

## 36. Manufacturing

In the era of globalization that took root in the 1980s, with a zeal for cost reduction, American companies overwhelmingly offshored manufacturing. This resulted in the U.S. losing a third of its manufacturing jobs between 2000 and 2010. Tesla, under Elon Musk's leadership, defied this trend. Musk prioritized control over the manufacturing process, emphasizing the importance of the factory's design—"the machine that builds the machine"—as much as the vehicle itself. This approach allowed Tesla to maintain a competitive edge through constant innovation.

Larry Ellison, Oracle's founder, likened Musk to Steve Jobs, noting both had a beneficial obsessive-compulsive drive, but Musk extended his obsession to manufacturing, unlike Jobs. This commitment led Musk to spend significant time on the production floor, contrasting Jobs' approach of focusing on design and software while outsourcing manufacturing.

In 2010, seizing an opportunity, Musk acquired a Fremont, California-based factory from Toyota for \$42 million, a fraction of its original value. This factory, revamped under Musk's direct oversight, placed engineers close to the manufacturing process for real-time feedback and problem-solving. This hands-on approach was instrumental when Tesla went public in June 2010, a pivotal moment marked by a significant surge in Tesla's stock value despite a general market downturn.

However, achieving high production quality was a tumultuous journey. Initially dissatisfied with the production quality of the Model S, Musk's relentless pursuit of excellence led to a rigorous focus on root cause analysis and the implementation of a 'hardcore' work ethic. This drive paid off when the Model S was awarded Motor Trend Magazine's Car of the Year in 2012, the first electric vehicle to earn this distinction, underscoring Tesla's impact on the automotive industry.

Further expanding his vision, Musk embarked on an ambitious project to build the Nevada Gigafactory in 2013, aiming to surpass global battery production single-handedly. Despite skepticism, Musk's strategic maneuvering and partnership with Panasonic set the foundation for a \$5 billion venture that would cement Tesla's role in advancing electric vehicle technology and manufacturing innovation.