



# **Tactical Wheeled Vehicle Conference 2022 Legislative Policy Update**



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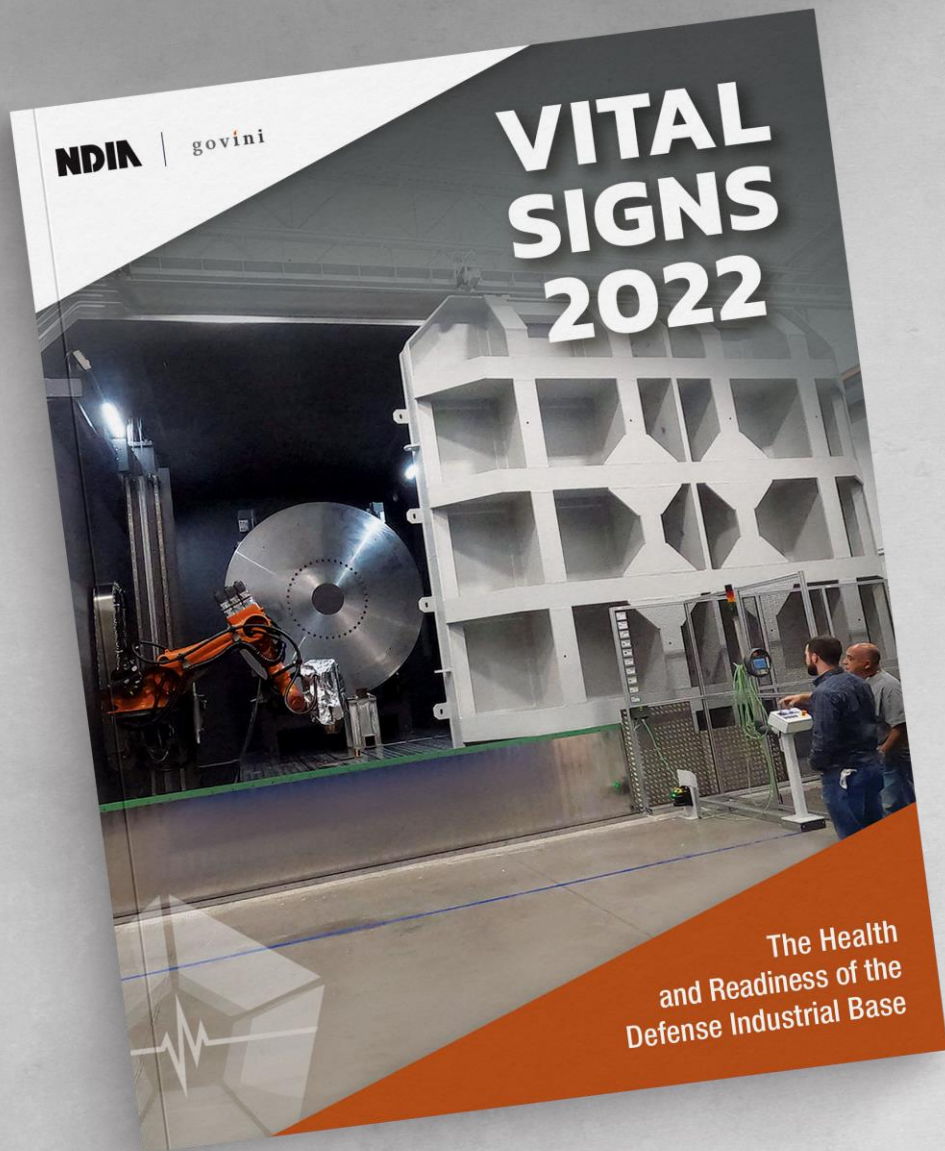
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- **As a non-profit NDIA's greatest strength on the Hill is being an honest broker**

## **Today's Topics:**

- Vital Signs 2022
- Legislation and Reports impacting the Defense Industrial Base
- Legislation specific to the Tactical Wheeled Vehicle sector
- Subcommittee on Tactical Air and Land Forces Interests
- Emerging Technologies Institute
- Q&A



# VITAL SIGNS 2022

Report Launch  
February 2022

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# Our Method

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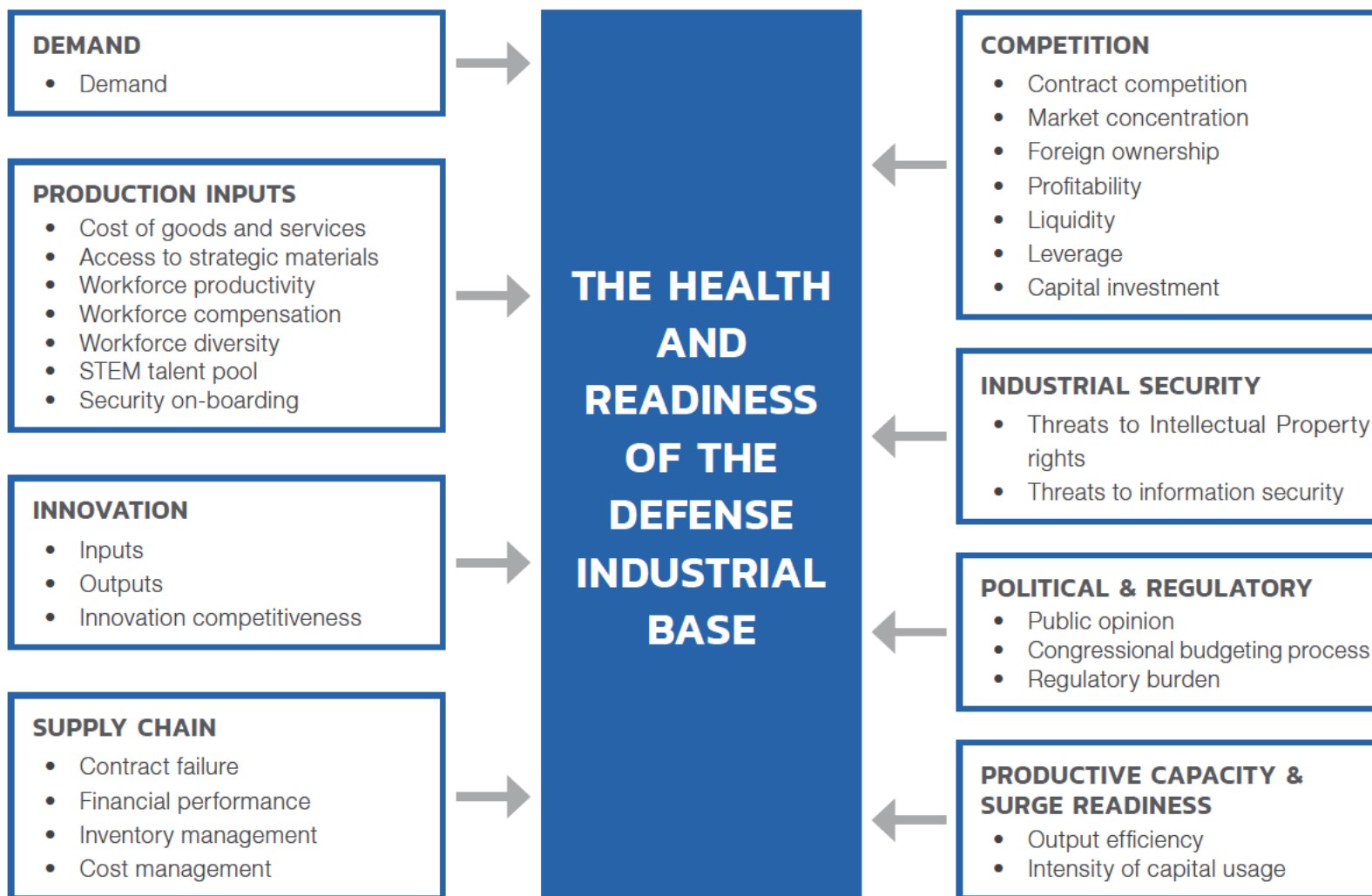
- This is the only report in the market that offers an annual unclassified assessment of the Defense Industrial Base. This report focuses particularly on the health of the defense industrial base as it relates to military readiness
- We assessed eight signs that serve as proxies for the health of the defense industrial base and business environment
- Overall, we scored 54 statistical indicators on a scale of 0 (critical failing) to 100 (outstanding)
- Scores are determined by comparing 3-year averages to a baseline peak figure
- We averaged indicator scores together
- Research assistance from NDIA's Junior Policy Fellows and data science company Govini
- Rolled out during the Defense Workforce, Innovation, and Industry Caucus

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# Business Environment & Performance Indicators

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Source: Vital Signs 2022, the Health And Readiness of the Defense Industrial Base, NDIA (2022)

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# VS22: An Overall “Unsatisfactory, Failing” Grade



OVERALL SCORES				
Condition	2019	2020	2021	Change, 2020 – 2021
Demand	82	88	94	● +6
Production inputs	66	66	67	● +1
Innovation	69	69	69	● 0
Supply chain	60	71	63	● -8
Competition	92	88	88	● 0
Industrial security	49	49	50	● +1
Political & regulatory	78	76	72	● -4
Productive capacity & surge Readiness	80	67	52	● -15
<b>Overall health and readiness</b>	<b>72</b>	<b>72</b>	<b>69</b>	<b>● -3</b>

Score Index

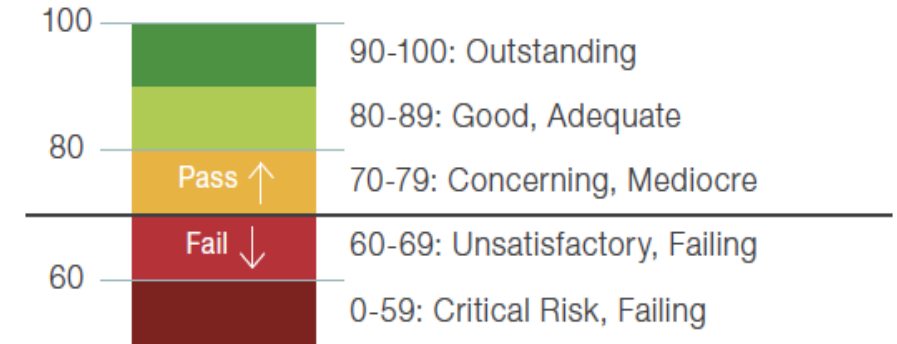


Figure 0.3, Source: NDIA



# VS22: An Overall “Unsatisfactory, Failing” Grade

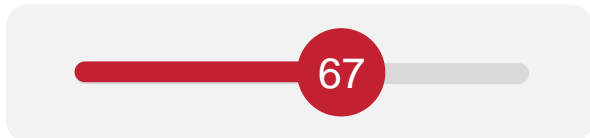
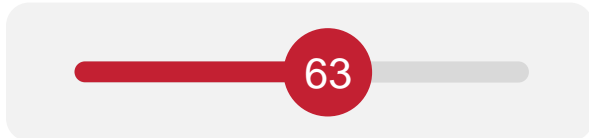
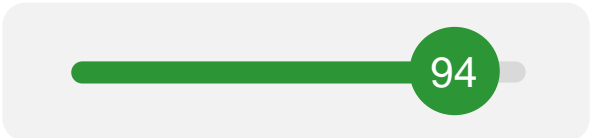
**NDIA**

Political & Regulatory

Demand

Supply Chain

Production Inputs

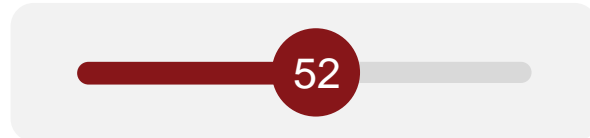
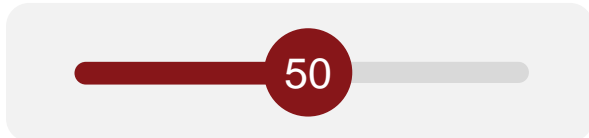
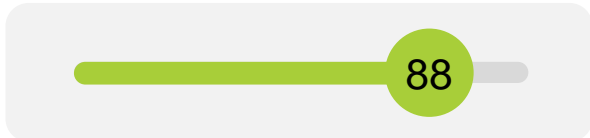


Competition

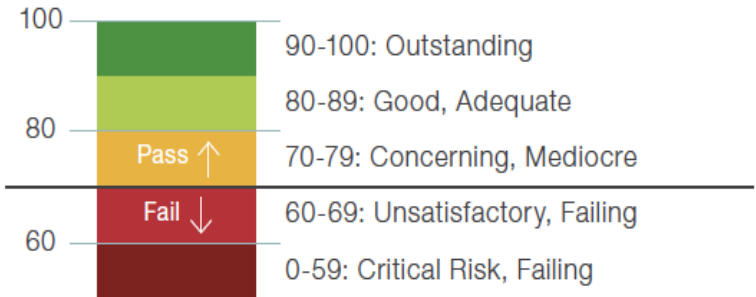
Innovation

Industrial Security

Production Cap & Surge



# An Overall Score of 69 ●



# Critical Risk Areas



Risk Area	Description
<b>COVID-19</b>	COVID-19 impacted both Supply Chain and Surge Readiness within the DIB. These Vital Signs experienced the most significant declines from last year, which is indicative of COVID-19's continued disruption within the U.S. economy.
<b>Competition</b>	<u>New entrants</u> : This year saw another decrease in new entrants, <i>an all time low in our dataset</i> . This is a risk to innovation, as new entrants represent the infusion of new talent and capabilities. This significant decline marks a drop of over 28% from two years ago.
<b>Emerging Technologies</b>	For FY20, Congressional focus in key technologies such as microelectronics and biotechnology increased from the previous year, while hearings that mentioned hypersonics and space — among others — dropped from FY19.
<b>Industrial Security</b>	Industrial security continued to be the worst performing Vital Sign, driven primarily by cybersecurity vulnerabilities. Known vulnerabilities continue to rise at a very high rate, while the severity of each known vulnerability has slightly decreased on average since 2016.
<b>Workforce</b>	Members reported difficulties finding skilled and cleared labor. Without access to a diverse talent pool, DIB companies will struggle to produce the necessary goods and services that maintain our dominance in all domains of warfare. Our study reflects the state of the DIB before the high U.S. quit rates observed in 2022
<b>Survey Results</b>	Survey Results revealed businesses struggling with the ramifications COVID-19, including protracted labor difficulties. The DIB continues to identify budget stability and acquisition streamlining as top areas the government can address.



Download the report

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**Download this year's and past reports here:**

[NDIA.org/VitalSigns](https://ndia.org/VitalSigns)

**We welcome your feedback.**

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- **CHIPS-** Creating Helpful Incentives for the Production of Semiconductors for America Act
- **USICA-** United States Innovation and Competition Act of 2021 (Senate)
- **America COMPETES-** America Creating Opportunities for Manufacturing, Pre-Eminence in Technology, and Economic Strength Act of 2022 (House)
- **SBIR-** Small Business Innovation Research Program
- **TCJA-** Tax Cuts and Jobs Act of 2017
- **NDAA-** National Defense Authorization Act
- **HASC/SASC-** House/Senate Armed Services Committee



# CHIPS Act and Semiconductor Shortages **NDIA**

- **Semiconductors are likely second only to electricity on the list of things that drive the global economy**
- **A worldwide shortage of them in recent months, especially in the auto sector, has helped boost inflation and stymied growth**
- **CHIPS provided the strategy and direction, USICA and America COMPETES will provide the money—aligning the strategy with the funding, and informing the execution direction**



- **COMPETES includes \$52 billion in funding for CHIPS Act implementation, \$45 billion for supply chain resiliency, the creation of a new technology directorate at the National Science Foundation (NSF), as well as substantial increases in research and development investments**
- **Congress will need to reconcile these bills aimed at:**
  - fostering innovation and our competitive advantage
  - addressing critical issues in supply chain resiliency
  - developing talent in the U.S.



- **Historically, The SBIR program has been reauthorized and extended multiple times since its creation. Most recently, the 2017 NDAA extended SBIR and related programs through September 2022**
- **America COMPETES includes a reauthorization for SBIR for five years**
- **NDIA is focused on bridging the gap between Phase II contracts and programs of record. A permanent authority would allow for authorizations that have previously been underutilized by the government**



- **TCJA significantly curtailed one of the significant tax incentives for R&D—immediate deductibility of qualifying R&D spending**
- **As of January 2022, qualifying R&D expenses conducted in the U.S. will be amortized over five years—deducting only 20% of those expenses per year.**
- **China has extended its super deduction for R&D expenses for manufacturing companies to an extra 100% of eligible R&D expenses in addition to actual R&D expenses incurred**
- **Simple math—a company that undertakes \$100 of R&D in the U.S. would deduct only \$20 in 2022. A company undertaking \$100 of R&D in China would deduct \$200, or 20 times as much**



**The FY22 NDAA had a big focus on reducing reliance on China and other non-allied nations within the supply chains—restricting sources of supplies and increasing investment**

**A few of note:**

- **Modernizing Acquisition Processes to Ensure Integrity of the Industrial Base**
- **Modifications to Restriction on Acquiring Printed Circuit Boards Amends**



- **Modifying Analyses of Activities for Action to Address Sourcing and Industrial Capacity**
  - Molybdenum and molybdenum alloys
  - Optical transmission equipment, including optical fiber and cable equipment
  - Armor on tactical ground vehicles
  - Graphite processing
  - Advanced AC-DC power converters
- **Global Bulk Fuel Management and Delivery**
  - Made US Transportation Command responsible for management and delivery



- **Implementation Of Comptroller General Recommendations On Preventing Tactical Vehicle Training Accidents:**
  - Requires each Secretary concerned submit a plan to address the recommendations in the GAO Report entitled “Army and Marine Corps Should Take Additional Actions to Mitigate and Prevent Training Accidents”
- **Military Standards For Armor Materials In Vehicle Specifications:**
  - Requires the Secretary of the Army establish technical specification standards for all metal and non-metal armor for incorporation into specifications for current and future armored vehicles developed or procured by the Department of the Army



- **Reps Brown and Wittman introduced to HASC 1st Lt. Hugh Conor McDowell Safety in Armed Forces Equipment Act of 2021**
- The bill directs a five-year pilot program on using data recorders to improve the readiness and safety of the operation of military tactical vehicles
- Intent: The data recorders would allow the services to identify near-misses and potential hazards that could go undetected and establish a database to ensure consistent implementation of safety programs across the services
- Military leadership can use the data to develop performance criteria and measurable standards for driver training programs





- **HASC Subcommittee mark of the FY22 NDAA, encouraged the Army to accelerate its addition of anti-lock brakes and electronic stability control to its humvee fleet.**
- **In a May hearing title “Army Tactical Wheeled Vehicle Program Update and Review of Electrification” we saw some of the focus areas for the committee:**
  - Constrained resources
  - Tactical elements for electric vehicles and sustainment
  - Interest in testing validation before fielding new technologies
  - Concern over a 30-year fleet becoming obsolete



- **Interest in Implementation of the 2022 Army Climate Strategy**
- **Accelerating pace and scope of electrification, but concern regarding integration obstacles for operational capability in dangerous and austere environments**
  - Battery replacement possibilities
  - Integration challenges for auxiliary power units
  - Hybrid technology interest



- **ETI plans to look at the full spectrum of emerging technologies including many that are critical to TWV:**
  - Autonomy
  - AI
  - Advanced Software
  - Materials
  - Systems Engineering And Digital Engineering
  - Energy Technologies
- **ETI will also be engaging on key technology policy issues such as workforce, strengthening partnerships with universities and DOD labs, and improving test and evaluation capabilities**
- **The ground vehicle community has lead the way in developing partnerships with the commercial sector—namely the automotive sector.**



# NDIA Business Institute Related Offerings

**NDIA**

- **Virtual: Offsets in the Global Defense Trade - March 17<sup>th</sup> Virtual**
- **Egglar Institute of Technology's On-Demand Courses**
- **Mastering Business Development - June 21-22, 28-29 (Virtual) | September 27-28 (DC) | November 8-9, 15-1 (Virtual)**
- **For more information go to:**  
**<https://www.ndia.org/education/business-institute>**



**Please feel free to reach out if you have follow-up questions.**

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