plan, he's going to need to become increasingly adept at navigating an ever more complex social and political landscape.

Innovating through the wicked problems

Musk appears to be aware of this. In 2015, through the Future of Life Institute (FLI), he backed a US$11 million research program to support the robust and beneficial development of artificial intelligence – an important technology for carrying out his master plan. Included in this initiative is the Strategic Artificial Intelligence Research Center – a collaboration between Oxford and Cambridge universities that aims to help develop policies to minimize the risks and maximize the benefits from artificial intelligence.

The tea leaves suggest Musk is thinking broadly about what it takes to develop societally successful technologies. Yet to succeed in his master plan, I suspect he'll need to think more broadly still – and fast.

Part of the issue is that the relationship between technology and society

is [highly complex and constantly shifting](#). Successfully developing transformative technologies while benefiting society as a whole leads to what some are fond of calling "wicked" problems – problems that are so slippery they change and shift in response to attempts to solve them. (If you want an example, just look at the introduction and use of genetically modified foods.) Changing society through new solar technologies, [autonomous vehicles](#) and driverless car-sharing will take a lot more than smart technologies, safety research and policy recommendations.

To navigate what is a wickedly complex social and political landscape, Musk is going to need to make friends with people in a whole bunch of new areas, from [responsible innovation](#) and the [governance of emerging technologies](#), to [technology assessment](#) and [risk innovation](#) – an emerging approach to thinking and acting differently on risk. Here, I'm admittedly a little biased, as this is what we do in Arizona State University's [School for the Future of Innovation in Society](#). But we're just a part of a growing global community of experts who are developing the know-how to ensure that emerging technological capabilities are developed responsibly and successfully.

To be sure, Elon Musk's master plan for Tesla Motors is nothing if not inspired. It's visionary, elegant, likely to improve lives and technologically within reach. Yet without coming to grips with the increasingly complex social and political challenges it faces, the plan runs the risk of not getting much further than the metaphorical paper it's written on.

And that would be a shame. Because – implemented responsibly – Musk's vision could be a game changer for how we go about building a more sustainable world.

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