



## How U.S. Presidents Can Inspire Economic Innovations That Benefit Everyone

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What can a U.S. president do to build a next-generation economy and widen opportunities for all Americans, not just a privileged few? Every modern American president has wrestled with some version of these questions. History provides powerful lessons and debunks popular misconceptions about where innovations come from. From the cotton gin to the transistor to the self-driving car, America's extraordinary history of growth-spurring inventions is not just a story of ingenious entrepreneurs and free markets. It is a story of leadership from the White House to highlight big challenges and push for policies to realize solutions. Consequential actions fall into three categories, each involving the person occupying the Oval Office.

### Invest for the Long Term

Innovations and opportunity have bloomed when political leaders make foundational investments in people, ideas, and as-yet unmarketable technologies. Focused on deterring potential enemies, President Dwight Eisenhower mobilized scientists and institutions to spark rapid U.S. technological achievement. In the San Francisco Bay area, for example, large defense contracts became the bedrock for a small-electronics industry. Defense contractor Lockheed was the largest employer in what is now called Silicon Valley; and Hewlett-Packard became the second-largest, counting the feds as a big customer in its early years. Federal money turned Stanford University into a research juggernaut and fertile hub for innovators in high tech and biotech.

Another first-year president, John F. Kennedy, declared that America would reach the moon within a decade, creating federal contracting opportunities for companies making transistors, circuits, and high-tech components. Public investment spurred entrepreneurs to develop blue-sky technologies while doing business with a patient, deep-pocketed government customer.

Broad-based investments in people are more important than anything else. To ensure the U.S. has the world's most high-skilled, innovative workforce, presidents must lead national reinvestments in higher education while lowering college costs for students. The golden age of the U.S. high-tech industry didn't come from applying market models to research and education – it came from the willingness to make very long-term investments in forward-looking research and talented people. The higher education system necessary to spur the kind of growth and innovation enjoyed during the Presidencies of Eisenhower and Kennedy still exists. But it remains fragile as long as few leaders recognize the foundational role that public policy must continue to play in a high-tech economy.

### Keep Borders Open

Another secret of America's sustained technological leadership has been the free movement of people across international borders. Leaders of both parties created and expanded the Fulbright and other exchange programs that turned American colleges and universities into destinations for the world's best students. It is no coincidence that the U.S. became the global command-and-control center of the high-tech industry at the same historical moment that the nation opened its borders to people from a broad range of nationalities and ethnicities. Throughout human history, innovation grows in open societies that welcome new migrants – as well as to refugees such as those from war-torn Europe welcomed to America after World War II. Those who came included people whose potential was not clear at the time. One was Andy Grove, a penniless 19-year-old Hungarian who stepped off a boat in New York in 1946 and who went on to cofound the legendary microchip maker Intel two decades later.

### Make Economic Security the Foundation

It is no coincidence that America's technology industry was seeded during an era of sustained public investment in broad-based economic security. The emergence of America's world-dominant tech industry came as presidential commitments to Social Security, the GI Bill, and Medicare and Medicaid worked in tandem with public investments in science, technology, and infrastructure to expand educational and occupational opportunities.

Today, presidents must resist the temptation to celebrate high-tech entrepreneurship without properly recognizing that only a few privileged people can afford to take risks that sometimes spark breakthroughs. Publicly-backed venture funds or targeted grants to underrepresented individuals are one way to enlarge the pool of tech entrepreneurs, but presidents should broaden the definition of entrepreneurship and help all Americans see that public investments for the many, not just the few, set the foundation for America's next-generation economy.

## **Government is Critical to Future Innovation.**

What matters is not just what political leaders do but *how* they do it. Unlike other countries, American public sector spending on innovation is often indirect – flowing through contracts to private industry or universities, regulatory institutions, or the tax code. The indirect, almost stealthy nature of spending has been absolutely critical to the ascendance of the U.S. high-tech economy. As government invested and then got out of the way, many centers of innovation arose in the public, private, and nonprofit sectors – including smaller centers nourished by contracts that allowed small private companies to be entrepreneurial, push technological boundaries, innovate and grow. Ironically, this decentralized system creates a government-business nexus that is often hard for American citizens to see, which can leave both techies and the general public with the mistaken idea that public policy has little to do with America's high-tech successes. Many Americans are anxious about an economy that seems to no longer foster mobility and opportunities. One way to address their concerns is to no longer separate “economic policy” from “tech and innovation policy,” but instead treat them as a whole greater than the sum of the parts. The high-tech industry has been an extraordinary American success story for decades. Today, both parties, and especially presidents, should aim to renew the broad social and economic conditions that fostered America's tech success story in the past and can write the next chapters. Leaders should invest in new technologies, regulate high tech as necessary, and dramatize the ties that bind the fortunes of the innovative few to international openness and opportunity and security for all Americans.

**Read more in Margaret O'Mara, “The Long Game: The Next President Must Lay the Foundation for a Next-Generation Economy” *First Year* 6 (2017).**