



DEFENSE CONTRACT MANAGEMENT AGENCY

**Defense Industrial Base Controlled Unclassified Information Protection
and Cybersecurity Assessment
Lessons Learned/Cybersecurity Maturity Model Certification**

Presented By:

Dana Mason and Carley Salmon

Defense Industrial Base Cybersecurity Assessment Center (DIBCAC), DCMA

Version 1.1



- **Part 1: Overview**
 - Defense Contract Management Agency (DCMA)
 - Defense Industrial Base Cybersecurity Assessment Center (DIBCAC)
 - Assessment Confidence Levels
 - Pre-coordination
- **Part 2: Assessment Process**
 - Assessment
 - Post Assessment
 - Lessons Learned/Observations
- **Part 3: Cybersecurity Maturity Model Certification (CMMC)**



The Defense Contract Management Agency (DCMA) is, first and foremost, a product delivery organization. Our nation's warfighters expect our defense industry to produce and deliver the equipment they need to fight, survive and win. DCMA's integrated team of acquisition and support professionals makes this happen.

- DCMA has around **12,000 employees**
- Manages over **350,000 contracts** valued at more than **\$5 trillion**
- Over **19,000 locations** worldwide
- Receive **1,000** new contracts daily
- We authorize **\$650 million in payments daily**, for the DoD that comes out to a 1.5 million items in "stuff" we sign into inventory for our military.

Mission

Support the warfighter by assessing the Defense Industrial Base compliance in the protection of DoD Controlled Unclassified Information, ensuring contractors implement appropriate cybersecurity requirements, in support of acquisition decision making.

Vision

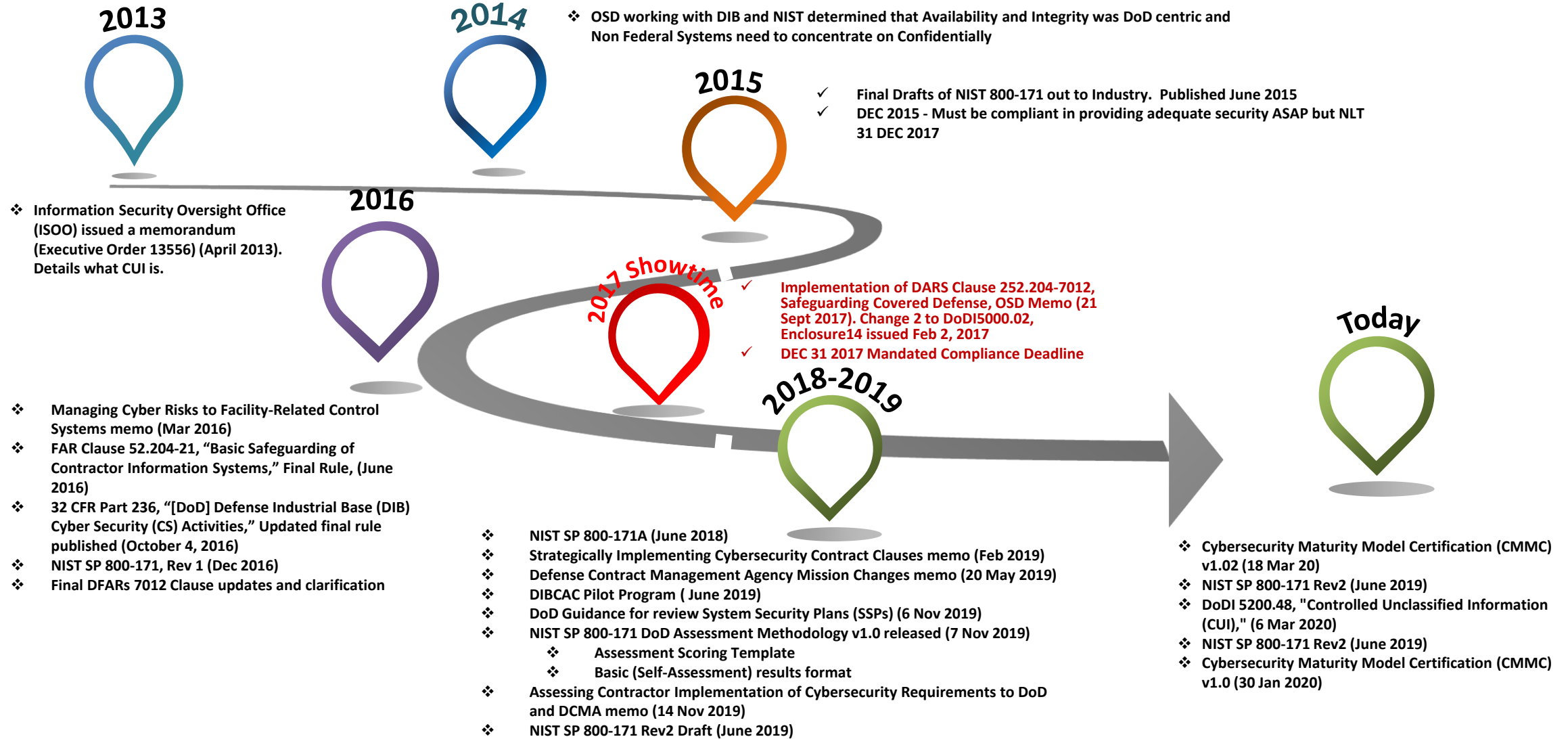
Security-focused, highly trained cybersecurity professionals providing comprehensive and repeatable assessments for risk-based decision making.



Security through compliance
Securitatis in obsequio



This All Started in 2013





DFARS Clause 252.204-7012, Safeguarding Covered Defense Information and Cyber Incident Reporting

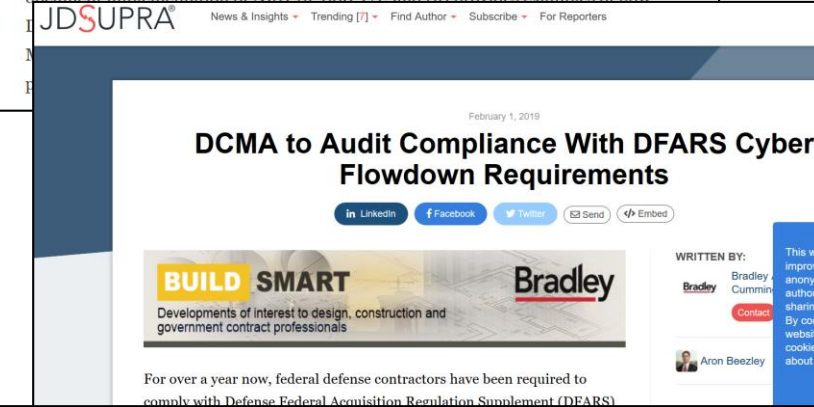
	Nov 18, 2013 <i>(Final Rule)</i>	Aug 26, 2015 / Dec 30, 2015 <i>(Interim Rules)</i>	October 21, 2016 <i>(Final Rule)</i>
Scope – What Information	<ul style="list-style-type: none"> Unclassified Controlled Technical Information 	<ul style="list-style-type: none"> Covered defense information Operationally Critical Support 	<ul style="list-style-type: none"> Revised/clarified definition for covered defense information
Adequate Security - Minimum Protections	<ul style="list-style-type: none"> Selected controls in NIST SP 800-53 	<ul style="list-style-type: none"> Aug 2015 NIST SP 800-171 	<ul style="list-style-type: none"> NIST SP 800-171
Deadline for Adequate Security	<ul style="list-style-type: none"> Contract Award 	<ul style="list-style-type: none"> Dec 2015 – As soon as practical, but NLT 31 Dec 17 	<ul style="list-style-type: none"> As soon as practical, but NLT 31 Dec 2017
Subcontractor/ Flowdown	<ul style="list-style-type: none"> Include the substance of the clause in <u>all</u> subcontracts 	<ul style="list-style-type: none"> Include in subcontracts for operationally critical support, or when involving covered contractor information system 	<ul style="list-style-type: none"> Contractor to determine if information required for subcontractor performance retains identity as CDI

When Contractors are faced with implementing multiple versions of the clause, Contracting Officers may work with Contractors, upon mutual agreement, to implement the latest version of the clause

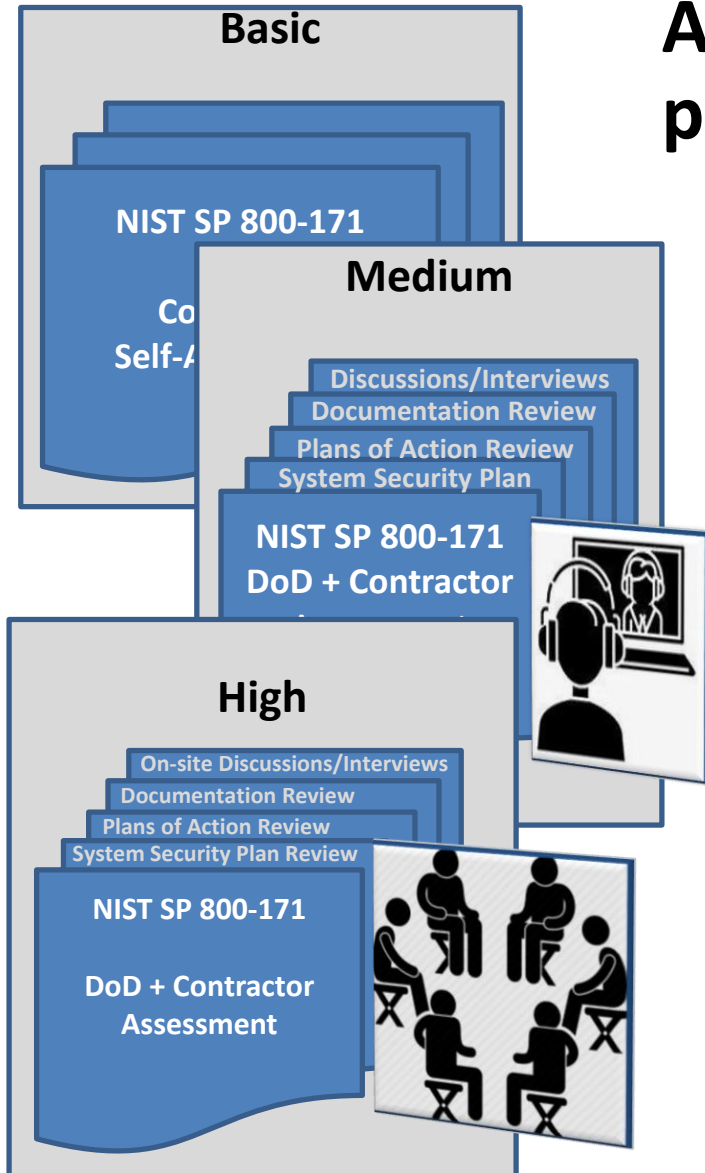
DoD Issues Further Guidance on Implementation of DFARS Cyber Rule

By Susan B. Cassidy and Calvin Cohen on September 26, 2017
POSTED IN CYBERSECURITY, DEFENSE INDUSTRY, GOVERNMENT CONTRACTS REGULATORY COMPLIANCE

On September 21, 2017, the Director of the Defense Pricing/Defense Procurement and Acquisition Policy (DPAP) issued **guidance** to Department of Defense (DoD) acquisition personnel in anticipation of the December 31, 2017 date for contractors to implement the security controls of NIST Special Publication (SP) 800-171. The guidance outlines (i) ways in which a contractor may use a System Security Plan (SSP) to document implementation of NIST SP 800-171; and (ii) provides examples of how




- Establish the tools, databases, processes, and requirements that will apply to all
- Partner with other Services/Agencies to implement the same assessment mechanisms to assess the contractors and contracts that they administer
- Ensure the Contractor is compliant (at time of award) with National Institute of Standards and Technology (NIST) Special Publication (SP) [800-171](#), *Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations* requirements in [DFARS Clause 252.204-7012](#), *Safeguarding Covered Defense Information (CDI) and Cyber Incident Reporting*
- Develop the proposed path using its administration authority under Federal Acquisition Regulation (FAR) [Part 42](#), *Contract Administration and Audit Services*; [FAR Part 43](#), *Contract Modifications*; and [DFARS Clause 242.302](#), *Contract Administration Functions* to modify contracts that are administered by DCMA to achieve a set of business strategies to obtain and assess contractor System Security Plan (SSPs) by leveraging its review of a contractor's purchasing system in accordance with [DFARS Clause 252.244-7001](#), *Contractor Purchasing System Administration*

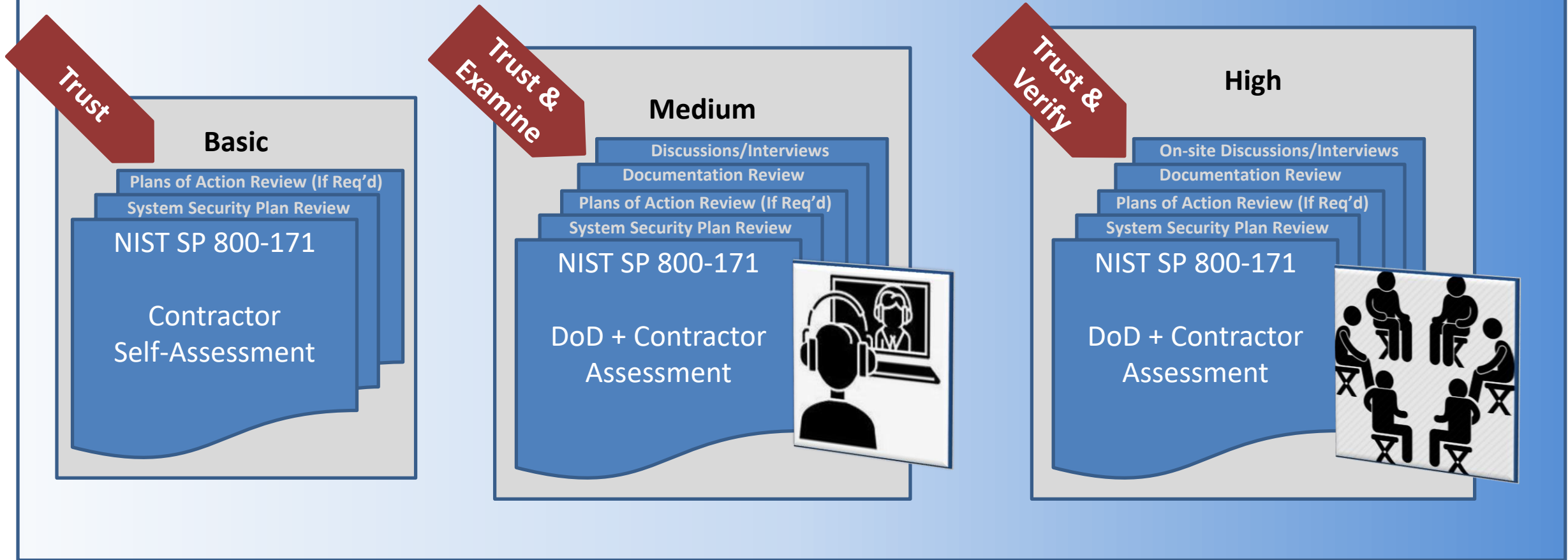


Assess contractor’s Enterprise level system(s) that process Controlled Unclassified Information (CUI)

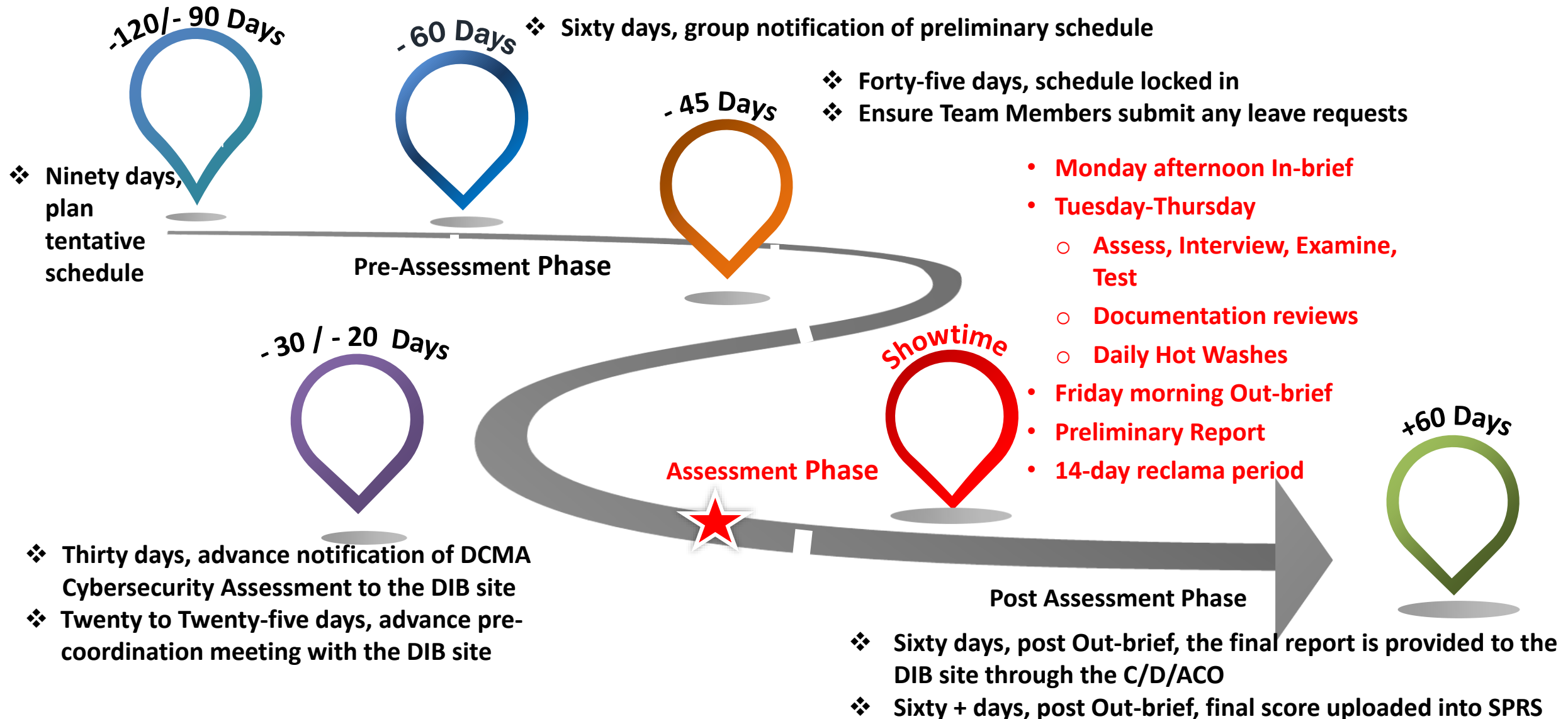
- Scoring criteria defined in the NIST SP 800-171 *DoD Assessment Methodology*,
 - High Confidence (over-the-shoulder) Validation (*includes all of the below*)
 - Medium Confidence (Document Review/Discussion)
 - Basic (Contractor Self-Assessment)
- Objective assessment of contractor’s requirements implementation status; not designed to credit partial implementation (with minor exceptions).
- Score reflects net effect of security requirements “not yet implemented.” If all implemented = score of 110.

Assessing Contractor Implementation of DFARS 252.204-7012

There are 3 levels of DoD assessment methodology, each resulting in a different level of confidence:



NIST 800-171 DoD Assessment Methodology



Notification Package:

- **Identify Scope**
- **Documentation requests**
- **Track the artifacts from DIB site**

Administration:

- **Coordination meeting with DIBCAC Coordinator/DIB Site C/D/ACO**
- **Develop and disseminate schedule**
- **Identify DIBCAC POCs**
- **Align assessment with assessment team**
- **Submit DIBCAC Incoming Visit Verification Guidance to DIB site C/D/ACO**
- **In/Out Briefs (DCMA focused overview)**
- **Develop compliance status DIB Leadership Team briefings**
- **Any Right Seat Rider participation logistics**

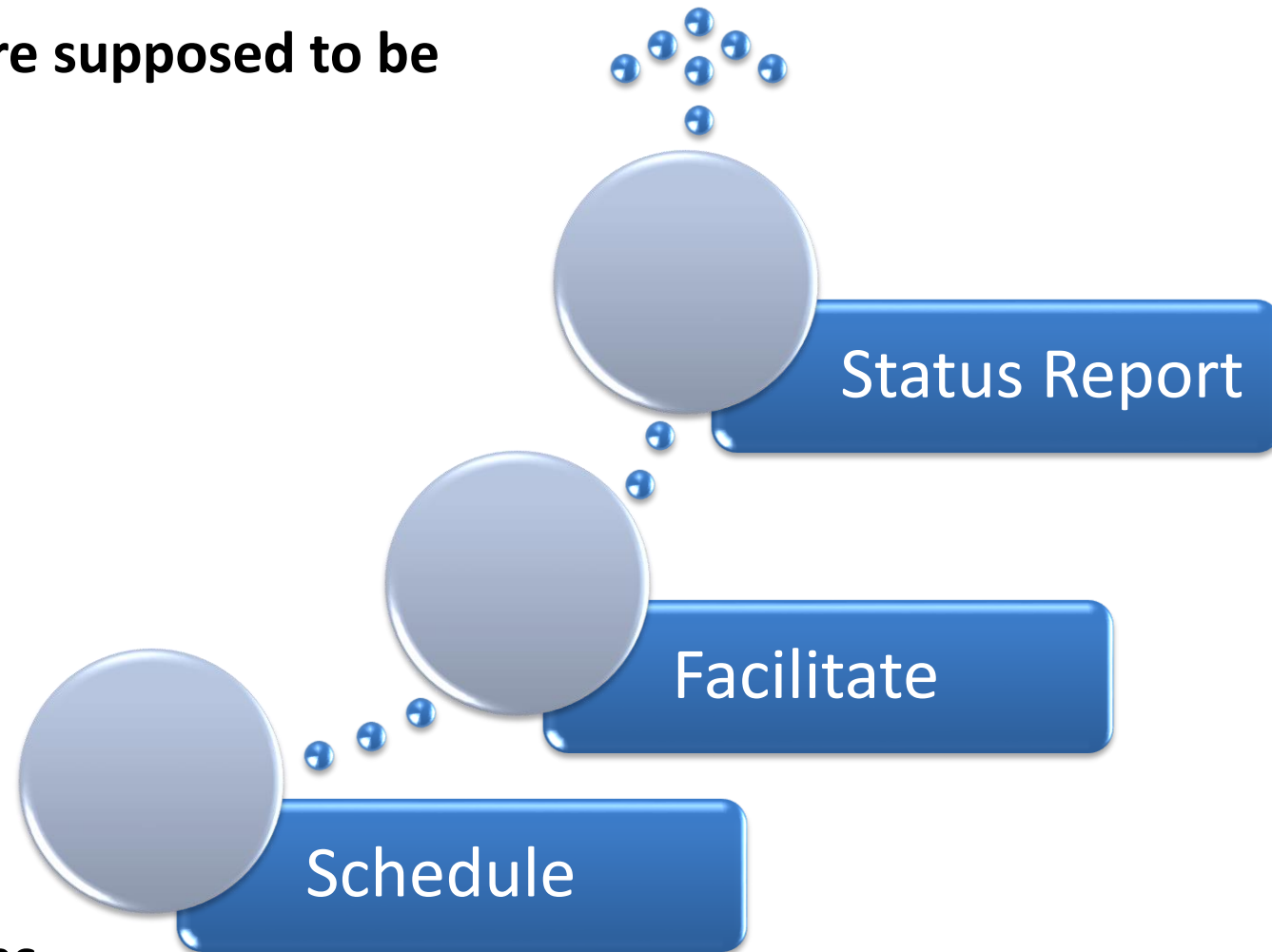
Coordination:

With C/D/ACO for receipt of artifacts

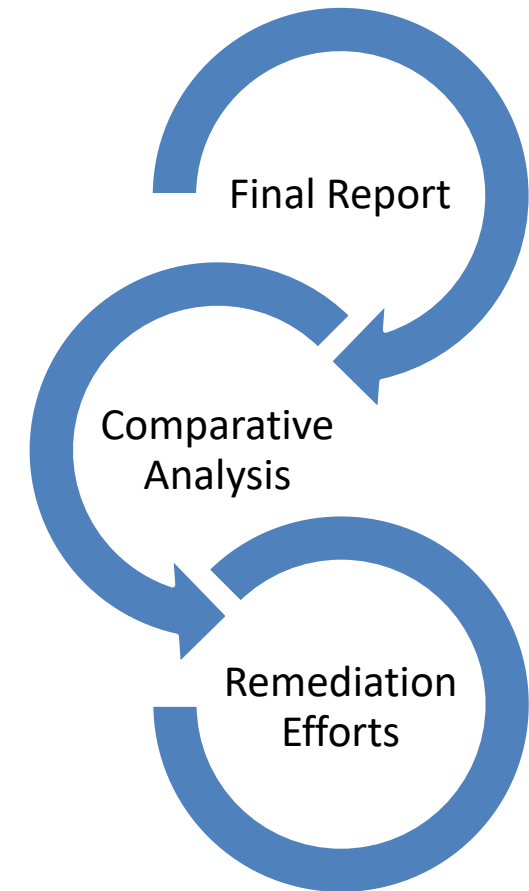
- **What to do when DIBCAC contacts you**
- **Pre-coordination**
 - basic assessment
 - documentation that you should have
 - process and programs needed



- **Maintain and manage the schedule (Team Lead)**
 - Keep all involved in the loop of statuses and schedule changes
 - Ensure personnel are where they are supposed to be
- **Facilitate meetings (Team Lead)**
 - In and Out briefs
 - Daily Hot washes
- **Daily Status reports (All Hands)**
 - What was accomplished
 - Identify preliminary deficiencies
 - The plan for the next day
 - Remaining requirements and actions



- **Complete Final Report:**
 - Ensure all final report are met (internal and external)
 - Disseminate (brief) final report to assessment Team Lead and DIBCAC leadership within 72 hours
 - Coordinate any required follow on discussions regarding final report with DIB site (via C/D/ACO)
- **Comparative Analysis:**
 - Gap between DIB site's self-assessment and final assessment results for metrics (future efforts can also be leveraged to do a DIB metric to view a broad spectrum of the industry at large, i.e. FY21)
 - Assessment team collaboration, lessons learned, After Action Review (AAR), etc.
- **Progress Brief on Remediation Activities: Any Plans of Action (POA)**



- **DCMA generates two documents after completion of an assessment:**
 - **Assessment Memorandum:**
 - States DCMA conducted an assessment of the contractor's compliance to the DFARS 252.204-7012.
 - Contains the contact information for the DIBCAC director in the event a component would like to discuss reciprocity.
 - **Assessment Report:**
 - Detailed description of the assessment conducted to include any items scored 'other than satisfied.'
 - Results - Company is compliant / non-compliant with DFARS Clause 252.204-7012
 - Compliant = requirements implemented, or Plan of Action (POA) in place with the expected date by when the Company will be compliant
 - Company goal is to reach compliance via 110
 - Not a Pass / Fail
- **Score entered into Supplier Performance Risk System (SPRS)**
- **If 110 not reached:**
 - DCMA DIBCAC re-assesses requirement post POA completion / validates compliance
 - Issues new Memorandum with updated score
 - Updates score in SPRS

As of 12 Jun 20

FY19 Pilot: Completed 16 out of 16 Assessments
FY20: Completed 53 out of 110 Assessments
****31 Medium Confidence Assessments**

Fundamental Boot Camps:

FY19: 3

FY20: 8

Intermediate Boot Camp: 1



*Fundamentals Boot Camp – Introduction to NIST SP 800-171, Assessment Methodologies

*Intermediate Boot Camp – Subject Matter Expert (SME) Training, Lead Assessor Training, Advanced Requirements Training



CYBERSECURITY MATURITY MODEL CERTIFICATION (CMMC)

- **CMMC Model combines multiple cybersecurity standards and references (i.e. NIST SP 800-171 Revision 1; Draft NIST SP 800-171B; International Organization for Standardization (ISO) 27001, *Information Security Management*; Aerospace Industries Association/National Aerospace Standards (AIA/NAS) 9933, *Critical Security Controls for Effective Capability in Cyber Defense*; and others) into one unified standard for cybersecurity**
- **Intent is to specify the required CMMC level in Requests for Proposals (RFP)**
 - Winning offeror to achieve this CMMC level as condition of contract award.
 - Guiding principle underlining CMMC framework - “trust but verify”
- **Department is currently working with military services and agencies to identify candidate programs that will implement CMMC requirements during the FY2021-FY2025 phased roll-out**
- **All new DoD contracts will contain the CMMC requirement starting in FY2026**



CMMC Methodology Under Construction



Outside Government

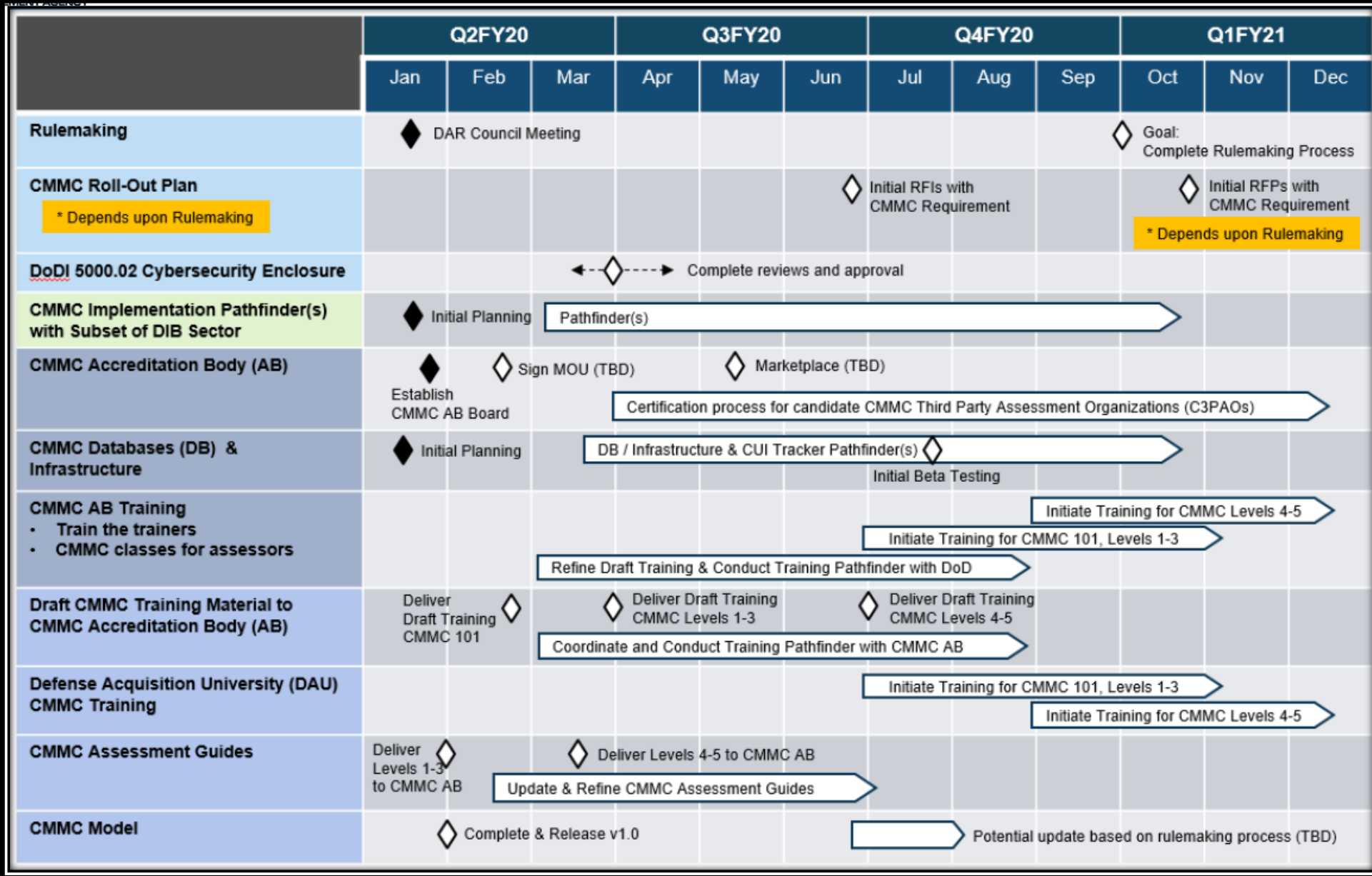
- **Governing Body**
- **Training and certification development**
- **Third Party Assessors (who, what, when, where, why, how much \$)**
- **Defense Industrial Base (DIB) Companies need to become certified**
- **Need a tool to track scheduled and or certification results**

Within Government

- **DFARS Language changes**
- **DoD Procurement Activities need CMMC training**
- **DoD Contracts need CMMC language**

No matter what happens, NIST SP 800-171 still needs to be implemented as per the DFARS and is the foundation of CMMC

CMMC Draft Schedule: CY20



- Currently the DFARS Clause 252.204-7012 defines 110 requirements for CMMC those 110 requirements are mixed into CMMC Level 1, 2 and 3
- CMMC adds Process Maturity Level for Level 2 and above
- CMMC adds new requirements in Level 2 & 3
- CMMC Level 1 is same requirements as identified FAR Clause 52.204-21, *Basic Safeguarding of Covered Contractor Systems*, published in 2016

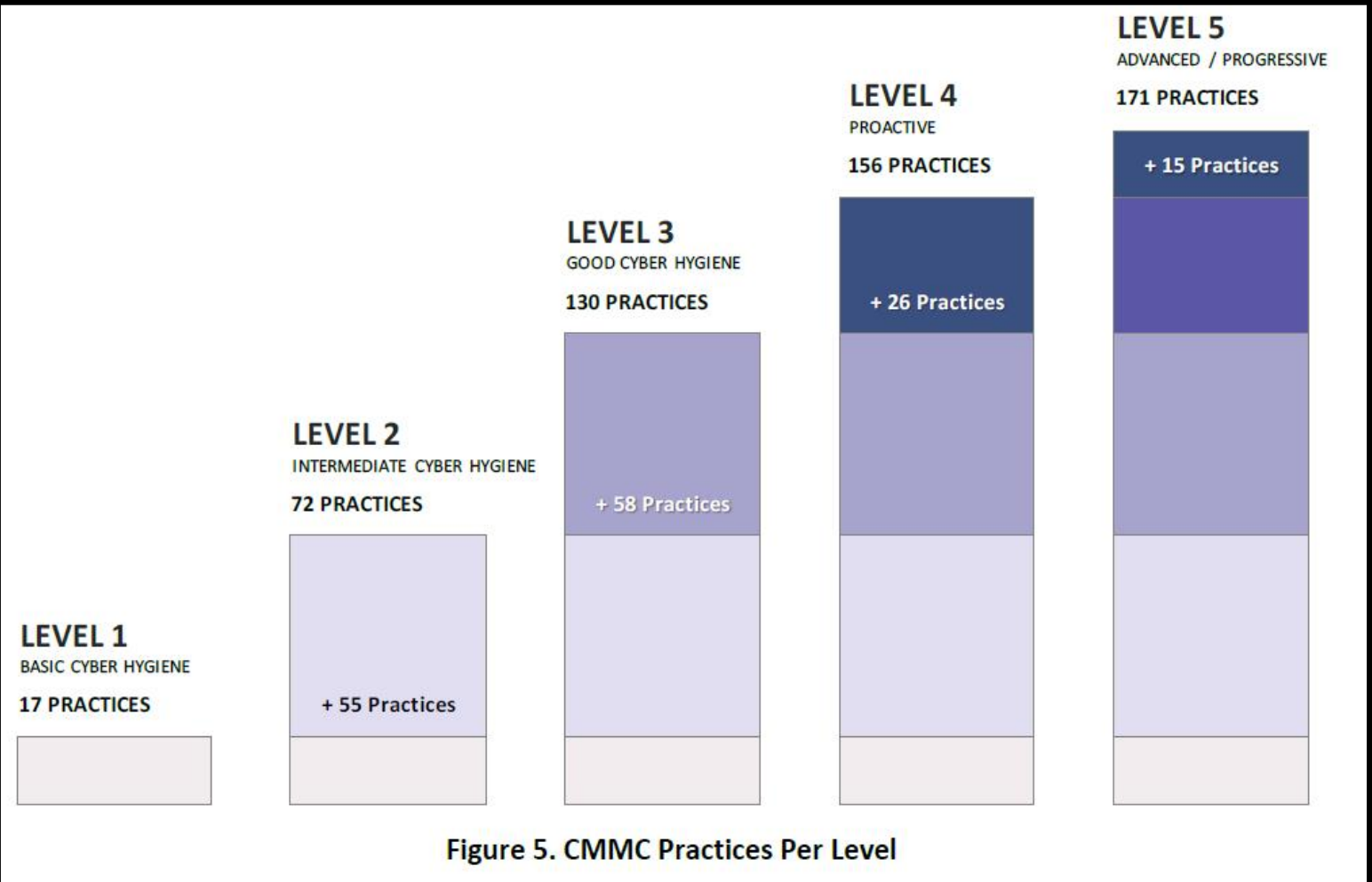


Figure 5. CMMC Practices Per Level

From CMMC Version 1.0

- Most important take away, read:
 - **DFARS Clause 252.204-7012**, *Safeguarding Covered Defense Information (CDI) and Cyber Incident Reporting*



There are many requirements sprinkled in there. NIST 800-171 compliance, use of cloud providers, how to and when to report cyber intrusions, Adequate security, CDI, CUI, and subcontracts.
 - **NIST SP 800-171R2**, *Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations*
 - **NIST SP 800-171A**, *Assessing Security Requirements for Controlled Unclassified Information.*

This is our primary assessment methodology.
 - **CMMC version 1**, Link: <https://www.acq.osd.mil/cmmc/>
- Everything you do for NIST 800-171 compliance relates to a CMMC Certification level!

Questions?

dcma.lee.hq.mbx.tdx-inbox@mail.mil



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- 
- **Program offices may contact the contractor directly to request information pertaining to a specific assessment**
 - **Results available via SPRS:**
 - **Organization that conducted the assessment (e.g., DCMA, Defense Counterintelligence and Security Agency (DCSA), or DoD component)**
 - **Scope of information system/system security plan(s) assessed (e.g., the internal unclassified information system(s)/network(s) , mapped to contractor Commercial and Government Entity (CAGE) codes, that support(s) performance of DoD contracts)**
 - **Date / Level of the assessment (i.e., Basic, Medium, or High)**
 - **Total summary score for each system security plan(s) assessed**
 - **Date that score of 110 (full implementation) expected to be achieved**

Letters	Phrase
ACO	Administrative Contract Officer
AIA/NAS	Aerospace Industries Association/National Aerospace Standards
C/ADO	Corporate Administrative Contract Officer
CAGE	Commercial and Government Entity
CDI	Controlled Defense Information
CDRL	Contract Data Requirements List
CIO	Chief Information Officer
CMMC	Cybersecurity Maturity Model Certification
CTI	Controlled Technical Information
CUI	Controlled Unclassified Information
D/ACO	Divisional Administrative Contract Officer
DC3	DoD Cyber Crime Center
DCMA	Defense Contract Management Agency

Letters	Phrase
DCSA	Defense Counterintelligence and Security Agency
DFARS	Defense Federal Acquisition Regulation Supplement
DIB	Defense Industrial Base
DIBCAC	Defense Industrial Base Cybersecurity Assessment Center
DoD	Department of Defense
DoDI	Department of Defense Instruction
E-CFR	Electronic Code of Federal Regulations
FAR	Federal Acquisition Regulation
FedRAMP	Federal Risk and Authorization Management Program
GFI	Government Furnished Information
ICF	Incident Collection Format
	<i>continued next page</i>

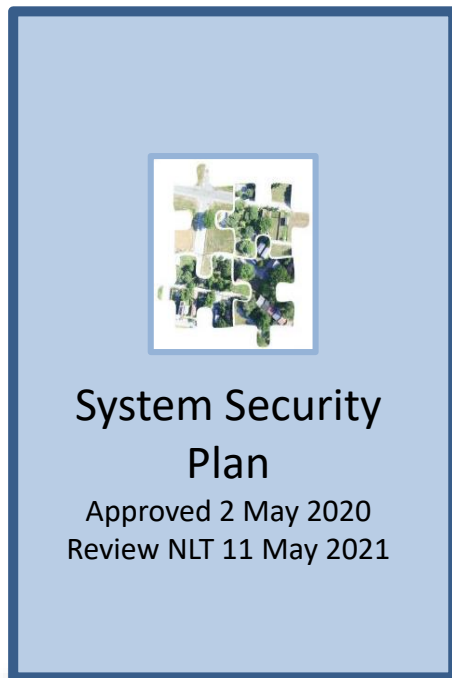
Letters	Phrase
ISO	International Organization for Standardization
NARA	National Archives and Records Administration
NIST	National Institute of Standards and Technology
PIEE	Procurement Integrated Enterprise Environment
POA	Plans of Action
Req'd	Required
SP	Special Publication
SPRS	Supplier Performance Risk System
SSP	System Security Plan

BACK UP

- **Per DFARS Clause 252.205-7012(b)(2)(ii)(B), if the offeror proposes to vary from NIST SP 800-171, the Offeror shall submit to the Contracting Officer, for consideration by the DoD CIO, a written explanation of:**
 - Why security requirement is not applicable; OR
 - How an alternative but equally effective security measure is used to achieve equivalent protection
- **When DoD CIO receives a request from a contracting officer, representatives in DoD CIO review the request to determine if the proposed alternative satisfies the security requirement, or if the requirement for non-applicability is acceptable**
 - The assessment is documented and provided to the contracting officer, generally within 5 working days
 - If request is favorably adjudicated, the assessment should be included in the contractor's system security plan

To document implementation of NIST SP 800-171, companies should have a system security plan (SSP) in place, in addition to any associated plans of action (POAs):

- **Security Requirement 3.12.4 (System Security Plan)**: Requires the contractor to develop, document, and periodically update, system security plans that describe system boundaries, system environments of operation, how security requirements are implemented, and the relationships with or connections to other systems
- **Security Requirement 3.12.2 (Plans of Action)**: Requires the contractor to develop and implement plans of action designed to correct deficiencies and reduce or eliminate vulnerabilities in their systems, and to describe how and when any unimplemented security requirements will be met



DFARS Clause 252.204-7012(c)(1)

When a cyber incident occurs, the contractor/subcontractor shall:

- **Review contractor network(s) for evidence of compromise of covered defense information using contractor's available tools, including, but not limited to, identifying compromised computers, servers, specific data, and user accounts.**
- **Identify covered defense information that may have been affected in the cyber incident.**
- **If contract contains requirement for operationally critical support, determine if the incident affects the contractor's ability to provide operationally critical support**
- **Rapidly report (within 72 hours of the discovery of an incident) directly to DoD.**
- **Subcontractors provide the incident report number, automatically assigned by DoD, to the prime Contractor (or next higher-tier subcontractor) as soon as practicable.**

When reporting a cyber incident, contractors/subcontractors submit to DoD:

- **A cyber incident report via <https://dibnet.dod.mil/>**
- **Malicious software if detected and isolated**
- **Media or access to covered contractor information systems and equipment when requested by the requiring activity/contracting officer**

Upon receipt of a cyber incident report :

- **The DoD Cyber Crime Center (DC3) sends the report to the contracting officer(s) identified on the Incident Collection Format (ICF) via encrypted email; the contracting officer(s) provides the ICF to the requiring activity(ies)**
- **DC3 analyzes the report to identify cyber threat vectors and adversary trends**
- **DC3 contacts the reporting company if the report is incomplete (e.g. no contract numbers, no contracting officer listed)**



The screenshot shows the DIBNet portal homepage. At the top right, there is a yellow button labeled "DIB CS Participant Login". The main heading is "Welcome to the DIBNet portal" with the subtitle "DoD's gateway for defense contractor cyber incident reporting and voluntary participation in DoD's Cybersecurity Program". There are two main content areas. The left area is titled "Report a Cyber Incident" and contains a yellow "Report" button, a paragraph explaining that a DoD-approved Medium Assurance Certificate is required, and a link to "click here". Below this is a "Need assistance?" section with contact information for the DoD Cyber Crime Center (DC3), including an email address (DCISE@dc3.mil), a hotline number (410) 981-0104, and a toll-free number (877) 838-2174. The right area is titled "DoD's DIB Cybersecurity (CS) Program" and contains a paragraph explaining the program's purpose. Below this is an "Apply Now!" button and another "Need assistance?" section with contact information for the DIB CS Program Office, including an email address (OSD.DIBCSIA@mail.mil), a phone number (703) 604-3167, a toll-free number (855) DoD-IACS, and a fax number (571) 372-5434.

Access beyond this page requires a DoD-approved medium assurance certificate. For more information please visit the ECA website

Link: <https://www.DIBNet.dod.mil>

What will be available in SPRS

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SPRS Supplier Performance Risk System

NIST SP 800-171 DoD ASSESSMENT

Close

** NOTE: The information will be protected against unauthorized use and release, including through the exercise of applicable exemptions under the Freedom of Information Act **

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Company	Total Assessments	Most Recent Assessment	Score	Confidence Level	Assessment Standard	Assessing CAGE or DoDAAC	Scope	Plan of Action Completion Date
A COMPANY	1	08/08/2019	110	HIGH	NIST SP 800-171	D12345	ENTERPRISE	
A COMPANY	1	09/01/2019	105	MEDIUM	NIST SP 800-171	D12345	ENTERPRISE	
A COMPANY	1	06/01/2019	101	BASIC	NIST SP 800-171	AAAA1	ENTERPRISE	
B COMPANY	1	08/08/2019	109	HIGH	NIST SP 800-171	D12345	CONTRACTS	
B COMPANY	1	09/01/2019	104	MEDIUM	NIST SP 800-171	D12345	CONTRACTS	12/01/2019
B COMPANY	1	06/01/2019	100	BASIC	NIST SP 800-171	BBBB1	CONTRACTS	02/01/2020

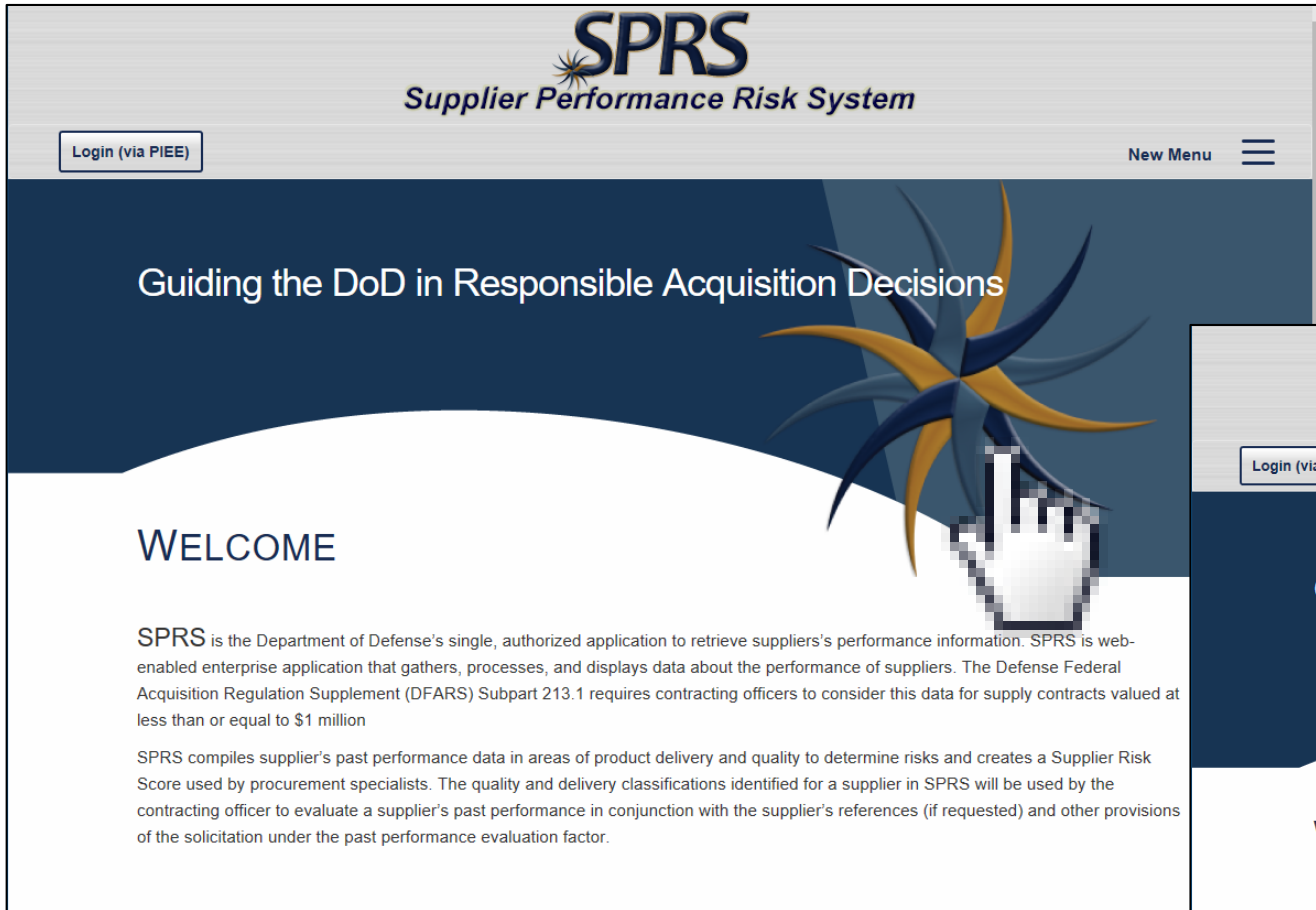
20 items per page 1 - 6 of 6 items

A COMPANY - [Show Less Detail](#) [Return to Top](#)

Assessment Date	Score	Confidence Level	Assessment Standard	Assessing CAGE or DoDAAC	Scope	Included CAGEs/entities	Plan of Action Completion Date
08/08/2019	110	HIGH	NIST SP 800-171	D12345	ENTERPRISE	AAAA1 A1 COMPANY 1 A STREET, A1CITY, AA 11111 AAAA3 A3 COMPANY 3 A STREET, A3CITY, AA 33333	11/01/2019
07/01/2019	109	HIGH	NIST SP 800-171	D12345	ENTERPRISE	AAAA1 A1 COMPANY 1 A STREET, A1CITY, AA 11111 AAAA3 A3 COMPANY 3 A STREET, A3CITY, AA 33333	

*Assessments by DCMA
(BASIC are self-assessed)*

*CAGEs and facilities
subject to SSP*



SPRS
Supplier Performance Risk System

Login (via PIEE) New Menu

Guiding the DoD in Responsible Acquisition Decisions

WELCOME

SPRS is the Department of Defense's single, authorized application to retrieve suppliers's performance information. SPRS is web-enabled enterprise application that gathers, processes, and displays data about the performance of suppliers. The Defense Federal Acquisition Regulation Supplement (DFARS) Subpart 213.1 requires contracting officers to consider this data for supply contracts valued at less than or equal to \$1 million

SPRS compiles supplier's past performance data in areas of product delivery and quality to determine risks and creates a Supplier Risk Score used by procurement specialists. The quality and delivery classifications identified for a supplier in SPRS will be used by the contracting officer to evaluate a supplier's past performance in conjunction with the supplier's references (if requested) and other provisions of the solicitation under the past performance evaluation factor.



SPRS
Supplier Performance Risk System

Login (via PIEE) New Menu

Guiding the DoD in Responsible Acquisition Decisions

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- Home
- Section 2339a
- NIST SP 800-171 Assessments
- Request Access
- Contacts
- FAQS
- Links
- Reference
- Release
- Training

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SPRS Supplier Performance Risk System

NIST SP 800-171 DoD ASSESSMENT

Close

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Company	Total Assessments	Most Recent Assessment	Score	Confidence Level	Assessment Standard	Assessing CAGE or DoDAAC	Scope	Plan of Action Completion Date
BAE				BASIC	NIST SP 800-171			
BAE				MEDIUM	NIST SP 800-171			
BAE				HIGH	NIST SP 800-171			
BELL TEXTRON INC.				HIGH	NIST SP 800-171			
BOEING				BASIC	NIST SP 800-171			
BOEING				MEDIUM	NIST SP 800-171			
BOEING				HIGH	NIST SP 800-171			
GENERAL ATOMICS				BASIC	NIST SP 800-171			
GENERAL ATOMICS				HIGH	NIST SP 800-171			
GENERAL DYNAMICS				HIGH	NIST SP 800-171			
GENERAL DYNAMICS				BASIC	NIST SP 800-171			
GENERAL DYNAMICS				HIGH	NIST SP 800-171			
GENERAL DYNAMICS				BASIC	NIST SP 800-171			

MOST COMMON FINDINGS?

- 1. Multi-factor authentication not implemented completely**
- 2. Not using FIPS 140-2 validated cryptography for data in transit and at rest protections**
- 3. Poorly written and detailed system security plans**
- 4. Network segregation (see concern above)**
- 5. Configuration management, user installed software lack of policy & enforcement to not allow it**



“MOST CONCERNING” FINDINGS?

- 1. DFAR Clause 252.204-7012 not being on DoD contracts, creating the question if they have CUI and are not protecting it, what can we do about from the DoD?**
- 2. No enclave separation or segmentation from parts of corporations with presence in other countries (China, Taiwan, Hong Kong, Singapore, Eastern Europe, Middle East, former Russian Republics)**
- 3. Lack of definition of CUI by DoD Contracts making it hard for DIB and DIBCAC to discern what should be protected or limited within the corporate boundaries**
- 4. Not having Multifactor authentication and FIPs validated cryptography making CUI potentially visible in clear text (see below)**
- 5. Lack of supplier implementing DFAR Clause 7012 in DoD Prime contracts for their suppliers, not being able to validate the supply chain to the companies assessed, adversaries will go after the weakest link/ easiest target**