AF/A5/7
CAPABILITY DEVELOPMENT GUIDEBOOK

Volume 2B

Capability Development Plan

System Development Plan Guidebook

February 2024

PREFACE

This Guidebook is one in a series of AF/A5DR developed guides describing the Air Force validation process for operational capability requirements in support of overarching Capability Development efforts. This Guidebook explains the organizational constructs, leadership and participant responsibilities, and activities led by AF/A5/7 to develop Capability Development Plans and System Development Plans, in support of overarching operational Capability Development. These products enable the Air Force Enterprise to conduct the necessary intellectual rigor, and document required lines of effort to coordinate fielding necessary future service capabilities. While this volume is framed by activities and interactions between requirements processes, acquisition pathways, and resourcing strategies, the focus of this volume is on the planning and organizing of AF/A5/7, MAJCOM, and sponsor activities to enable deliberate and rapid Capability Development. This volume is AF/A5/7 Center 2-centric and describes how Air Force Futures teams organize, plan, prioritize, and sequence activities using plans to support the Capability Development Enterprise and drive a holistic and integrated future force design.

In accordance with HAFMD 1-57, AF/A5/7 prepares requirements development policies and issues guidebooks to ensure implementation of those policies. The AF/A5/7 Capability Development Guidebooks are how-to guides for use by all stakeholders participating in the USAF requirements process. They represent official guidance and recommended standard procedures to ensure compliance with and implementation of overarching Requirements and Acquisition policies. Although the Guidebooks are not statutory or regulatory in nature, they follow the procedural guidance and other requirements-related processes described in the Joint Capabilities Integration and Development System (JCIDS) Manual. Any guidance in this Guidebook not prescribed in the JCIDS Manual is not directive but following the described procedures is highly encouraged. Requirements sponsors should coordinate with AF/A5D through the AF/A5DR Requirements Oversight Enabling Team for case-by-case tailoring.

The Office of Aerospace Studies, AF/A5DY-OAS is tasked to aid CDTs in constructing Capability Development Plans and System Development Plans. Early OAS involvement is advised. The OAS/CDT matrix is shown below.

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CDT	Primary	Alternate
ABMS	Lamprecht	Melvin/Stough
ACE	Veerkamp	Nuss
AI	Lamprecht/Stough	Nuss
Base Defense	Farrar	Nuss/Moss
C2/TACS	Lamprecht	Stough
CAF	Farrar/Stough/Melvin	Nuss/Veerkamp
Cyber Ops	Lamprecht	Stough
EW/EMS	Stough	Farrar/Nuss
Global Muns Posture	Farrar	Melvin
GIISR / Sensing Grid CFT	Lamprecht/Stough	Vacant
IW	Lamprecht	Farrar
LUA	Veerkamp	Moss
Mobility	Veerkamp	Moss
NDO	Melvin	Nuss
OTTI	Stough	Nuss
PNT	Vacant	Degnan
SOF/PR	Veerkamp	Stough
USSF Liaisons	Vacant	Degnan
Weapons Development	Farrar/Nuss	Melvin

Additional guidance and information to supplement this Guidebook is located on the AF/A5DR Requirements Policy & Integration Portal Page:

- Go to https://www.my.af.mil

- Navigate to "BASE, ORG & FUNCTIONAL AREA", select, Organizations A-Z

- On the "Organizations A-Z ribbon, select, "HAF"

- Scroll down and select AF/A5/7 -Air Force Futures

- On the left ribbon, select "SUB-ORGANIZATIONS," then, "AF/A5DR – Requirements Policy & Integration"

If you have questions regarding the Volume 2-series Capability Development Guidebooks or if you have suggestions for improvements, please contact:

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There are no restrictions on release or distribution of this guidebook.

Change Summary	Date
This document captures updated organizations, roles, responsibilities, DoD and DAF guidance for operational requirements development and must be reviewed in its entirety. Portions of this guidebook were derived from the AF/A5R Requirements Guidebook Volume 3 (24 June 2020, Version 5.02), which is rescinded and replaced by this Capability Development Guidebook Volume 2D.	N/A
Simplified graphics. Updated for office symbols, governance, and JCIDS Manual currency. Removed Requirements Roadmaps as redundant with Capability Development Plans	March 2023
Replaced references to Cross Functional Teams (CFT) and Functional Integration Teams (FIT) with Capability Development Teams (CDT) Admin changes	September 2023
Admin Changes	January 2024
Clarified Guidebook authorities. Included Ally, partner, and commercial inclusion language. Changes are in RED. Admin Changes	February 2024

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SECTION 1. INTRODUCTION

1.1. Foundational Documents. This volume provides the format and content guidance for Capability Development (CD) foundational documents. The documents listed below are Air Force-internal and are not formal Joint Capabilities Integration and Development System (JCIDS) documents, however, they do form the basis for all follow-on Capability Requirements (CR) development.

1.1.1. Capability Development Plan. The CDP is a written proposal that describes a plan of action to attain the capabilities needed to address strategic mission gaps and describes the activities that will be pursued to provide the needed capability to the warfighter which includes our Allies and partners. The CDP covers a specific amount of time and incorporates milestones, engagements, and required decisions along that timeframe. The CDP also serves to sequence, prioritize, and structure the System Development Plans (SDP) that capture strategies to turn concepts and Concept-Required Capabilities (CRC) into capability solutions.

The CDP describes the strategic-level guidance and the threat-based, future operational challenges identified within this guidance for each Capability Development Team (CDT) capability portfolio. This plan identifies the on-going Lines of Effort (LOEs) within the portfolio that will be used to assess capability solutions for those challenges, and the CRCs that will resolve those challenges. The CDP then identifies the Performance Attributes and cross- Doctrine, Organization, Training, materiel, Leadership and Education, Personnel, Facilities, and Policy (DOTLmPF-P) capability development solutions that the CDT will assess for potential development to fulfill those CRCs and deliver the capabilities necessary to resolve the operational gaps and mission risks within their portfolio.

The CDP describes ongoing Lines of Effort (LOE), milestones to achieve the identified capabilities, and may include potential offsets. The CDP also includes how the current solution will bridge the gap to future capability.

The CDP is normally written by a CDT, in coordination with the requirement owner, normally the MAJCOM. Other stakeholders are invited to participate.

AF/A5D is the CDP approval authority. Approval typically occurs at a Capability Portfolio Management Review (CPMR) or Periodic Review (PR).

The CDP does not replace a formal Capabilities Based Assessment or similar analysis on which follow-on CR documents are based.

1.1.2. System Development Plan. While the CDP describes the required capabilities, the SDP is the detailed plan of the ways and means to acquire the specific solution system inclusive of plans for exportability, sales, and/or co-development with Allies and partners. The SDP captures the activities necessary to bring a capability online. It is primarily used for planning, but also shows how the Requirements, Acquisition, and Resourcing products align with decisions to ensure capability solutions described in CDPs are executable. Concepts consisting of requirements, resourcing, and acquisition strategies are developed for the desired time-phased solutions embedded in CDP LOEs.

AF/A5D is the SDP approval authority. Approval typically occurs at a CPMR or PR.

1.2. AF/A5/7 Role in Capability Development

1.2.1. Scope of Authority. The AF/A5/7, Deputy Chief of Staff, Air Force Futures, is the lead for planning the future Air Force and future force design. AF/A5/7 has delegated responsibility for CD guidance, CDPs and strategies, and operational CR development to AF/A5D. Similarly, other Air Force Futures Center leaders have been delegated authority for other essential and related activities, while the MAJCOMs retain a significant and essential role in future force planning as well. However, the CD planning activities and requirements validation decisions described in this Guidebook are the under the sole authority of the

AF/A5D. These decisions may also manifest into operational CR documents that are validated within the AF/A5/7 requirements documentation processes described in AF/A5/7 Capability Development Guidebook, Volume 2A and other document-appropriate Guidebook volumes. The AF/A5/7 mission is to be the voice of tomorrow's Airmen. In this role, AF/A5/7 will:

- Anticipate the challenges tomorrow's Airmen will face.

- Implement strategies, develop concepts, and identify technologies to meet these challenges.

- Develop capabilities that preserve advantage for tomorrow's Airmen.

- Identify the training and organizations tomorrow's Airmen will need.

- Promote interdependence with Allies and partners across the globe.

- Integrate our efforts into a coherent force design that fits into a broader Joint design.

- Help our senior leaders make decisions that endure.

AF/A5/7 performs these interrelated responsibilities on behalf of and in collaboration with the rest of the Department of the Air Force, MAJCOMs, and other key stakeholders. To the extent they desire to influence outcomes, other AF organizations outside of AF/A5/7 have a responsibility to engage with AF/A5/7 teams and leadership to participate in these processes and create the documents described herein. While AF/A5/7 teams are responsible for leading this work and following this guidance, it is in the best interest of all involved that the activities described in this guidebook are collaborative, cross-cutting, transparent, and inclusively performed with all stakeholders across the Capability Development Enterprise (CDE). The vital nature of full and complete alignment across the CDE, and between those participants and the Acquisition and Resourcing communities cannot be overstated. To that end, full engagement and continuous participation with all stakeholders including colleagues in SAF/AQ, SAF/IA, OCEA, AF/A8, MAJCOMs, other relevant Headquarters staff elements, and selected Allies and partners where feasible, is essential in support of AF/A5D decisions.

1.2.2. Organizational Overview. AF/A5/7 operates via a flat and dynamic organizational structure that leverages teams of teams using constant collaboration to develop an understanding of the capabilities needed to give our Future Force the same competitive advantage that we have enjoyed for the last 75 years. AF/A5/7's organizational structure, organization, and roles and responsibilities are outlined in HAF Mission Directive 1-57. There are leadership forums that, although not in the CD process flow, nevertheless provide CDE input.

1.2.2.1. Capability Development Summit. The CD Summit is a partnership of senior DAF Leaders that guides the alignment of CD initiatives and priorities across requirements, acquisition, and resourcing. It strives to improve the effectiveness of DAF-wide activities by aligning efforts and establishing a disciplined, time-phased, prioritized approach to CD with a steady demand signal for Developmental Planning (DP) activities. The CD Summit is not a decision venue or governance body but serves to align leadership decisions within their own authorities.

1.2.2.2. Capability Development Working Group (CDWG). The CDWG is an O-6/GS-15 level forum that coordinates and integrates CD issues across the enterprise. The CDWG may endorse plans or other CD documents, but it has no approval authority for such documents.

SECTION 2. CAPABILITY DEVELOPMENT FUNDAMENTALS

2.1. Task and Purpose of Capability Development. The fundamental goal of CD activities is to refine and implement key capabilities, typically via combined efforts across the spectrum of DOTmLPF-P. Moreover, this task must be pursued in the context of future uncertainty and dynamic global change. The CSAF aptly described our challenges and task in his 2020 white paper titled *Accelerate Change or Lose*:

> *"In an environment that includes, but is not limited to, declining resources, aggressive global competitors, and rapid technology development and diffusion...many of the requirements for capabilities that have underpinned our success were developed in the decade today's most senior leaders joined our Air Force. Since then, much has changed. Not only has the technology revolution dramatically changed the ways in which humans and economies interact in the world, it has changed the way militaries can develop and project power...We must design our capabilities and concepts to defeat our adversaries, exploit their vulnerabilities, and play to our strengths [and] capabilities must be conceived developed, and fielded inside our competitor's fielding timelines..."*

The Air Force's roles and missions in support of the Joint Warfighting Concepts drive AF operational concepts, capability imperatives, and CRCs that begin to coalesce into defined capability needs. With an understanding of the needs and recognized assumptions of future trends and adversary actions, Operational CD works to define the gaps and refine the need(s) through analytical and DP activities. These activities and insights inform the suitability, feasibility, and resource demands of potential solutions to meet the need(s). As more is understood of these programmatic criteria, the most suitable solution approaches are identified and assessed, leading to informed decisions that prioritize, integrate, and sequence operational requirements for the Acquisition Enterprise to pursue. This process of "Refining the Need" in Operational CD is the focus of this Guidebook volume and is depicted in Figure 2.1.
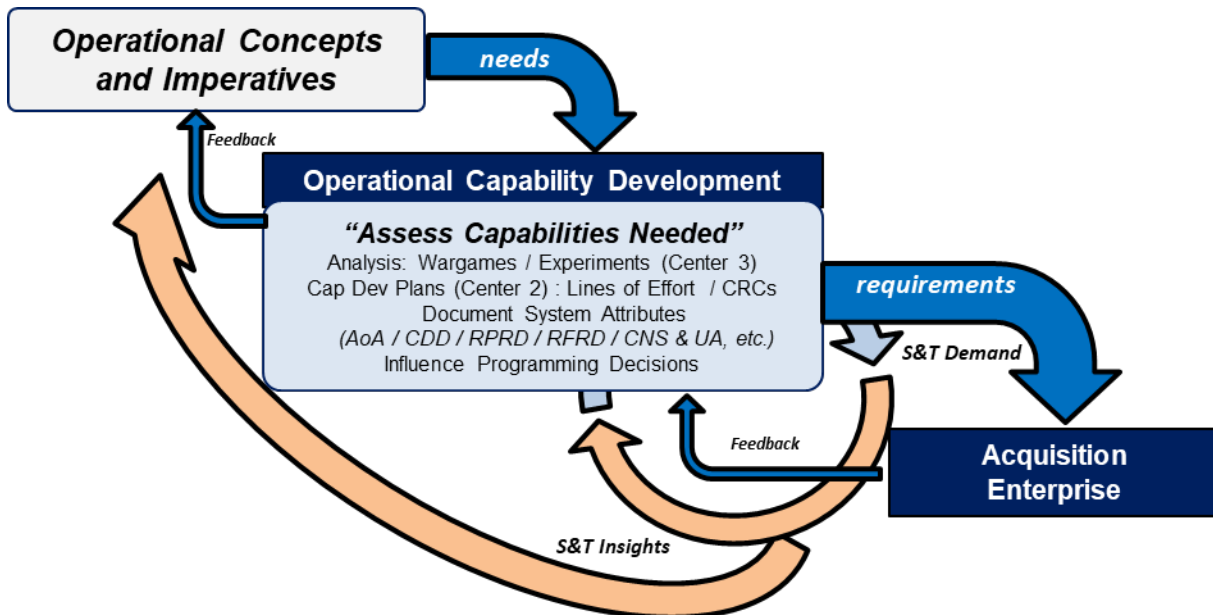
Figure 2.1. Refining the Need

The goal of the AF/A5D (Center 2) CD is to analyze, plan, validate, and enable operational CD to distill validated CRs from operational concepts. Skillfully translating the capability need into operational requirements captured in the appropriate requirements document is essential for the resourcing and acquisition communities to pursue timely solutions for the Air Force. The development of promising technology and concepts into capability solutions is not possible without intentional, flexible, and

intelligently resourced plans, with validated assumptions that reduce risk and uncertainty.

2.2. Definitions. Several CD terms and organizational structures are unique to Air Force Futures and are briefly defined here for reference. Detailed discussion of these structures, products, and their interactions, is the focus of the remainder of this volume.

2.2.1. Capability Development Team. A CDT is a core team that typically works with MAJCOM leads to identify, prioritize, and create plans to resolve capability shortfalls within a given functional area. CDTs may also be tasked to develop solutions to future Air Force capability gaps and challenges that cut across traditional Air Force core functions and therefore may not reside within a particular Air Force MAJCOM. When the CDT works across functional areas, they ensure the proposed solutions to the gaps and challenges are synchronized across the entire DAF enterprise and are aligned with the Department of Defense, and Air Force strategic priorities and guidance, to include future force design priorities. The CDT has both full time and matrixed members across the DAF to ensure this synchronization, but the CDT is held as the primary focal point regarding the proposed solutions. The CDTs report their CD progress to multiple Air Force corporate governing processes. Given the cross-cutting nature and variety of stakeholders associated with any given CDT, the CDP is one of the most critical CD products the CDT will produce. A well-coordinated CDP provides a mechanism for common understanding among the CDT and the various stakeholders and organizations.

2.2.2. Capability Portfolio. A capability portfolio is primarily a management structure to improve team engagement and integration. A Center 2, O-6 level Portfolio Manager is responsible for prioritizing and coordinating activities and aligning the efforts of several CDTs across a portfolio.

2.2.3. Capability Portfolio Management Review. Biannual CPMRs are chaired by Center 2 leadership; all stakeholders (MAJCOMs, Air Staff, A8, AQ, etc.) are invited. The CPMR is a venue for stakeholders to provide input to the CD process and allows Center 2 leadership to provide support and guidance for CD products. A CDP should be the primary product delivered and discussed at these engagements, unless otherwise directed by Center 2 leadership.

2.2.4. Periodic Reviews. PRs are scheduled with Center 2 leadership biannually but can be requested by teams as needed. They can be likened to a round table discussion used to iterate and refine CDPs. PRs are internal to Center 2, but others may be invited as necessary.

SECTION 3. THE CDP/SDP PROCESS

All CD planning activities are continuous and dynamic. The CDPs and SDPs are living documents that must be periodically updated to reflect changes, new insights, revised strategies, updated Concepts of Operation, etc. The CDP and SDP process is shown in Figure 3.1.
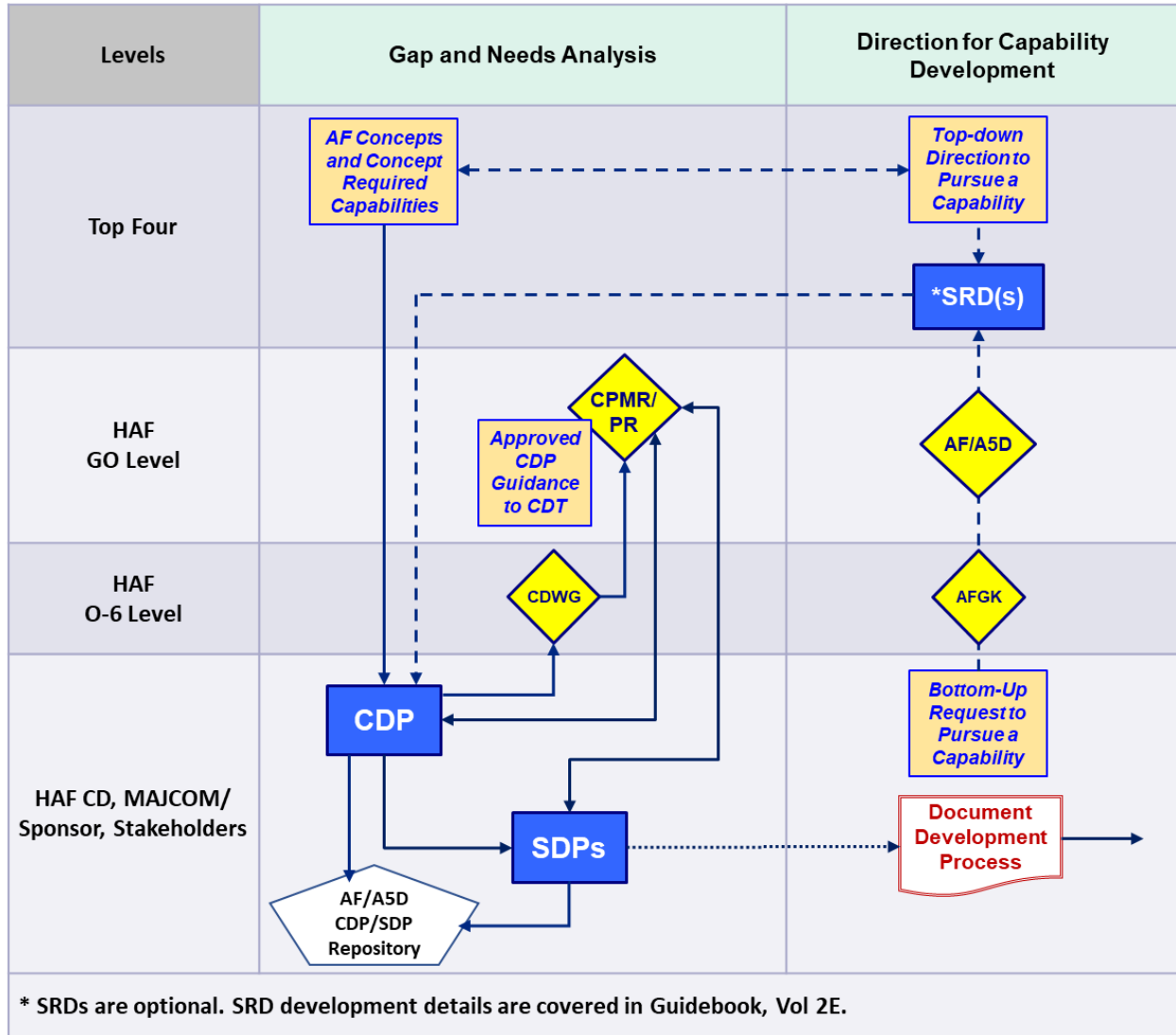
Figure 3.1. The CDP and SDP Process

3.1. Initiation. CDP initial development or updates can be initiated in various ways. USAF leadership may direct CDP work based on updated concepts or CRCs. The responsible CDT can initiate CDP work, or Sponsors or Stakeholders may recommend CDP work based on new information obtained in their sphere. CSAF approved Strategic Requirements Documents may also direct CDP work. Strategic Requirements Document development is covered in Guidebook Volume 2E.

3.2. Development. The CDP establishes expectations and outlines a plan that balances the speed and flexibility required to advance specific capabilities while maintaining the coordination required to ensure separate efforts arrive at mutually supportive solutions. The CDT, working closely with key stakeholders at the MAJCOMs, labs, and across the CDE, develop and refine their CDP to align with DoD and AF-approved Operating Concepts, embedded CRCs, and additional top-down direction and strategic priorities.

The writing team describes existing and new LOEs to achieve the identified capabilities. They explore and analyze all potential ways and means within each LOE to develop the capability. LOEs may include a bridging strategy from the current solution to the future capability and may include potential offsets.

Systems described by SDPs may emerge from more than one CDP. SDPs also function to drive early engagement between the future force designers, the force operators, solution providers in the commercial marketplace, global partner capacity, and the acquisition enterprise. There should be constant feedback between the CDP and related SDPs and iteration driven by frequent collaboration between all stakeholders.

Existing CDPs and SDPs evolve and are updated to reflect the most current timing, requirements and acquisition strategies, international inclusion, and resourcing expectations.

3.3 Approval. Teams must present their CDPs and SDPs to Center 2 leadership for review and approval. Presentations occur during PRs, CPMRs, or as requested by Center 2 leadership. A primary function of the CPMR is to ensure complete integration and alignment between teams. Robust integration will eliminate assumptions or uncertainty in the plans and enable exploration of new capability opportunities. Approval of the CDP and SDPs validate the team's overall direction, timing, milestones, and integration work with other affected/affiliated CDPs. The CPMR may also direct specific DP activities and tasks to the CDT, MAJCOMs, and other stakeholders such as experimentation, prototyping, modeling and simulation, or direct requirements document development. Approved CDPs and SDPs are archived in the AF/A5D CDP/SDP repository.

Section 4 – AF/A5/7 CAPABILITY DEVELOPMENT PRODUCTS

4.1. Capability Development Plans – Format & Content. The CDP is the primary planning document of the CDTs. The CDP identifies the operational challenges, LOEs, CRCs, and activities required to tackle a specific problem set as summarized in the document's Problem Statement. For each LOE, the document describes the CRC in terms of the current threat and capabilities, and the plan to resolve the Problem Statement. They are high-level, easy-to-read, stand-alone documents that clearly and succinctly present the team's plan.

The CDP:

- Captures the strategic questions that further define the operational challenges and mission environments within the problem sets that the CDT will investigate.
- Identifies the mission/capability gap(s) in the AF's ability to achieve mission success in Joint/AF/Combined (Allies and partners) strategies and concepts that the CDT is trying to address. This forms the Problem Statement.
- Establishes separate LOEs within the problem set's portfolio to better refine the operational mission needs.
- Identifies all the CRCs necessary to address the strategic objectives of the associated operational concepts for each LOE.
- Addresses critical uncertainties and shows a pathway to achieving the CRC and captures and depicts dependencies on other CDTs' efforts.
- Establishes a clear understanding of baseline capabilities and gaps, and how new capabilities and opportunities may be integrated and synchronized.
- Identifies commercial offerings, Partner and Ally capabilities, and US Government developmental efforts requiring further refinement, recommends CD efforts required to continue, and provides a recommended schedule.
- Synchronizes capabilities and timing considering resource constraints, schedules key decision points, and establishes rough order of magnitude resource requirements.
- Drive early recognition of Ally and Partner involvement opportunities, dependencies, or potential for future export/desire for the capability to proliferated to other Allies and partners.
- Ensures the team's CD efforts and responsibilities are understood by all internal and external stakeholders.
- Highlights opportunities for increased speed of CD and fielding through agile acquisition.

An effective CDP has the following characteristics:

- Addresses the team's operational problem statement by reducing risk to acceptable levels.
- Risk reduction is shown through analysis and other learning.
- Spans the DOTmLPF-P solution space.
- Integrates with other CDT solutions and identifies dependencies.
- Incorporates the baseline capability.
- Considers affordability, innovation cycles for defense only solutions, and Ally and partner connections.
- Aligns the key elements of Requirements, Resourcing, and Acquisition.
- Prioritizes LOEs.
- As a Living Document, it is updated based on:
  - Learning from experiments, prototypes, studies, and Ally and Partner input.
  - Technology updates.
  - Threat changes.

     o   Resourcing decisions and realities.

4.1.1. Time-phasing CDP activities. The cornerstones of the CDP are the LOEs and their associated CRCs, and while some LOEs are well-formed and ready for transition to acquisition, many LOEs will be immature and require additional study before an informed decision is made. The CDP should include a 'campaign of learning' to develop a robust body of knowledge for immature LOEs. Figure 4.1 is an example showing multiple LOEs and groupings. The LOEs include and embed the CDT's plans or recommendations for:

- Programs of record with options to initiate, continue, modify, accelerate, or terminate.

- Science and technology investments and activities.

- Prototyping activities that include learning and decision points.

- Campaigns of experiments that include learning and decision points, and on/off ramps inclusive of Ally and Partner engagement.

- Planning for development with agile acquisition on/off ramps and/or development with an Ally or partner.

- Studies and analysis with learning and decision points.
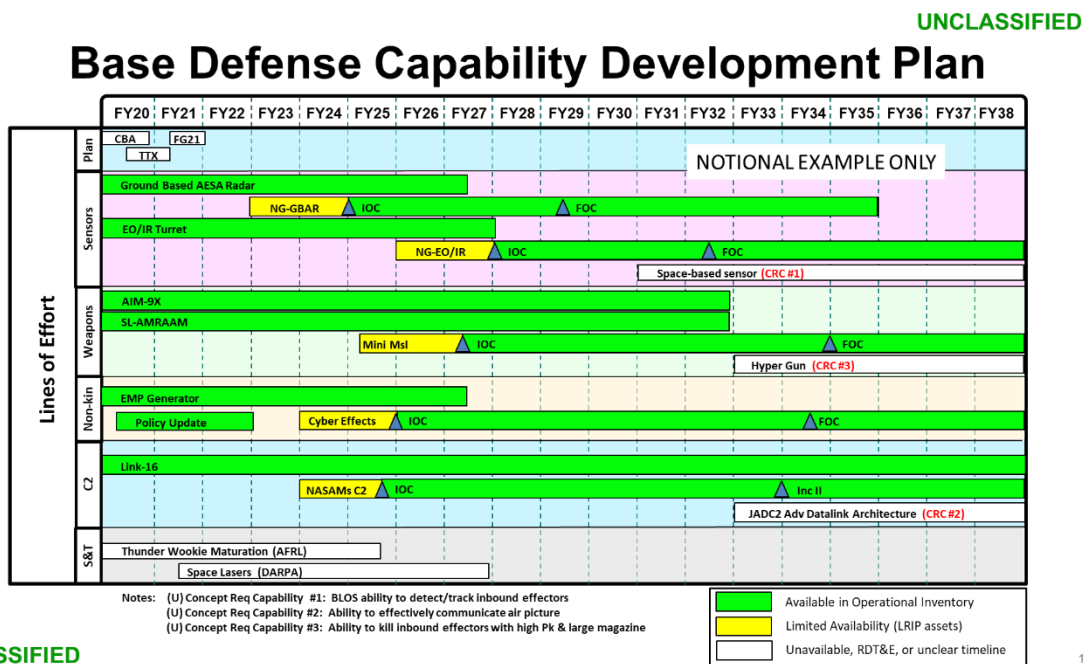
Figure 4.1 Example Lines of Effort in a Capability Development Plan

4.1.2. Linking CDP Activities and Identifying Dependencies. Another key component of a CDP is the linkage of LOEs to affected/dependent Mission Effect Threads (where available) and key elements of the latest Force Design. These links are vital to decision makers so LOEs can be grouped together during budget deliberations. For example, a Mission Effect Thread requiring five systems to reduce risk may not reduce risk to acceptable levels if only one or two systems are fielded. In fact, doing so may increase overall risk to the portfolio because those resources will have been misused. In a similar vein, linkage of LOEs to Ally and Partner capabilities tied to the Force Design is equally critical to the mission effects, risk, and budget deliberations.

4.1.3. Explaining Priorities. The CDP is a living document that will evolve over time as teams learn from pursuing solutions. The original problem statement and hypothesis can change based on what the CDT learns as the document evolves. The team must determine the level of detail needed to effectively convey their plan. It should be detailed enough to enable stakeholders to understand the technology and other details involved, but too much detail may be counterproductive. All potential solutions are prioritized in the CDP, and it must clearly explain the compelling evidence that drives the highest priority option(s), why an adaptation of a commercial offering is not viable given the benefits in scale, innovation cycles, and cost if that path is not chosen, and how Allies and Partners may play in the priorities. The CDT must prioritize gaps, risks, and challenges before prioritizing potential solutions. Priorities should be time phased based on need, opportunity, and ability to meet concept, projected timelines, and cost.

4.1.4. Describing Resource Impacts. The CDT must include existing baseline capability and associated funding for the mission area to develop executable solutions. The solution trade space is comprised of current fielded capability and programmed capability but does not have to be restricted to just US inventory capability should a foreign capability prove appealing to the CDT. The MAJCOMs, AF/A8, Program Element Monitors, and AF Life Cycle Management Center can provide details on the performance and cost of baseline systems. Affordability of potential solutions must be considered in the CDP and the SDPs. Initial cost figures are rough order of magnitude estimates and rounded to zeroes. Cost estimates will be refined as requirements mature. CDP and SDP cost estimates are used to assess the affordability of potential solutions. They provide enough fidelity to determine whether potential solutions can be resourced and implemented in the timeframe required (feasibility).

4.1.5. CDP Content. The content of the CDP is the top priority over adherence to a strict format. The format of the CDP may be tailored by each team to best convey their planning and logic, combining document and presentation formats and tools. The CDP is a stand-alone product and easily understood regardless of the reader's familiarity with the content. The team's problem statement, capability needs and gaps, guidance, and/or key analytical insights are typically captured in a written document. The time-phased plan is typically a PowerPoint product and lays out the team's LOEs completely and succinctly. Adding accompanying or embedded text on CDP graphics may also be appropriate. Appendix 1 contains a sample CDP. Examples of approved CDPs are available in the AF/A5D CDP and SDP Repository.

4.2. System Development Plans. Each material and non-material solution in a CDP that may result in a materiel or non-material solution requiring allocation of resources must have an SDP. While the CDP illustrates potential solutions to the problem statement, the SDP captures the steps to realize the solution(s). Like the CDP, the SDP is a living document and should be kept current. The SDP is a planning and organizing tool that demands close coordination with SAF/AQ, AF/A8 stakeholders, and potentially key Allies and partners. The goal is a collaborative product, and the CDT must actively engage with the acquisition and resourcing communities to ensure it stays current and relevant. The need for currency, conciseness, and readability can't be overstated. If a senior leader has a question regarding the inventory of capabilities, a team should be able to take the CDP and SDPs off the shelf and answer the question with a very easy-to-understand product.

4.2.1. Purpose. The SDP is the execution plan for each capability solution in a CDP and describes the Department's strategy for attaining a capability or other defined outcome, such as learning objectives for research and development activities. Each SDP is specific to one LOE or system development/program, and typically centers around a strategy chart, as shown in Figure 4.2. An SDP will evolve as teams learn and alter plans based on new learning and changes in the threat, operational, fiscal, or political environments.

4.2.2. Content. The SDP is described with a combination of text and graphics and is constructed in a way that it does not require a verbal explanation. There is no mandatory SDP format, but there is mandatory content.

4.2.2.1. Identify the portion(s) of the CDP(s) being supported and the related objectives, deliverables, assumptions, and integration points. This section of the SDP provides a narrative of the general approach, priority, and places it within the context of the supported CDP and history of the owning CDT. This information will be critical to providing justification to support the requirements, acquisition, and resourcing strategies.

4.2.2.2. Identify the major tasks necessary to deliver the objective and show their time-phased interrelationships in a graphical depiction. This decomposition is driven by differentiating activities by type, such as research, procurement, etc., and possible alignment to legacy AF core function(s). This will help streamline the production of the remaining CDP elements and identify relevant partners to enlist in support of development activities. This view shows the timeline of each activity, key decisions, activity start and end points, and highlight mandatory sequencing relationships or other interdependencies with the CDP or other CD activities/organizations. An example chart showing the alignment of the Requirements, Acquisition, and Resourcing strategies for a notional SDP is shown in Figure 4.2.

Figure 4.2 Sample System Development Plan for a LOE in a CDP

4.2.2.2.1. The requirements strategy describes how the CDT will engage the requirements community, the plan to develop the insights, and formally document the needs into an operational CR document. The requirements strategy must be coordinated with the acquisition strategy to ensure the planned activities reflect a common solution pathway such as Middle Tier Acquisitions, JCIDS, etc.

- The requirements strategy provides a high-level description of the types of capabilities that will be more narrowly defined and propagated through engagements with the Sponsors. It does not have to list the actual requirements but must list the kinds of topics to be pursued.

- For each of the topics listed, the requirements strategy lists who the CDT is partnering with to codify the needs and identify the requirements and programming sponsor. The CDT will ensure the SDP content and reviews are appropriately aligned decision points and events. The Air Force Gatekeeper and/or AF/A5DY-Office of Aerospace Studies can assist the CDT to identify the appropriate stakeholder points of contact.

- The SDP shows the anticipated timelines for writing, staffing, and validating the necessary requirements, and be updated as the tasks are accomplished. The SDP will recommend the timing, types, and authorities for relevant JCIDS, non-JCIDS, or other requirement validations.

4.2.2.2.2. The resourcing strategy describes how the CDT will pursue funding to support the development of the objective capability. The SDP explains where activity is already funded; plans for additional resources must be affordable. The SDP may identify and offer potential offsets if those offsets support the overarching CDP concepts.

- Describe the funding requirements over time, broken out according to functions described in the overview graphic. Funding requirements show the desired appropriated category, amount, and must at least span the Future Years Defense Program. Derive funding requirements from cost estimates or other legitimate sources for each element in the SDP. The resources required, resources allocated, and cost estimates must be updated as funding status changes. List the source of all cost estimates.

- Describe how funding is being pursued, either directly through AF corporate budgeting processes or alternate means to include partnership with an Ally or Partner providing resources. Any funding source may be pursued, but the approach must be described and documented.

- For each funding line, the resourcing strategy must list who the CDT is partnering with to secure the resources.

4.2.2.2.3. The acquisition section of the SDP describes the proposed adaptive acquisition approach to deliver the operational capabilities. For procurement activities, this may take the form of Major Capability Acquisition, Middle Tier Acquisition, or one or more of the other pathways described in the DoDI 5000-series. Learning activities in the SDP may be linked to other avenues, such as experiments, the AF Life Cycle Management Center's Planning for Development, or activities to inform the development of sustainment strategies. For non-materiel solutions, the SDP will document an overall approach, sequence timelines, and prioritize key activities within the relevant DOTmLPF-P solution space.

- The acquisition strategy must document the approach proposed for each element of the functional overview. It will show activities to be initiated, modified, accelerated, or terminated along a timeline. It will show decision points, milestones, and the CDTs progress towards deployment of the desired capabilities.

- For each of the activities, the SDP must list who the CDT is partnering with to advance the development effort.

4.2.2.3. In summary, SDPs convey the following information:

- The key attributes needed, and the strategy for developing the operational requirements.
- The baseline capability, current capability, and the planned capability over time.
- The plan for getting answers to strategic questions such as analytics, modeling and simulation, experiments, science and technology, prototypes, etc.
- The plans for schedule, funding, and status for capability solutions.
- Key decision points and other significant events.

- Initial determinations on international involvement (i.e., co-development) and/or exportability of the system with the strongest justification needed for non-involvement of Allies and Partners.
- Initial acquisition timelines for named programs.

Appendix 1 – SAMPLE CDP FORMAT

[Example Cover Page]

--**Insert Team Name Here**—

Capability Development Team

Capability Development Plan

Current as of: dd Month yyyy *[most recent change]*

Last Approved: dd Month yyyy *[Last CPMR validation]*

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Appropriate Classification

Document Change Log

CPMR/PR Approval Date	Status (Baseline, Revision, Canceled)	Document Version Number	Section Affected	Description of Revision	Author

<u>Purpose and Intent:</u> This section provides an overall description of the problem, the proposed way ahead or approved course of action that will explore the problem, and why the proposed capabilities are needed. It logically lays out the CDT's intent to develop and field capabilities to solve the problem and be clear on what the team expects to learn about the things that are needed to solve the problem. This section also reflects an all-domain, multi-function, family-of-systems solution to the problem to an appropriate degree. It lists and explains the themes of the plan. Recommended length is no more than two pages.

<u>Capability Development Plan Overview</u>**:** With reference to a graphic/illustration showing the plan and LOEs, this section provides an explanation of why the baseline capability is insufficient to solve the operational problem. Key questions to be answered are listed here, along with critical uncertainties, expected learning points, and decision points that are captured in the LOEs. Include linkage to Joint and Air Force Concepts and show how CRCs relate to the CDP LOEs.

Base Defense Capability Development Plan
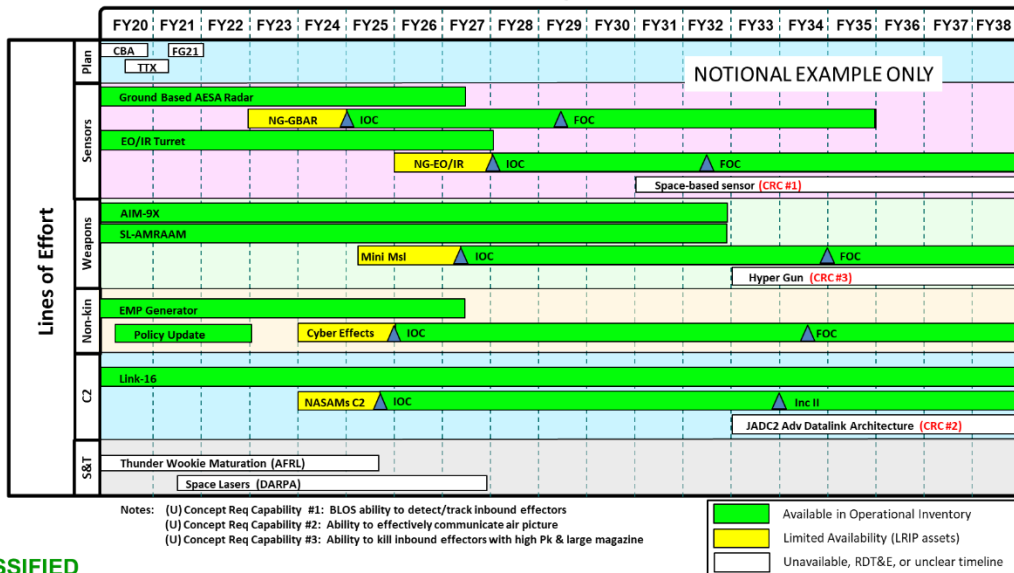
Appendix 2 – SAMPLE SDP FORMAT

[Example Cover Page]

--**Insert Team Name Here**—

Capability Development Team

System Development Plan

Current as of: dd Month yyyy *[most recent change]*

Last Approved: dd Month yyyy *[Last CPMR validation]*

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Appropriate Classification

Document Change Log

CPMR/PR Approval Date	Status (Baseline, Revision, Canceled)	Document Version Number	Section Affected	Description of Revision	Author

Purpose: Briefly describe each potential capability solution identified in the CDP and link it to the CDP's main graphic. Each SDP will show when and how specific system solutions will develop and evolve to meet the overall CDP timeline. Categorize all development efforts used in the SDP by LOEs and provide a description of each LOE.

Sub-surf Attack Wpn
System Development Plan (SDP)

NOTIONAL EXAMPLE ONLY

UNCLASSIFIED

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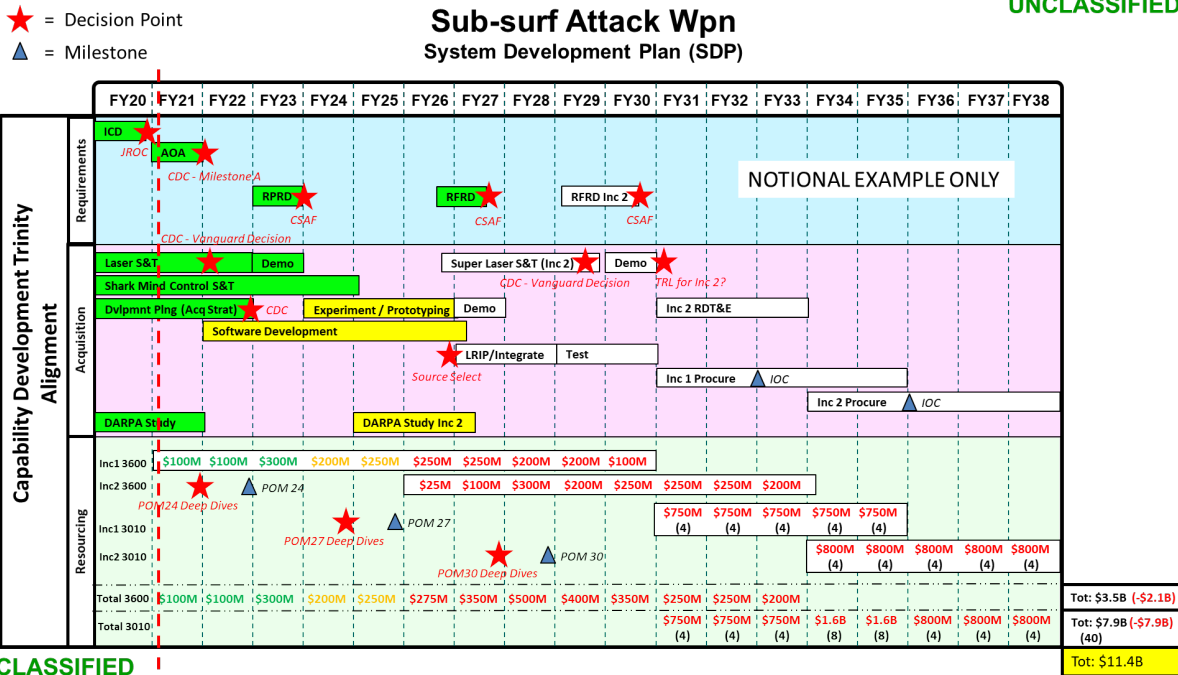
<u>Plan of Action and Milestones:</u> This chart depicts all the CD activities, tiered, and prioritized on a timeline as shown below. This chart gives readers a holistic view of all LOEs planned and underway and is most often referenced when creating the nested SDPs that inform and guide the entirety of the CDE. The functional area planning and system DP that precedes this section provides the rigor, logic, and justification for what is presented in this Plan of Action and Milestone table. Teams can include in the chart a color coded or easily recognizable visual reference that delineates efforts that are already included in active SDPs or are being pursued due to previous decisions.

Notional Plan Of Action and Milestones for Insiders CDT
FY	Description	Decision	POC	Issues
22	Rapid Runway Repair (RRR) Tool Prototype	Fund FY23 POM initiative for RRR tool to increase speed and efficiency in runway repair, $18M total, $8M is FY23, $9M in FY24, $1M in FY25.	AFMC	Critical design requirement for Airbase recovery
	Airbase Defense Sensor AoA	Fund FY23/24 AoA to study alternatives for sensors to detect and track inbound threats, $6M in FY23 and $4M in FY24	ACC	Critical component of Airbase Defense Global Integrated ISR CDT is leading this LOE
	Skyborg Experiment	Approve sponsor command	AF/A5D	Experiment will identify first mission capability, sponsor command will be needed for POM and transition
	Directed Energy S&T	Increase priority for High Powered Microwave (HPM) technology for close range base defense	AF/A5D	Important part of layered defense Next Generation Munitions CDT is leading this LOE
23	Short Range Defense Experiment	Fund purchase of 3 Skyshield gun systems and conduct two year experimentation campaign, $80M across FY24/25	SPDE	Determine role and benefit of short range gun systems to defeat missile attacks
	Logistics Support Study	Direct study by AMC to determine ability to support remote unprepared airbases	AMC	Foundational analysis to understand ability to support remote operations
	Weapons Developmental Planning (DP)	Direct DP for Airbase DefenseAirborne Layer Weapon	AFLCMC	Primary MAJCOM does not support, believes current weapons are provide sufficient capability and new weapon will dilute inventory
24	Weapon X Production	Weapon X Milestone-C LRIP decision	AQ	Integration work for F-22 is 6-months behind Next Generation Munitions CDT is leading this LOE

Appendix 2 – REFERENCES AND ACRONYMS

References

AFI 10-601, *Operational Capability Requirements Documentation and Validation*

DAFI 63-101/20-101, *Integrated Life Cycle Management* [Acquisition and Sustainment]

DoDD 5000.01, *The Defense Acquisition System*, 9 September 2020

DoDI 5000.02, *Operation of the Adaptive Acquisition Framework*, 8 June 2022

HAF MD 1-54*, Deputy Chief of Staff, Air Force Futures (AF/A5/7),* August 2023

Manual for the Operation of Joint Capabilities Integration and Development System, 30 October 2021

Acronyms

CD -	Capability Development
CDE -	Capability Development Enterprise
CDP -	Capability Development Plan
CDWG -	Capability Development Working Group
CDT –	Capability Development Team
CPMR –	Capability Portfolio Management Review
CR –	Capability Requirement
CRC –	Concept-Required Capability
DOTmLFP-P -	Doctrine, Organizations, Training, materiel, Leadership and Education, Personnel, Facilities, and Policy
DP -	Developmental Planning
JCIDS -	Joint Capabilities Integration and Development System
LOE –	Line of Effort
PR –	Periodic Review
SDP –	System Development Plan