

## 66. Vision Only

In January 2021, Tesla faced a pivotal dilemma regarding its Autopilot system for self-driving cars—whether to continue incorporating radar technology or shift entirely to relying on cameras for visual data. This decision became emblematic of CEO Elon Musk's decision-making style, which veered between being bold, visionary, stubborn, and at times flexible. Initially, Musk had been semi-receptive to using radar; in 2016, he permitted the installation of a forward-facing radar to complement the vehicle's eight cameras for the Tesla Model S upgrade. This led to the internal development of Tesla's own radar system, dubbed Phoenix.

However, by 2021, complications emerged. A microchip shortage, spurred by the COVID pandemic, affected the supply of necessary components for radar technology. Additionally, the Phoenix radar system was underperforming. Faced with these challenges, Musk proposed a drastic solution: eliminate radar entirely from Tesla's Autopilot, favoring a purely vision-based approach. He argued that relying solely on cameras would be revolutionary, dismissing radar as a redundant and ineffective technology.

Despite resistance from top executives like automotive president Jerome Guillen, who highlighted safety concerns associated with removing radar, Musk was unwavering. Guillen's opposition led to a tense confrontation, ending with Musk decisively instructing the termination of radar use in an email dated January 22, 2021. Guillen subsequently departed from Tesla.

The decision to forego radar sparked widespread debate and scrutiny. A comprehensive investigation by The New York Times revealed internal doubts among Tesla engineers, who were skeptical of the safety and efficacy of a camera-only Autopilot system. This skepticism underscored broader questions about the realism of Musk's promises regarding the Autopilot's capabilities and the safety implications of dismissing supplementary sensing technologies.