

Challenges and Solutions for Integration of Advanced Manufacturing from SMM Perspective



Solution based thinking for a generational change in the workforce

Security and cost for SMM

Rough estimate

As you would expect, the cost of each area depends on a business' maturity. A business that has already implemented a regulatory framework like ITAR or even nongovernmental standards like ISO 27001 and PCI-DSS will require less time and resources to implement CMMC.

Additionally, the costs of CMMC implementation and certification are not completely understood due to changing requirements and their various interpretations. That said, we can offer approximations.

Program development and technology costs can range between \$20,000 and \$60,000.

The actual audit and certification costs can range between \$10,000 and \$40,000.

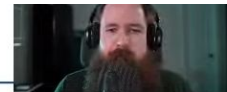
Depending on several factors, the total cost of a CMMC implementation and certification can range between \$30,000 and \$200,000.

CMMC Cyber security maturity model

CONTROLLED UNCLASSIFIED INFORMATION (CUI)

<https://www.youtube.com/watch?v=jbY2irZ1ePg>

Key Takeaways



1

CMMC Didn't Just Appear Out of the Blue

- CMMC isn't the forest. It's the leaves on a single tree.
- CMMC isn't going away.
- NIST SP 800-171 verification will exist, regardless of what it's called.
- Even if it did, the systemic burden that has accumulated over the years remains.

2

The Timeline Won't Stop With the Upcoming Final Rule

- The timeline is accelerating. There will be more rulemaking.
- SOLARWINDS is the new OPM.
- Upcoming Biden Executive Order on software supply chain security.
- Zero Trust Architecture.

3

We Already Know What the Upcoming Final Rule Will Say

- Almost every argument being made against DFARS, NIST SP 800-171, CMMC, and the CUI program has already been made and addressed in the Federal Register via formal rulemaking.
- Just because an argument may be sound and valid (cost, burden, small business impact, etc.) doesn't mean that it will win the debate.
- The cybersecurity arms race has eclipsed national security: the debate much more complex than it was 10 years ago.

4

Organizational Debt is the Enemy

- Organizational debt accumulates as it is never the top priority, until it's suddenly the only priority.
- There is a limit to how much technology can help.
- The majority of NIST SP 800-171 and CMMC requirements are non-technical.
- Relying on technology to solve non-technology problems is expensive and inefficient.
- Be skeptical of anyone promising suspiciously high compliance percentages as a result of "turn-key", silver bullet solutions.

5

The Burden of DFARS Cybersecurity Compliance is a Paradox

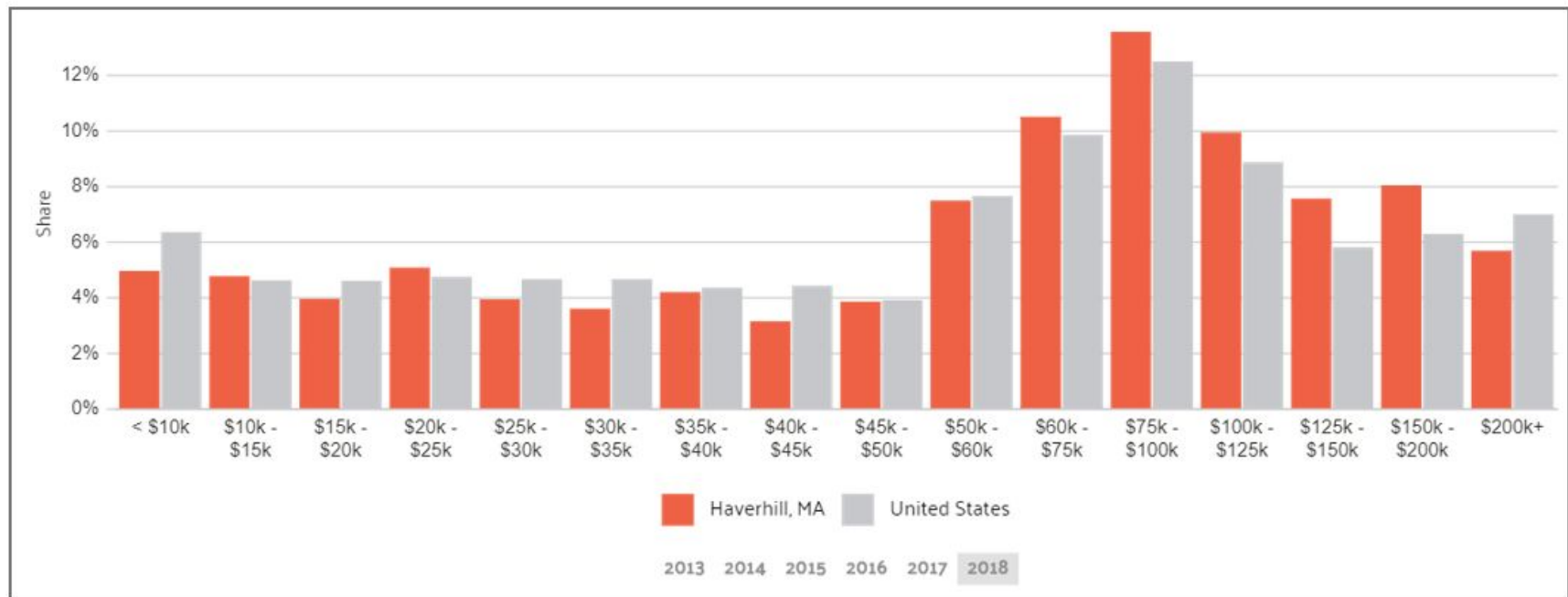
- Aggressive attempts to create a minimal viable security baseline inadvertently made compliance much more difficult for those companies with low security maturity.
- Poor assumptions in the design of NIST SP 800-171 does not magically delete the categorization and subsequent requirements to protect CUI.
- Counterintuitively, CMMC provides the exact mechanism for "reducing" burden: directly requiring things that were previously assumed to exist.

6

The Government is Still Burning Down it's Organizational Debt

- Upcoming Final DFARS Rule.
 - Anticipated momentarily.
- Upcoming FAR CUI Rule.
 - Anticipated Summer 2021.
- Agency CUI Program Implementation.
 - Anticipated December 2021.

Annex 1 - Household Income



Household Income 2018

Data from US Census Bureau



One Goal - Every public school student achieves a true living wage job.





Process:

Establish a community public-private partnership that serves as a civic infrastructure focused solely on achieving the goal.

Bring together the city government, school system, business community, local community college or university, and social support organizations.

Leverage readily accessible data on available good jobs, the creative educational/training programs resident in community colleges and apprenticeship programs, the utility of rideshare services, the expertise available in the retired community and business community.

Plant ideas early ... start in Middle School.