TECHNOLOGY INNOVATION AND AMERICAN NATIONAL SECURITY: PRESERVING U.S. LEADERSHIP IN A NEW DECADE

THE STAKES

Throughout much of the 20th century, the United States led the world in technological innovation, with the new systems and industries arising from this leadership driving sustained economic growth and underpinning U.S. national security capabilities. In many ways, technology innovation and all that came from it was at the heart of America’s ability to become (and remain) a global leader. Today, however, America’s preeminent role in driving innovation—and leading the world—is being threatened, if not wholly undermined.

Rapid developments in emerging technologies, such as 5G, artificial intelligence, and quantum computing, as well as the global spread of distributed computing and other advanced technologies, carry the potential to drastically disrupt industries, economies, and the current world order. Adversarial nation-states can use U.S.-driven innovation acquired either through legitimate or illegitimate means and our reliance on highly connected technologies to their advantage across a range of areas, including economically, politically, and socially. And today, the private sector — not the U.S. government — develops many critical national security technologies and these companies are able to share their innovation with a broad range of global actors.

A B O U T  T H I S  P R O J E C T

NSI 2020 is a year-long project that will focus on four key topics on the intersection of technology innovation and national security, with a series of events, papers, and policy engagements driving attention to these topics.

This project will explore what the U.S. should do to ensure its global economic and political leadership, including how the U.S. government and private sector might work together to respond to national security threats and economic competition while promoting innovation.

We expect these events to drive a serious debate on technology and national security, informed by the work of NSI’s authors and experts providing key insights and actionable recommendations.

T H R O U G H O U T  M U C H  O F  T H E  2 0 t h  C E N T U R Y ,  t h e  U n i t e d  S t a t e s  l e d  t h e  w o r l d  i n t e c h n o l o g i c a l  i n n o v a t i o n ,  w i t h  t h e  n e w  s y s t e m s  a n d  i n d u s t r i e s  a r i s i n g  f r o m  t h i s  l e a d e r s h i p  d r i v i n g  s u s t a i n e d  e c o n o m i c  g r o w t h  a n d  u n d e r p i n n i n g  U . S .  n a t i o n a l  s e c u r i t y  c a p a b i l i t i e s .  I n  m a n y  w a y s ,  t e c h n o l o g y  i n n o v a t i o n  a n d  a l l  t h a t  c a m e  f r o m  i t  w a s  a t  t h e  h e a r t  o f  A m e r i c a ‘ s  a b i l i t y  t o  b e c o m e  ( a n d  r e m a i n )  a  g l o b a l  l e a d e r .  T o d a y ,  h o w e v e r ,  A m e r i c a ’ s  p r e e m i n e n t  r o l e  i n d r i v i n g  i n n o v a t i o n — a n d  l e a d i n g  t h e  w o r l d — i s  b e i n g  t h r e a t e n e d ,  i f  n o t  w h o l l y  u n d e r m i n e d .  R a p i d  d e v e l o p m e n t s  i n  e m e r g i n g  t e c h n o l o g i e s ,  s u c h  a s  5 G ,  a r t i f i c i a l  i n t e l l i g e n c e ,  a n d  q u a n t u m  c o m p u t i n g ,  a s  w e l l  a s  t h e  g l o b a l  s p r e a d  o f  d i s t r i b u t e d  c o m p u t i n g  a n d  o t h e r  a d v a n c e d  t e c h n o l o g i e s ,  c a r r y  t h e  p o t e n t i a l  t o  d r a s t i c a l l y  d i s r u p t  i n d u s t r i e s ,  e c o n o m i e s ,  a n d  t h e  c u r r e n t  w o r l d  o r d e r .  A d v e r s a r i a l  n a t i o n - s t a t e s  c a n  u s e  U . S . - d r i v e n  i n n o v a t i o n  a c q u i r e d  t h r o u g h  l e g i t i m a t e  o r  i l l e g i t i m a t e  m e a n s  a n d  o u r  r e l i a n c e  o n  h i g h l y  c o n n e c t e d  t e c h n o l o g i e s  t o  t h e i r  a d v a n t a g e  a c r o s s  a  r a n g e  o f  a r e a s ,  i n c l u d i n g  e c o n o m i c a l l y ,  p o l i t i c a l l y ,  a n d  s o c i a l l y .  A n d  t o d a y ,  t h e  p r i v a t e  s e c t o r  —  n o t  t h e  U . S .  g o v e r n m e n t  —  d e v e l o p s  m a n y  c r i t i c a l  n a t i o n a l  s e c u r i t y  t e c h n o l o g i e s  a n d  t h e s e  c o m p a n i e s  a r e  a b l e  t o  s h a r e  t h e i r  i n n o v a t i o n  w i t h  a  b r o a d  r a n g e  o f  g l o b a l  a c t o r s .
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TECHLASH: IS IT HARMING AMERICAN INNOVATION AND UNDERMINING OUR NATIONAL SECURITY?
In recent years, U.S. technology companies have been facing an increasingly hostile public reaction here in the United States and abroad. As a result, some of America's most innovative companies have been plagued by lawsuits and claims of antitrust abuses, as well as face growing calls for restrictive regulation in the U.S. and globally and public scrutiny of their actions. Despite this ostensibly negative public attention, the use of these companies' products is growing broadly and their success in developing innovative capabilities and selling products built upon them continues to drive U.S. economic success and unquestionably contributes to U.S. national security.

A core issue that must be addressed is how the U.S. government can address legitimate public concerns without impairing U.S. innovation, economic growth, and national security.

U.S. TRADE POLICY: HOW CAN THE U.S. PROTECT NATIONAL SECURITY WHILE ENCOURAGING INNOVATION?
America's economic prosperity and military superiority largely revolves around its leading role in technology innovation. But the same companies and public institutions that are driving U.S. innovation are also being targeted by foreign nation-states for intellectual property pillaging through a range of techniques. The U.S. government uses a number of tools to prevent sensitive technologies from being acquired by potential economic and political rivals, but these same tools limit the ability of U.S. companies to access foreign markets, prevent attracting foreign capital and talent, or restrict access to innovative technologies here in the U.S.

A core issue that must be addressed is how the U.S. government can both protect the innovation that is the engine of American economic growth and the pillar of American national security, while also remaining economically engaged and politically competitive.

MADE IN USA 2030: DOES THE U.S. NEED A NATIONAL INDUSTRIAL TECHNOLOGY POLICY?
While many of the technologies Americans use daily are, at least in part, the result of government-sponsored research as a foundation for commercial innovation and development, federal support and funding for science research and for applied technology development has stagnated in recent decades. At the same time, American companies are being challenged by Chinese and other foreign corporate competitors who are largely financed by their governments, often using stolen U.S. technology, and who are being provided access to protected markets. Thus, there is a growing concern that the U.S. government's hands-off role in technology development may threaten U.S. national interests, including our military superiority.

A core issue that must be addressed is whether the U.S. should consider a national industrial strategy supporting strategic technology industries to ensure U.S. global leadership and preserve national security.

THE PRIVATE SECTOR: HOW THE TECH INDUSTRY IS LEADING ON NATIONAL SECURITY
There is no question that the private sector plays a highly visible role in national security and foreign policy – from tracking or mitigating information operations, revolutionizing intelligence collection and analysis through the expanded use of open-source intelligence, or connecting human rights advocates within repressive regimes – and that private-sector innovation underpins America's economic strength.

However, the positive impacts of technology companies and their critical role in promoting U.S. national security interests are rarely acknowledged. Tech industry leaders often receive brutal political lashings at the hands of members of Congress during lengthy interrogation-filled hearings as executive branch officials constantly brainstorm shifting regulatory and enforcement policies. Government regulators at both the federal and state level are also actively working to break up the largest tech companies. These efforts could greatly dampen the industry's ability to innovate and hugely impact the way Americans live their lives and how the U.S. government operates, including protecting U.S. national security.

A core issue that must be addressed is how the U.S. government can better work with, enable, and incentivize technology private sector actors to assist in national security efforts and support democracy and human rights globally?