



Blue Water Components Research Brief

Industrial Resilience Series

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Author	Wesley Sprecher, President
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Executive Order 14415 and the Evolution of DMSMS Management:
Understanding the Next Phase of Defense Lifecycle and Supply Chain Policy

Executive Summary

Executive Order 14415 marks one of the most significant shifts in U.S. defense acquisition policy in decades. However, the Department of War's effort to reduce dependence on non-allied foreign sources for strategically important materials did not begin with Executive Order 14415. Congress first established this policy direction in 2018 through what is now codified as Title 10 U.S.C. § 4872, prohibiting the acquisition of certain sensitive materials from non-allied foreign nations. While the statute established the policy objective, Executive Order 14415 reinforces that legislative intent by assigning implementation responsibilities, clarifying authorities, and strengthening executive oversight across the defense industrial base.

This EO changes the information organizations must possess about their products, suppliers, and manufacturing networks before contracts are awarded—and throughout the life of a program.

Organizations that continue operating with periodic, document-based assessments will find it increasingly difficult to demonstrate the level of supply chain visibility expected by both customers and regulators. Continuous intelligence has been a competitive differentiator; it is now a sustainment requirement.

This paper examines how Executive Order 14415 extends existing acquisition policy beyond material sourcing alone, accelerating the Department's transition toward continuous supply chain risk management, industrial resilience, and lifecycle sustainment practices.

KEY FINDINGS

- Executive Order 14415 reflects a changing strategic environment emphasizing domestic capability, supplier transparency, and proactive risk management rather than reactive mitigation
- Supply chain resilience is now considered a national security imperative
- Many of these dependencies exist multiple tiers beneath the prime contractor and often remain invisible until production is disrupted or sustainment becomes impossible
- While recent supply chain disruptions and geopolitical competition underscored the need for action, Executive Order 14415 principally reinforces the implementation of 10 U.S.C. § 4872 by emphasizing domestic production, resilient supply chains, and stricter observance of existing statutory requirements.
- Taken collectively, Title 10 U.S.C. § 4872, Executive Order 14415, DoDI 4245.15, SD-22, and SD-26 demonstrate the Department of War's direction of travel for acquisition and sustainment. While these documents primarily establish policy and guidance for government organizations, they are expected to influence future acquisition strategies and contract requirements. Defense manufacturers should therefore monitor emerging customer requirements and evaluate investments in capabilities such as supply chain visibility, continuous lifecycle intelligence, digital product data management, domestic supplier development, enterprise risk governance, digital traceability, workforce competency, and proactive DMSMS and Parts Management.

1. Background & Strategic Context

Over the past decade, disruptions caused by pandemics, natural disasters, geopolitical competition, transportation constraints, and industrial consolidation have demonstrated that supply chain resilience is inseparable from national security. These events have accelerated the Department of Defense's transition toward policies emphasizing domestic capability, supplier transparency, and lifecycle risk management. A broad shift in industrial base policy reflects that Executive Order 14415 does not exist in isolation. This reflects a broader evolution in U.S. industrial and acquisition policy that increasingly recognizes supply chain resilience as a national security imperative.

Recent policy initiatives—including updates to Department of War DMSMS lifecycle management policy (DoDI 4245.15), continued modernization of DMSMS management guidance through SD-22 and SD-26, and regulatory changes affecting the procurement of printed circuit boards and printed circuit board assemblies supporting defense systems—illustrate a common direction. While these actions originate from different authorities and address different aspects of the defense industrial base, they collectively emphasize greater transparency, trusted domestic manufacturing capability, and long-term industrial resilience. Taken together, these developments suggest that organizations should view supply chain resilience not as a series of independent compliance activities, but as an increasingly integrated element of acquisition strategy, sustainment planning, and industrial base management.

Taken together, these legislative, executive, and departmental initiatives mark a fundamental shift in how supply chain risk is understood and managed within the Department of War. Geopolitical competition, disruptions to global supply chains, increasing dependence on advanced electronics, and the extended service lives of defense platforms have exposed the limitations of supply chains optimized primarily for cost and efficiency. In response, Congress, the Executive Branch, and the Department of War have progressively strengthened the policy framework through Title 10 U.S.C. § 4872, Executive Order 14415, DoDI 4245.15, SD-22, SD-26, and related acquisition initiatives. Collectively, these authorities emphasize industrial resilience, trusted domestic manufacturing, proactive DMSMS and Parts Management, enterprise lifecycle management, and greater supply chain transparency. While each document serves a distinct purpose and originates from a different authority, together they reflect a broader transition toward treating supply chain intelligence and resilience as strategic capabilities essential to national security. Collectively, these developments reflect a transition from supply chains optimized primarily for global cost efficiency toward supply networks designed to balance cost, resilience, trusted manufacturing and strategic capability.

2. Policy Analysis

U.S. defense supply chain policy has evolved in response to a series of operational, economic, and geopolitical events that exposed vulnerabilities in globally distributed manufacturing networks. The COVID-19 pandemic revealed the fragility of just-in-time supply chains as shortages of semiconductors, medical supplies, and critical components disrupted both commercial production and defense readiness. At the same time, increasing strategic competition among major powers, continued dependence on foreign sources for critical minerals and advanced electronics, and disruptions stemming from international conflicts reinforced concerns about concentrated manufacturing capacity and single points of failure. These events accelerated bipartisan efforts to strengthen domestic manufacturing, improve supply chain visibility, and reduce strategic dependencies through initiatives such as the 2021 federal supply chain review, implementation of the CHIPS and Science Act, and subsequent industrial base investments.

2. Policy Analysis

Within the Department of War, this changing environment has been reflected in the steady evolution of DMSMS management policy and implementation guidance across the acquisition and sustainment lifecycle. SD-22 provided implementation guidance that encouraged government program offices to move beyond reactive component replacement by adopting proactive DMSMS management practices throughout the acquisition and sustainment lifecycle. DoDI 4245.15 subsequently established Department of War policy for proactive, risk-based DMSMS management, defining governance, accountability, and lifecycle planning responsibilities across acquisition and sustainment organizations.

SD-26 complements this policy framework by providing standardized contract language that enables Department of War acquisition organizations to flow DMSMS management, data delivery, lifecycle risk management, and reporting requirements to government contractors. Taken together, these policy and guidance documents illustrate the Department of War's progression from managing individual component obsolescence toward a more integrated approach to lifecycle risk management and supply chain resilience.

Executive Order 14415 builds upon this broader policy trajectory by extending the conversation beyond lifecycle management to the strategic resilience of the defense industrial base itself. The Order strengthens expectations for comprehensive supply chain mapping, encourages qualification of domestic sources for critical materials and components, and limits reliance on waivers for certain foreign-sourced materials in national security procurements.

Rather than replacing existing Department of War DMSMS policy and guidance, Executive Order 14415 reinforces a broader federal emphasis on trusted domestic manufacturing, industrial resilience, and improved visibility into multi-tier supply chains. Viewed collectively, this evolving policy framework reflects an increasingly integrated approach in which lifecycle management, acquisition strategy, and industrial base resilience are no longer treated as separate disciplines but as complementary elements of long-term national security planning.

Year	Authority	Type	Primary Focus
2009	SD-22	Implementation Guidance	Introduced proactive DMSMS management practices and sustainment lifecycle
2018 / 2021 / 2026	Title 10 U.S.C.§4872	Statute	Established statutory foundation for trusted sourcing of sensitive materials and resilient domestic and allied defense supply chains
2020	DoDI 4245.15	Department Policy	Established Department policy for proactive, risk-based DMSMS management throughout lifecycle
2019 / 2025	SD-26	Standardized Contract Language	Standardized acquisition contract language supporting contractor execution of DMSMS management
2026	Executive Order 14415	Executive Order	Reinforced statutory requirements and strengthened executive implementation

Table 1: Major Milestones in the Evolution of Defense Supply Chain, DMSMS, and Industrial Resilience Policy
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3. Operational Impacts by Stakeholder

The evolution of this policy framework extends beyond compliance and will increasingly influence acquisition planning, lifecycle sustainment, supplier engagement, and industrial base management. Although the operational impacts will vary across stakeholder groups, each will play a role in supporting a more resilient, transparent, and strategically aligned defense supply chain. The common thread across these initiatives is a transition from managing physical products to managing the information that describes them. Accurate, accessible, and continuously maintained product and supply chain information is increasingly becoming the foundation upon which acquisition decisions, lifecycle management, and industrial resilience depend.

Although this paper focuses primarily on the evolution of DMSMS and industrial resilience policy, these initiatives align with broader Department of War acquisition and supply chain objectives that emphasize authoritative product data, lifecycle configuration management, supply chain transparency, and informed risk-based decision making. Collectively, these efforts reflect an increasing recognition that resilient sustainment depends not only on trusted sources of supply, but also on accurate, accessible, and continuously maintained technical and supply chain information. The following analysis examines how these evolving demand signals are likely to affect key stakeholder groups and the capabilities they will increasingly be expected to demonstrate.

OEMs: Original Equipment Manufacturers are likely to experience increased expectations for end-to-end supply chain visibility, domestic sourcing strategies, and documentation supporting supplier selection decisions. As system integrators, OEMs increasingly serve as the focal point for demonstrating industrial resilience across complex supplier ecosystems. This expands supply chain risk management beyond procurement into engineering, quality, program management, and executive leadership.

Capability Considerations

OEMs should evaluate investments in enterprise supply chain visibility, digital Bills of Material, continuous lifecycle intelligence, and executive governance processes that provide timely awareness of supplier risk, sourcing dependencies, and manufacturing resilience. These capabilities can improve decision-making throughout acquisition, production, and sustainment while strengthening the organization's ability to respond to evolving customer expectations.

Stakeholder	Information Responsibility
Program Office	Maintain lifecycle visibility and acquisition oversight
Prime Contractor	Integrate supplier intelligence and execute contractual DMSMS requirements
OEM	Maintain product configuration data and lifecycle supportability
Suppliers	Provide timely product lifecycle, sourcing, and availability information

Table 2: Information Responsibilities Across the Defense Lifecycle

3. Operational Impacts by Stakeholder

Tier 1 suppliers increasingly act as the bridge between OEM requirements and the broader supplier ecosystem. As prime interface partners, they are likely to experience greater demand for supplier transparency, lifecycle planning, domestic sourcing evidence, and proactive risk reporting. Customer expectations may increasingly extend beyond product delivery to include demonstrable understanding of lower-tier supply chain dependencies.

Capability Considerations

Tier 1 organizations should consider strengthening supplier intelligence, digital traceability, domestic supplier qualification processes, and cross-functional risk governance. Investments that improve visibility into lower-tier suppliers and enable continuous monitoring of lifecycle and sourcing conditions may improve responsiveness to customer inquiries while reducing operational disruption.

Tier 2 manufacturers frequently produce specialized components or assemblies that support multiple defense platforms while maintaining limited visibility into downstream program requirements. As information requests expand, these organizations may be expected to provide greater transparency regarding manufacturing locations, material sourcing, lifecycle status, and production capacity.

Capability Considerations

Tier 2 suppliers should evaluate investments in structured product data, digital Bills of Material, supplier traceability, and lifecycle management capabilities. Establishing standardized methods for maintaining and sharing supply chain information can reduce administrative burden while improving competitiveness within the defense industrial base.

Tier 3 suppliers often manufacture highly specialized components that are critical to larger systems despite operating with comparatively limited resources. As resilience and transparency become increasingly important across the defense supply chain, smaller organizations may encounter growing expectations for documentation, traceability, and lifecycle information that historically were not requested.

Capability Considerations

Tier 3 organizations should consider practical investments in digital record management, product traceability, workforce development, and standardized lifecycle documentation. Scalable approaches to managing supply chain information can position smaller suppliers to support evolving customer requirements without significantly increasing administrative complexity.

Government Program Offices are increasingly responsible for balancing acquisition speed, affordability, and long-term sustainment while ensuring that industrial base considerations are incorporated into program planning. Policies such as Executive Order 14415, DoDI 4245.15, SD-22, and SD-26 collectively reinforce the importance of proactive supply chain risk management throughout the acquisition lifecycle.

Capability Considerations

Program offices should consider strengthening enterprise supply chain assessment capabilities, digital program oversight, industrial base analytics, and continuous lifecycle intelligence. Improving access to timely supply chain information can support acquisition planning, sustainment forecasting, and more informed risk management throughout the life of a program.

4. Practical Takeaways

1. Waivers Are Becoming the Exception, Not the Strategy

Executive Order 14415 reinforces a policy direction that places greater emphasis on trusted domestic sources for critical materials and components, while increasing scrutiny of waivers that permit foreign sourcing in defense applications. Although waivers remain an important acquisition tool, the policy signals that they should support exceptional circumstances rather than serve as a routine business practice.

What Practitioners Should Understand

Organizations should expect greater visibility into sourcing decisions throughout the acquisition lifecycle. The ability to identify domestic alternatives, understand supply chain dependencies, and document supplier selection rationale may become increasingly important during proposal development, production planning, and sustainment activities. Supply chain decisions that were once made primarily on the basis of cost or availability are increasingly evaluated within the broader context of industrial resilience and national security.

2. Supply Chain Visibility Extends Beyond Direct Suppliers

The policy environment increasingly recognizes that risk often originates below the first tier of the supply chain. Executive Order 14415 reinforces broader federal efforts to improve understanding of supplier dependencies, manufacturing locations, and critical material sources across multiple tiers of the defense industrial base.

What Practitioners Should Understand

Understanding a direct supplier is no longer sufficient to understand supply chain risk. Dependencies several tiers removed from the prime contractor can influence production schedules, sustainment planning, and program risk. Organizations that maintain visibility beyond immediate suppliers may be better positioned to anticipate disruptions and respond more effectively when conditions change.

3. Digital Product Information Is Becoming Strategic Infrastructure

Policies and guidance such as SD-22, DoDI 4245.15, SD-26, and Executive Order 14415 collectively place greater emphasis on accurate, accessible, and continuously maintained product and supply chain information.

What Practitioners Should Understand

Bills of Material, approved manufacturer lists, supplier information, lifecycle status, and sourcing data increasingly support activities far beyond engineering. These data sets influence acquisition decisions, sustainment planning, industrial base assessments, and supplier engagement. Organizations that maintain structured, digital product information are generally better positioned to respond efficiently to changing customer and regulatory requirements.

4. Industrial Resilience Is Becoming a Shared Enterprise Responsibility

Historically, lifecycle management, DMSMS, sourcing, engineering, and acquisition activities often operated as separate disciplines. Recent policy developments increasingly recognize that supply chain resilience depends upon coordinated decision-making across multiple business functions.

4. Practical Takeaways

4. Industrial Resilience Is Becoming a Shared Enterprise Responsibility

What Practitioners Should Understand

Supply chain resilience is no longer solely a procurement or engineering responsibility. Program management, contracts, quality, manufacturing, sustainment, and executive leadership all contribute to managing lifecycle and supply chain risk. Organizations that encourage collaboration across these functions are generally better equipped to respond to evolving operational and policy requirements.

5. Continuous Awareness Is Replacing Periodic Assessment

The combined direction of recent policy initiatives reflects a shift from periodic compliance activities toward maintaining an ongoing understanding of lifecycle, supplier, and industrial base conditions throughout the life of a defense program.

What Practitioners Should Understand

Supply chains are dynamic. Suppliers change ownership, manufacturing locations evolve, components approach end-of-life, and geopolitical conditions can alter sourcing risk with little notice. Periodic reviews remain an important management practice, but organizations increasingly benefit from maintaining current awareness of conditions that may influence acquisition, production, or sustainment decisions over time.

5. Blue Water Perspective

Executive Order 14415 is best understood not as an isolated policy initiative, but as another milestone in the ongoing evolution of defense acquisition and sustainment. When viewed alongside SD-22, DoDI 4245.15, SD-26, and related industrial base initiatives, a consistent pattern emerges. Over time, the focus of policy has expanded beyond managing individual component obsolescence toward strengthening the resilience, transparency, and long-term viability of the defense industrial base as a whole.

From Blue Water's perspective, the most significant change is not the introduction of new compliance requirements, but the changing role of information in supply chain management. Historically, organizations have relied on systems of record—such as ERP, PLM, and MRP platforms—to manage internal operations and product data. Those systems remain foundational, but they were not designed to continuously reflect the external conditions that increasingly influence defense programs, including supplier health, lifecycle changes, manufacturing shifts, material availability, or geopolitical risk.

As the policy environment continues to evolve, maintaining awareness of the external operating environment is becoming as important as managing internal business processes. This represents a broader shift from periodic assessment toward continuous understanding, enabling organizations to make informed decisions before disruptions affect production, sustainment, or mission readiness. In our view, organizations that treat supply chain intelligence as a strategic business capability—not simply a compliance activity—will be better positioned to adapt to future policy changes, strengthen customer confidence, and improve long-term operational resilience.

5. Blue Water Perspective

Ultimately, industrial resilience is not achieved through any single executive order, regulation, or technology. It is the product of informed decision-making, cross-functional collaboration, and timely access to trusted information. While the specific policies discussed in this paper will continue to evolve, the broader direction is increasingly clear: resilient supply chains depend not only on what organizations produce, but on how well they understand the dynamic ecosystems in which those products are designed, sourced, manufactured, and sustained. The evolution of defense policy is fundamentally an evolution in the role of information.

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Blue Water Components Analysis

Blue Water Components. Independent analysis and interpretation contained within this publication are derived from review and synthesis of the statutory authorities, executive actions, Department of Defense policy, implementation guidance, federal reports, and publicly available government sources listed above. Conclusions, operational implications, and capability recommendations represent the independent analysis of Blue Water Components and do not reflect official positions of the U.S. Government.