



**DCMA**

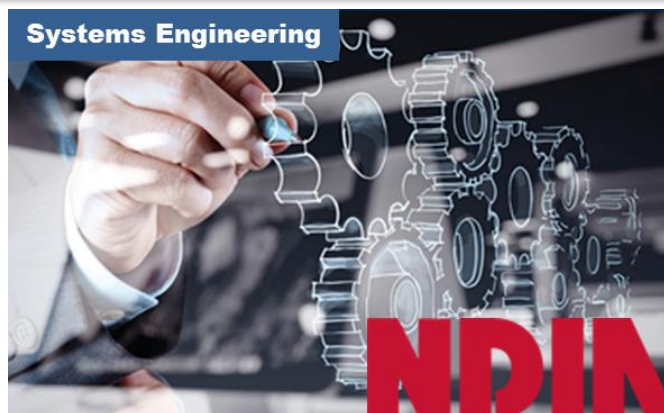


*One team, one voice delivering global acquisition insight that matters.*



# Assessing the impacts of Amended Toxic Substances Control Act (TSCA) to the DoD Mission and the Defense Industrial Base (DIB)

## *DIB Mission Assurance and IB Risks Posed by Chemical Regulation*



**Systems Engineering**

**NDIA**

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**DCMA Industrial Analysis Group**

**NDIA Systems Engineering 23-26 Oct 2017**

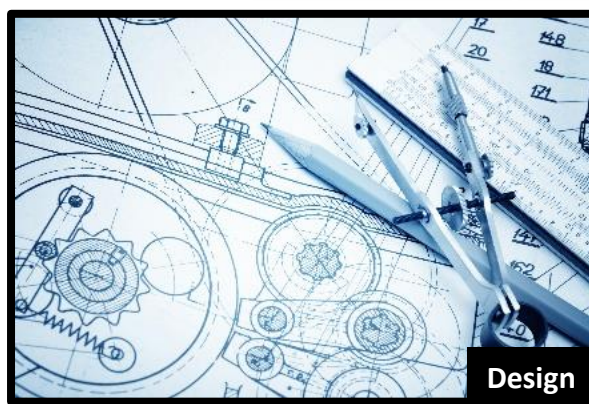
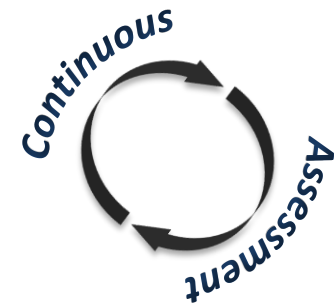


- **Introduce the Industrial Analysis Group (IAG)**
- **Problem Statement (DIB sector perspective)**
- **Pilot Assessment Results**
- **Degrees of Potential Market Collapse Due to Regulation**
- **National Security Exemptions**

## Mission Statement:

- Deliver actionable acquisition insight to DCMA, DoD senior leadership, and the national critical infrastructure community by continuously **analyzing industrial capabilities** and **identifying strategic risks** with recommended solutions through a **Mission Assurance (MA) framework** in order to ensure **Defense Industrial Base (DIB)** industrial capabilities are available to provide the most **critical goods and services needed by the warfighter**.
- **Lead** the execution of DCMA's regulatory responsibility for national **DIB Sector Mission Assurance**.

★ Acquisition Strategy requires Industrial Analysis considerations prior to milestone decisions.

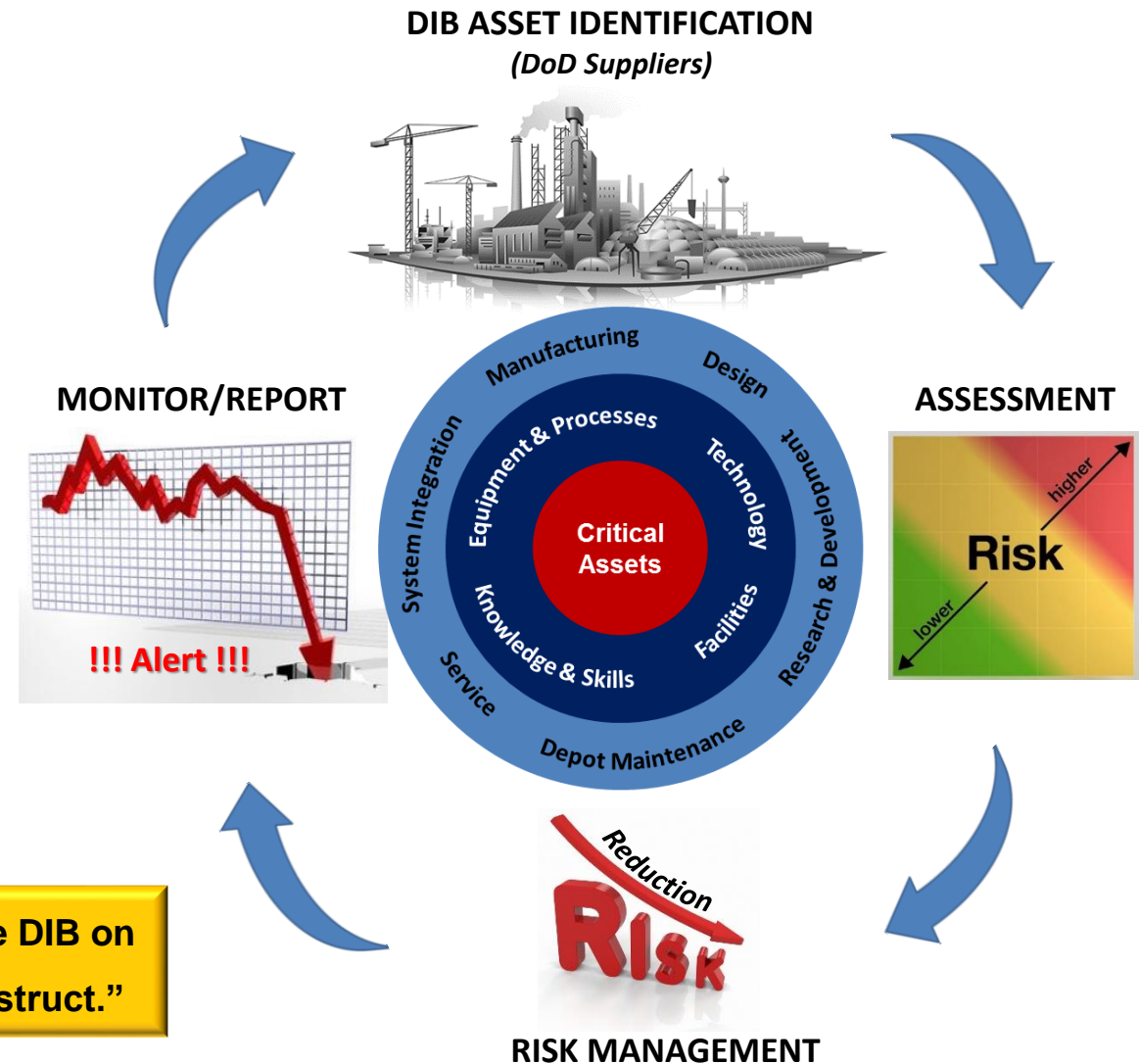


## What IAG Does For DoD

- 1 DCMA is the lead DoD component for the DIB sector. **Ensures DIB industrial capabilities are available to provide the most critical goods and services needed by the Warfighter.**
- 2 Executes industrial base assessments in support of statutory and regulatory acquisition program requirements (e.g. **supports Milestone Decisions**). **Feeds DIB MA Process.**
- 3 **Shares industrial base intelligence** among DCMA, DoD Enterprise, and National Critical Infrastructure community to assist in understanding the DIB, build collective knowledge, assess/manage risk, maintain readiness, and prioritize workload/funding

**“Director, DCMA executes assigned national sector responsibilities for the DIB on behalf of the SECDEF and synchronizes these activities with the MA Construct.”**

~ From DRAFT DoD Instruction 3020.45, “Mission Assurance Construct” (May 2017) ~





**Objective – Determine IB Risk**

1. How important is a capability to DoD (criticality)?
2. How likely is it that the capability will be disrupted (fragility)?



Survey Industry & Gather Data



Manage & Store DIB Data



Analyze & Assess Industrial Capability Risk



Report to Senior Leaders



**UNSEEN RISK - these risks are buried within a complex, global supply chain**

- ❑ Can be enablers of Key Performance Parameters (KPPs) and U.S. Military strategic advantage
- ❑ Fundamental ingredients - higher probability of impacting a greater number of programs
- ❑ May enable a wide variety of industrial and maintenance processes
- ❑ Chemical sector accounted for 2% of GDP in 2016 (largest contributor in manufacturing)



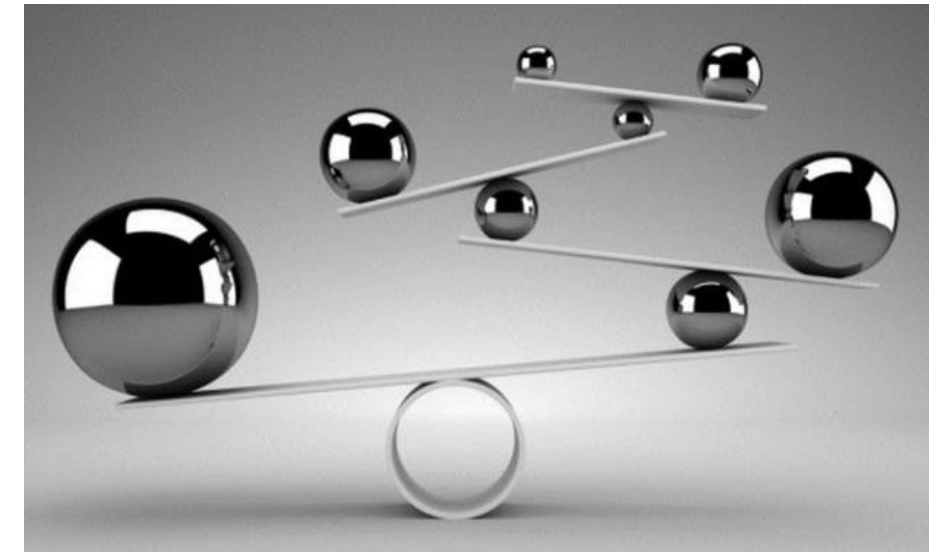
## MARKET COLLAPSE and Unavailability of Chemical/Material

- Increased burden on industry
- Limit competition by increasing barriers to entry
- Suppress innovation by decreasing design choice
- Foreign supplier dependency
- Increased cost of goods & services
- Program schedule delays
- Performance issues due to unmanaged substitution

→ **Operational readiness impacts**

## BALANCE human health risk management with industrial base and mission risk

- Monitor pending regulatory and statutory changes
- Proactive industrial base assessment
  - Industry participation is essential
- Exemptions
  - Support with data (Gov & Industry) to make case
  - DIB capabilities sustained under certain conditions
- Alternative chemicals/materials or methods
  - Tradeoffs
- Risk acceptance
- Develop organic industrial capability





## OBJECTIVES

- Investigate NMP and MeCl chemical form, DoD purchase quantity, DoD customers, and end users
- Determine supplier fragility and assess criticality for NMP, MeCl, and alternatives
- Evaluate the market impact of the proposed TSCA regulation
- Project the market effect of a national security exemption

## SELECT FINDINGS

- Air Force is dominant user of MeCl; Air Force and Navy top users of NMP
- Most common purchase form is a mixture containing MeCl or NMP
- At least 17 MDAPS supported; aviation heavy
- Common defense applications: paint removal, cleaning, coating reapplication
- Market impact if TSCA restrictions are put in place:
  - Some indicated they'd be out of business (incl. dominant DoD source)
  - DoD sales are insufficient to maintain overall business
  - Some indicated they would exit market (incl. dominant DoD source)
  - Others (perhaps more diversified) indicated minimal to no impact

## POPULATION



## CONCLUSIONS

- Industry participation was poor
- DoD demand is minimal compared to overall NMP/MeCl production
- Current industrial capability risk is LOW (there are many active suppliers)
- Alternatives exist, but are less effective and Services are hesitant to adopt. Recommend Joint, comprehensive trade-off assessment
- TSCA regulation likely to result in market correction and immediate DoD impacts; formation of defense unique niche market dependent on foreign market viability
- National security exemption might not prevent market collapse in this situation due to commercial demand dominance



## Defense Unique Niche Market Stabilized by Foreign Demand

- DoD demand is small fraction of commercial demand
- Exemption is in place to allow U.S. defense uses of chemical
- Foreign markets have less regulation and remain profitable*

**IMPACT:** Supplier market correction, but capabilities will remain. May see off-shoring of industrial capabilities.

## Defense Unique Niche Market

- DoD demand is small fraction of commercial demand
- Exemption is in place to allow U.S. defense uses of chemical
- Foreign markets are not profitable*

**IMPACT:** Major supplier market correction. Capabilities will be sustained by Government investment. Limited number of suppliers (IB risk).

## Market Collapse

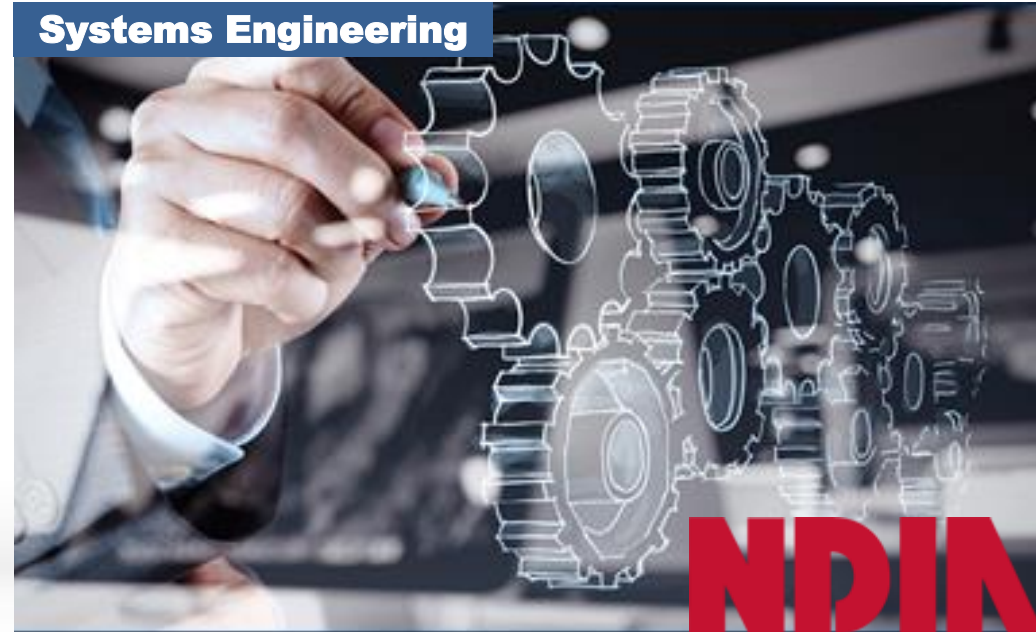
- DoD demand and Government investment is not incentive enough
- Domestic and Foreign markets are not profitable

**IMPACT:** Capability loss (operational risk)



## Potential Conditions for Stabilizing Industrial Capability Using an Exemption:

- Criticality
- Minimum Sustainment Rate (MSR)
- Product diversity
- Defense vs. commercial demand distribution
- Competition
- Foreign market viability
- Timeline
- Alternative solution



**Thank You**