

Maintaining Our Industrial Edge – Determined & Inventive Opponents

- **DOD is facing an unprecedented threat to its technological & industrial base. US (& it allies) cannot tolerate the continued theft of military & advanced technology**
- **Espionage & continued globalization & the US open society, both in academia & business, has offered our adversaries access to the same technology & information that is critical to the success of our future warfighting capabilities (& economy)**
- **China represents our greatest challenge**
 - Executing a multi-decade plan to transfer technology to increase the size & strength of its economy, currently the world's 2nd largest
 - Goal is to be #1 in global market share in key industries to reduce reliance on foreign technology & to foster indigenous innovation. China's strategy emphasizes their aim to import substitution & technology innovation
 - Elevated espionage risk supported by increasingly sophisticated & centralized cyber-spying & other intelligence activities
- **Significant & targeted technologies of interest to DOD include Artificial Intelligence, autonomous vehicles, robotics, cybersecurity, UAV & sensor technology, & more**

China's Strategy – Close the Gap & Leapfrog the US Militarily

- **President Xi Jinping has urged the PLA “to speed up” the application of advanced technologies to upgrade China’s military capabilities**
- **China is a persistent collector – primary intent is to steal classified information from government agencies or trade secrets from corporations, but also through forced transfers & joint ventures**
 - Increasing levels of investment & acquisitions of US & foreign companies – including DoD supply chain elements
 - Also illicit activities where stolen IP is estimated at \$300B per year – widely through cyber theft (USG, US contractor, ally & partner country/contractor exfiltration) & other intelligence collection, plus...
 - Scrutinizing public information for innovation to craft their investment strategies to overmatch our technology
 - Accessing & cataloguing unclassified or non-government innovation data in the private sector for exploitation – some data in aggregation is as damaging as a breach of classified information
 - Establishing Chinese-based technology transfer organizations
 - Building relationships through social media platforms
 - Recruiting talent & establishing academic collaboration (particularly STEM)
- **Some advances in protecting sensitive DOD information have been achieved...however, for several areas any improvement is too late – stealth, nuclear weapons, fighter aircraft design, & other advanced technologies were taken years ago**

More Can Be Done to Protect Our Advantage

➤ DOD must...

- Strengthen counterintelligence – increase the number of field agents & analysts focused on critical technology protection at the Defense Security Service & the Service counterintelligence organizations.
- Elevate private sector’s focus on security – threat briefings to cleared defense contractors & investigations will not decrease the threat
 - USD(I)’s “Deliver Uncompromised” aims to establish security as a fourth pillar in acquisition, on par with cost, schedule, & performance
- Transition from a compliance, checklist-based National Industrial Security Program to a risk-based approach informed by the threat & DoD technology priorities. Reinforce protecting controlled unclassified information, which includes technical data & PII available to private industry
- Buttress the integrity of the supply chain

➤ And DOD has tools now...

- Joint Federated Assurance Center – conducts software & hardware assurance of critical DoD systems. MDA has successfully piloted the use of JFAC
- Joint Acquisition Protection & Exploitation Cell – assesses technical information losses & determines the consequences of those losses to inform requirements & acquisition
- Maintaining Technology Advantage Cross-Functional Team – addresses the globalized & commercialized technology development environment

We must get within China’s decision loop or “be prepared to be surprised”