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Modernizing Supplier Qualification to Expand the Department of War Industrial Base

An Assessment of Qualification Requirements, Bureaucratic Impediments, and Opportunities for Reform

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Executive Summary

Supplier qualification modernization is a department-wide readiness imperative. The objective is not to lower standards, but to modernize how rigorous safety, quality, cybersecurity, and technical standards are implemented to lower barriers to entry, strengthen contested logistics readiness, expand the qualified supplier base, and improve industrial base resiliency.

Strategic Context

The Department's ability to prevail in contested logistics environments depends upon resilient and responsive supply chains. Supplier qualification directly affects surge capacity, industrial participation, and warfighter readiness.

Central Thesis

The current supplier qualification system is the product of more than seventy years of independently justified policies. Modernization requires a single focused approach to align policy, modernize organizational behavior, and implement technology-enabled processes to achieve readiness outcomes.

Policy Drives Behavior

Meaningful change will not occur through technology investments alone. Until Department-wide policy changes are implemented, the behaviors, business rules, and qualification practices employed by the Military Departments and their Defense Agencies will continue to drive many of today's barriers to industrial base participation.

Evolution of Major Supplier Qualification Policies and Requirements

Policy / Requirement	Date Enacted	Primary Purpose	Industrial Base Implications
Approved Source Programs	1950s-1960s	Safety and performance	Engineering qualification requirements
QPL Requirements	1950s-1970s	Reliability	Higher qualification costs
First Article Testing	1950s-1970s	Manufacturing validation	Longer schedules
ITAR	1976 (expanded after 2001)	Protect technical data	Limited data accessibility
SAR Processes	1980s	Approve alternate sources	Reduced participation

JCP	1985	Protect technical data	Delayed onboarding
ISO 9001 / AS9100	1990s-2000s	Quality management	Additional compliance costs
Supply Chain Risk Management	2011-2018	Supply chain integrity	Documentation requirements
NIST SP 800-171	2016	Protect CUI	Cybersecurity costs
CUI Requirements	2016-Present	Traceability	Administrative burden
CMMC	2020-Present	Cybersecurity controls	Disproportionate impact on small manufacturers

No single policy constitutes the primary barrier to supplier participation. The cumulative effect of these requirements represents a daunting barrier that significantly influences qualification costs, timelines, industrial base participation that is often viewed as impenetrable and not worth the effort to penetrate

Characteristics of Major Sustainment Supply Chains

Supply Chain	Characteristics	Qualification Challenges	Primary Risk
Class IX Repair Parts	Technical data dependent, low demand	SARs, FAT, source limitations	Single-source dependency
Energy	Commodity based and globally distributed	Specifications and storage requirements	Supply disruption
Subsistence	Perishable and regulated	Food safety compliance	Availability
Medical	Highly regulated	FDA approvals and traceability	Shortages and patient safety
Construction & Equipment	Industrial manufacturing	Standards and testing requirements	Surge capacity
Clothing & Textiles	Domestic sourcing requirements	Berry Amendment compliance	Limited domestic capacity

The Nine Qualification Barriers

1. Access to Technical Data

Government-owned technical data does not always translate into competitive sourcing opportunities.

Potential reforms include adopting risk-based qualification methodologies, AI-enabled reviews, digital engineering capabilities, and improved cross-organizational coordination. Product Support Planning should also be updated to preserve future sourcing flexibility by acquiring appropriately priced intellectual property license rights during the initial competitive production contract. Supply policy should further require the PICA to maintain a centralized repository of available IP license rights and clearly defined procedures for exercising those rights when additional qualified sources are needed.

2. Qualification Costs

Qualification costs disproportionately burden small manufacturers.

Potential reforms include risk-based qualification methodologies, AI-enabled reviews, digital engineering capabilities, and improved cross-organizational coordination.

3. Long Government Approval Timelines

Sequential reviews create unnecessary delays.

Potential reforms include risk-based qualification methodologies, AI-enabled reviews, digital engineering capabilities, and improved cross-organizational coordination.

4. Limited Government Engineering Resources

Engineering constraints contribute to qualification backlogs.

Potential reforms include risk-based qualification methodologies, AI-enabled reviews, digital engineering capabilities, and improved cross-organizational coordination.

5. Weak Business Case for Many NSNs

Low demand requirements discourage participation.

Potential reforms include adopting risk-based qualification methodologies, AI-enabled reviews, digital engineering capabilities, and improved cross-organizational coordination. The Department should also consider aggregating demand and modernizing contracting strategies by commodity (for example, machined metal parts, composites, and wire harnesses) to create stronger business cases for suppliers. Such an approach would encourage investment in modern, flexible manufacturing capabilities that can efficiently pivot across multiple low-volume product lines.

6. Joint Certification Program

Necessary protections may delay technical data access.

Potential reforms include adopting risk-based qualification methodologies, AI-enabled reviews, digital engineering capabilities, and improved cross-organizational coordination. In addition, PICA/SICA roles, coordination, and qualification decision authority should be more clearly codified and consistently enforced to eliminate redundant reviews and establish a single accountable approval authority.

7. CMMC

Cybersecurity requirements can create disproportionate costs. The recent suspension of CMMC 2 Qualifications is a step in the right direction. Although this suspension is to study the CMMC 2 requirements.

Potential reforms include adopting risk-based qualification methodologies, AI-enabled reviews, digital engineering capabilities, and improved cross-organizational coordination. Cybersecurity requirements should also be better aligned with actual program risk. For many non-electronic components, such as structural metal parts and composites, CMMC requirements may provide limited additional value and should be tailored based on the sensitivity of the technical information involved.

8. Documentation and Administrative Burden

Extensive documentation requirements increase costs.

Potential reforms include adopting risk-based qualification methodologies, AI-enabled reviews, digital engineering capabilities, and improved cross-organizational coordination. A centralized, government-managed qualification database administered by DLA should enable all Military Departments and Defense Agencies to quickly determine whether a supplier or part has already been qualified, reducing duplication and accelerating qualification decisions.

9. Multi-Organizational Bureaucracy

Multiple organizations contribute to lengthy qualification timelines.

Potential reforms include adopting risk-based qualification methodologies, AI-enabled reviews, digital engineering capabilities, and improved cross-organizational coordination. PICA/SICA relationships, responsibilities, and decision authority should be clearly defined in policy and consistently enforced to reduce redundant coordination and establish a single authoritative qualification decision.

Policy, Organizational Behavior, and Readiness Outcomes

Policy	Behavior	Qualification Practice	Industrial Base Outcome	Readiness Outcome
Source Limitations	Risk avoidance	Additional SARs	Reduced competition	Single-source dependencies
Sequential Reviews	Organizational stovepipes	Multiple approvals	Higher costs	Reduced responsiveness
Limited Data Access	Restricted qualification	Longer timelines	Fewer suppliers	Reduced surge capacity
Uniform Standards	High-risk methodologies	Higher qualification costs	Reduced participation	Lower resiliency
Risk-based Policies	Modernized reviews	Faster qualification	Expanded suppliers	Improved readiness

Requirements: Purpose versus Unintended Consequences

Requirement	Purpose	Unintended Consequence
FAT	Safety and performance	Longer timelines
SAR	Technical equivalency	Reduced competition
JCP	Protect technical data	Delayed onboarding
CMMC	Protect CUI	Higher compliance costs
Source Limitations	Reduce technical risk	Limited competition

What Success Looks Like

Today's Environment	Modernized Future State
Single-source NSNs	Multiple qualified suppliers, government retains priced options for licensed IP access
Sequential reviews	Parallel digital workflows – single manager approval, i.e., PICA/SICA
Limited industrial participation	Expanded domestic supplier base
Supply chain fragility	Greater resiliency, surge capacity, & flexibility to address changing demand patterns
Legacy qualification processes	Technology-enabled qualification ecosystem

Department-Wide Industrial Base Qualification Modernization Initiative

- Implement risk-based supplier qualification policies tailored to supply chains.
- Modernize organizational behaviors and qualification practices through policy changes.
- Expand Government-managed technical data accessibility where appropriate.
- Implement AI-enabled qualification package reviews and integrated digital workflows.
- Establish qualification cycle time performance metrics.
- Increase small business participation through streamlined qualification pathways.
- Strengthen industrial base resiliency through supplier diversification.
- Require periodic reviews of source limitations that unnecessarily limit competition.

Conclusion - Readiness Through Modernization

Readiness is the outcome. Industrial base expansion is the objective. Supplier qualification modernization is the mechanism. Lasting change requires aligning Department policy, organizational behavior, and technology-enabled modernization efforts. Until policy changes enable corresponding changes in behavior and qualification practices across the Military Departments and their Defense Agencies, many of today's barriers will persist. Supplier qualification modernization is therefore both a readiness imperative and a department-wide change management initiative that directly supports mitigating risks contested logistics environments, improving the resiliency of the defense industrial base, and enabling joint force sustainment.

References

- 10 U.S.C. §§ 4021–4022 (Other Transaction Authority).
- Defense Standardization Program Office. SD-6, Provisions Governing Qualification (latest edition).
- DFARS Procedures, Guidance, and Information (PGI), Qualified Products and Source Approval.
- DoDI 5000.97, Management of Government Quality Assurance Activities.
- MIL-STD-790, Standard Practice for Established Reliability and High Reliability Qualified Products List (QPL) Systems.
- NIST Special Publication 800-171 Rev. 3.
- DoD Cybersecurity Maturity Model Certification (CMMC) Program guidance.
- Defense Acquisition University (DAU) Intellectual Property Guidebook.
- Title 22 CFR Parts 120–130 (ITAR).
- Defense Logistics Agency Source Approval Program guidance and DIBBS resources.