# Joint Capabilities and Integration Development System
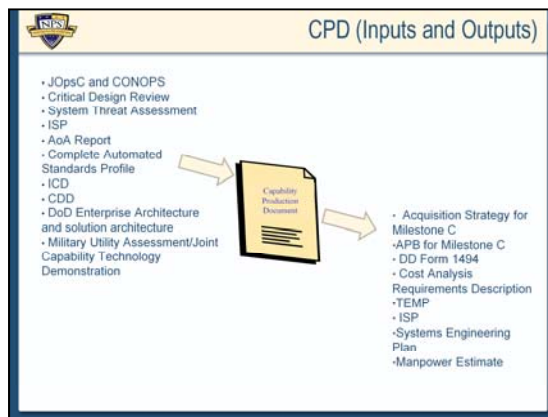## Capability Production Document

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CPD (Inputs and Outputs)

Inputs:
- JOpsC and CONOPS
- Critical Design Review
- System Threat Assessment
- ISP
- AoA Report
- Complete Automated Standards Profile
- ICD
- CDD
- DoD Enterprise Architecture and solution architecture
- Military Utility Assessment/Joint Capability Technology Demonstration

Capability Production Document

Outputs:
- Acquisition Strategy for Milestone C
- APB for Milestone C
- DD Form 1494
- Cost Analysis Requirements Description
- TEMP
- ISP
- Systems Engineering Plan
- Manpower Estimate

The Capability Production Document (or CPD) is one of the most important things to come out of the Engineering and Manufacturing Development phase. It defines an increment of militarily useful, logistically supportable, and technically mature capability that is ready for a production decision. The CPD also defines a single increment of the performance attributes to support a Milestone C decision.

The CPD is the sponsor's primary means of providing authoritative, testable capabilities for the Production and Deployment phase of an acquisition program. The CPD is finalized after the Critical Design Review and is validated and approved before the Milestone C acquisition decision.

Most of the information found in these slides is from CJCSI 3170.01G and the JCIDS Manual.  Later, in this presentation we'll touch on CPD guidance from each of the service policies.

This slide demonstrates where the CPD fits into the JCIDS and acquisition process.  You can see how the CPD builds on the previous work that's been done earlier in the JCIDS and acquisition processes.  And, as you can see, there are several documents and activities that depend on – or are driven by the contents of the CPD.

This is definitely another document that needs to have lots of HSI language in it!

CPD Overview

CPD informed by lessons learned in development process.

KPP values may change from CDD to CPD.

JROC ensures traceability from ICD.

JROC determines acceptability of system if it fails to meet KPP threshold values.

CPD guided by DoD Enterprise Architecture.

Must include DOTMLPF issues.

The primary difference between a CPD and a CDD is that the CPD is informed by the lessons learned during the development process that may result in a change to the thresholds of the KPPs. So, the CPD serves to refine the threshold and objective values for performance attributes, KSAs and KPPs that were validated in the CDD.

The Joint Requirements Oversight Council's objective in approving the CPD is to ensure the system meets the needs originally defined in the Initial Capabilities Document at an affordable cost. If the system doesn't meet all of the threshold levels for the KPPs, the JROC will decide whether or not the system is still operationally acceptable. The approved CPD informs the MDA decision to enter the Production and Deployment phase at Milestone C.

The development of the CPD is guided by the DOD Enterprise Architecture and the solution architecture. Several other documents also guide or shape the development of the CPD. These documents include the ICD, the CDD; the Analysis of Alternatives and any supporting analyses, developmental and operational test results, and the critical design review.

The CPD also has to include DOTMLPF issues. Just like the CDD, the CPD has to discuss any DOTMLPF issues that may result from the deployment of the materiel solution.

**CPD Contents**

- Capability Discussion
- Analysis Summary
- Concept of Operations Summary
- Threat Summary
- Program Summary
- System Capabilities Required for Increment(s)
- FOS & SOS Synchronization
- IT & NSS Supportability
- Intelligence Supportability

- E3 and Spectrum Supportability
- Technology Readiness Assessment
- Assets Required to Achieve *Full* Operational Capability
- Schedule and IOC and FOC Definitions
- Other DOTMLPF and Policy Considerations
- Other System Attributes
- Program Affordability

This slide lists the major sections of the Capability Production Document.  Just like the CDD, there are 16 sections.  In fact, they're exactly the same 16 sections that are in the CDD!  I describe these section in some detail in the module that covered the CDD so I won't do that again here.  You can either go back to the Interactive DA Framework and click on the CDD block or refer to your reading assignment for this module, Appendix H of the JCIDS Manual.

One slight difference between the CDD and the CPD is that in the CDD discusses *initial* operational capability and the CPD discusses *full* operational capability.

The next few slides will touch on the Navy, Army, and Air Force policies with respect to CPDs. More specifically, we'll look at what each of the service policies or guidance has to say about HSI in the CPD.

The Navy's SECNAV Instruction 5000.2 D really doesn't differentiate between CDDs and CPDs. It refers to these documents as CDD/CPD. Should they be discussed separately? Do you see enough differences between the two documents to describe them separately? What do you think?

In previous modules I mentioned the Navy's Two-Pass, Six-Gate process. That process comes into play here just as it did with the ICD and the CDD.

The Navy conducts one or more Follow-on Gate 6 reviews. One of those follow-on reviews is conducted to endorse or approve the CPD. This review is chaired by Chief of Naval operations, the Commandant of the Marine Corps, or someone designated by either of them.

All CPDs are approved by Deputy Chief of Naval Operations, Integration of Capabilities and Resources (CNO (N8)) or by a higher authority if specified by this Instruction.

**HSI in Navy CPDs**

"HSI considerations must be integrated into CDD/CPD system performance parameters and system characteristics to enhance mission performance of fielded systems."

(OPNAVINST 5310.23 DRAFT)

Instruction defines:

- Cognitive workload
- Physical workload
- Temporal workload
- Workload

Describes HSI input to each section of the CDD/CPD.

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OPNAV Instruction 5310.23 provides the CNO's guidance on including HSI in the Capability Production Document. It stresses the need to integrate HSI into the performance parameters of a system. Similar to the SECNAV Instruction I just mentioned on the previous slide, the OPNAV Instruction doesn't differentiate between CDDs and CPDs either.

As I mentioned when we discussed the CDD, the OPNAV Instruction, which was just recently signed by the Chief of Naval Personnel, defines the human performance and then describes the type of HSI information that should be included in each section of the CDD and CPD.
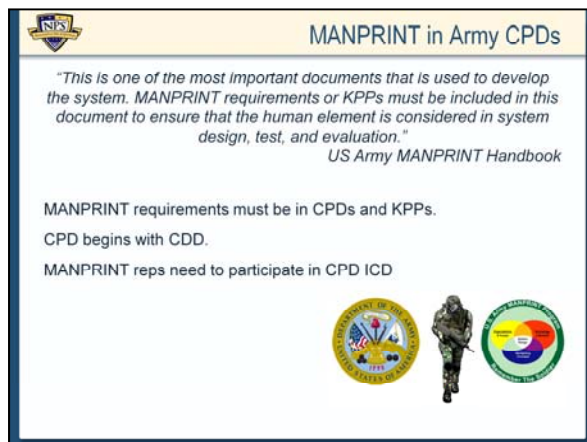
Let's look at the Army's MANPRINT Handbook to see what it has to say about the Capability Production Document.

The quote at the top of this slide gives you a good idea of how important the CPD is to the Army MANPRINT process.

The Handbook emphasizes that MANPRINT requirements have to be contained in the CPD and associated KPPs in order for the requirements to make it into the RFP, the Test and Evaluation Master Plan (or TEMP), and other key documents.

From a MANPRINT perspective, a good CPD starts with a good CDD. If MANPRINT is not adequately addressed in the CDD, it will probably not be adequately addressed in the CPD, the TEMP, or other important contractual documents.

The Handbook also addresses KPPs specifically: If the MANPRINT KPPs are not included in the CDD, the chances of getting them into the CPD will be slim.

MANPRINT practitioners are encouraged to participate actively in the CPD IPT. By being an integral part of the IPT, the chances of getting MANPRINT issues addressed will increase dramatically.

The Army's Capabilities Integration Center has published a Capability Production Document Writer's Guide, dated 16 June 2009. You'll find a copy of it in the Quick Links Panel of this module.

**HSI in USAF CPDs**

711th Human Systems Integration Development Guide
- Overview of topics to be addressed in capabilities documents.
- Suggests contributions to each section of CPD.
- Gives examples of HSI language.
- Describes domains and relevant issues.

The Air Force has put a lot of thought into both CDDs and CPDs and the manner in which HSI should be incorporated into these documents. The Human Systems Integration Development Guide published by the 711th Human Performance Wing is where this information can be found.

As I said in the past, it's not official USAF policy. But, there's a bunch of great stuff in there and regardless of what service you work with, it's well worth your time to take a look at it. An extract from the Development Guide is attached to the same block on the Interactive DA Framework as this presentation. You were asked to scan this document as a reading assignment for this module.

The Development Guide steps through each section of a CPD and describes HSI issues and concerns that should be addressed.

After that, the Guide provides examples of the type of HSI language that should be written into a CPD. There are even examples of language to avoid and language that's useful.

Appendix I describes each of the domains in great detail. Not only does the Development Guide describe the domains, it also lists issues and concerns for each domain in the form of questions.