




# Chapter 3

## Overview of the Requirements Phase

# SECTION 3-1

## Introduction

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- 3.1 During the Requirements Phase, Defence undertakes the detailed planning required for converting the capability needs (see Chapter 2) identified by Defence and accepted by Government into an integrated set of changes in each of the FIC. These changes will be implemented in the Acquisition Phase to deliver the new or enhanced capability. During this phase, CDG staff work with the other groups to:
- a. identify and develop affordable options that will satisfy the desired capability needs. This work will include the development of technical products that define the capability baseline for the capital equipment, facilities, IT infrastructure and other investments required to establish the capability;
  - b. undertake cost and schedule estimation activities to provide the requisite quality of information that Defence requires in its business cases. (Note: this will generally include the conduct of industry solicitation prior to Second Pass (see Section 5-2));
  - c. prepare detailed management plans and acquisition strategies that projects require to deliver the capability; and
  - d. present to Government business case(s) that allow timely decisions regarding the investment required to deliver the capability sought, and any other investments required across the Defence organisation to support and sustain the new or enhanced capability.
- 3.2 CDG takes the lead role in presenting business cases to Government during this phase. In this role, they establish for Government the link between:
- a. strategic policy and military strategy, and the broad capability development priorities derived from them;
  - b. the specialist processes to develop affordable solutions that satisfy those priorities; and
  - c. the implementation of these processes by Defence in commercial, alliance or other arrangements developed to deliver the individual elements of the capability.
- 3.3 At the conclusion of this phase, Defence seeks Government approval of the final solution and the investment required across Defence to deliver the capability needs. This is achieved through a systematic process during the Requirements Phase that provides Government with proposals for how key strategic elements of the capability development process will be managed (eg generic and specific options for further development, research, industry development, solicitation and engagement, the engagement with allies and the sources of investment funding required by each FIC component) and informs Government of the investments required to plan and implement the necessary major capital acquisitions.

# SECTION 3-2

## Providing Investment Advice to Government

- 3.4 Decisions about what military capabilities to acquire, how much should be spent on acquiring, operating and sustaining them, and how and when these capabilities should be acquired, are matters for Government. In the Requirements Phase, CCDG presents Government with the decision making information needed to assess specific investment proposals and to make key, high level choices about progressing particular options where that is required. The investment information is contained in the Initial or Acquisition Business Cases (I/ABC) prepared to describe the options available to Government for maintaining or enhancing current military capability.
- 3.5 Investment proposals (capability proposals) and decision briefs are constructed to provide Government with distinct options on the cost-capability trade-offs about which Defence needs further guidance to proceed. The presentation of each option should establish:
- a. its rationale, i.e. how it addresses the capability gap identified and endorsed by the NSC during review of the DCS (see Chap 2);
  - b. the analytical basis for its claimed operational feasibility, performance and utility;
  - c. its consistency with strategic priorities, Government legislative and policy obligations and Government financial guidance;
  - d. the expected financial impacts through its whole life costed in line with the guidance issued by FASCIR;
  - e. the expected schedule and the ability to meet key DCP milestones; and
  - f. the levels and types of risk associated with its implementation.
- 3.6 The investment proposal for an option should describe:
- a. what FIC changes constitute the new or enhanced capability;
  - b. the major activities Defence plans to conduct to develop the new or enhanced capability, and how the various Defence groups, other Government agencies and industry will be engaged in this process;
  - c. what investments will be required overall and in each of the Defence groups to undertake the definition, design, development, production, verification and validation, deployment, operation, sustainment and disposal of the capability;
  - d. the combination of financing options that Defence propose to provide the initial capital investments and sustainment funding for the capability; and
  - e. how the major activities are related, and when they are planned to occur.
- 3.7 Detailed guidance on the development of the investment proposal are available from the CDG Process Map on the CDG website.



# SECTION 3-3

## The Capability Definition Process in Outline

### Introduction

- 3.8 The starting point for the Requirements Phase is the identification by Defence of a capability need and acceptance of that need by the Government (see Chapter 2). Acceptance by Government of a particular capability need is generally evidenced by inclusion of the relevant item in the rolling ten year DCP. The DCP lists approved capability needs expressed in terms either of an equipment solution (broadly defined) or in terms of a desired operational effect (depending on the nature of the need). The DCP also provides an expected YOD for the solution to the need and an indicative estimate of the acquisition and NPOC funding requirements.
- 3.9 During the process of moving from an agreed need to high quality proposed solution agreed by Government for acquisition, early investments are made to develop the investment proposals and on the associated research, engineering, project development and industry engagement processes. This ensures that the advice provided to Government during the Requirements Phase meets the high standards required for investment decisions of the magnitudes involved in our major capital procurement. The significant resource cost in time, effort and money in moving through this process in part reflects:
- a. the effort required to ensure that the proposed capability, which has potentially significant implications for the ADFs future force structure, generates a sustainable strategic benefit. The ADF does not want to 'lock in' to solutions that cannot sustain such benefits, but which would be very difficult and expensive to reverse;
  - b. the complex array of technical, financial, operational, sustainment, environmental, social and other issues that need to be dealt with during the Requirements Phase; and
  - c. the need to develop and refine cost and schedule estimates for all elements of the capability and across the whole lifecycle of the proposed materiel solutions.
- 3.10 The development of capability proposals through the Requirements Phase of the capability systems life cycle passes through two essential decision points - 'First Pass approval' and 'Second Pass approval' (the two pass approval process is outlined in this chapter, and dealt with in more detail in Chapters 4 and 5). Both of these decision points are approvals by Government rather than Defence. Additional Government considerations may also be necessary depending on the strategic importance, political sensitivity or complexity of the project. The level at which any Government approval is given depends on the estimated cost of the capability development proposal, and on whether there are any political or diplomatic sensitivities associated with the proposal.



3.11 As also covered in the detailed procedures in Chapters 4 and 5, there are additional decision points in the capability development process over and above the First and Second Pass considerations by Government. These additional points are to satisfy CDG management requirements, as distinct from Government requirements, especially in the selection of broad options to be explored in greater depth prior to First Pass approval. There are also Defence wide requirements to obtain stakeholder approval of capability development proposals through the Defence committee system. For a diagrammatic overview of the capability development milestones during the Requirements Phase, see Figure 3-1.

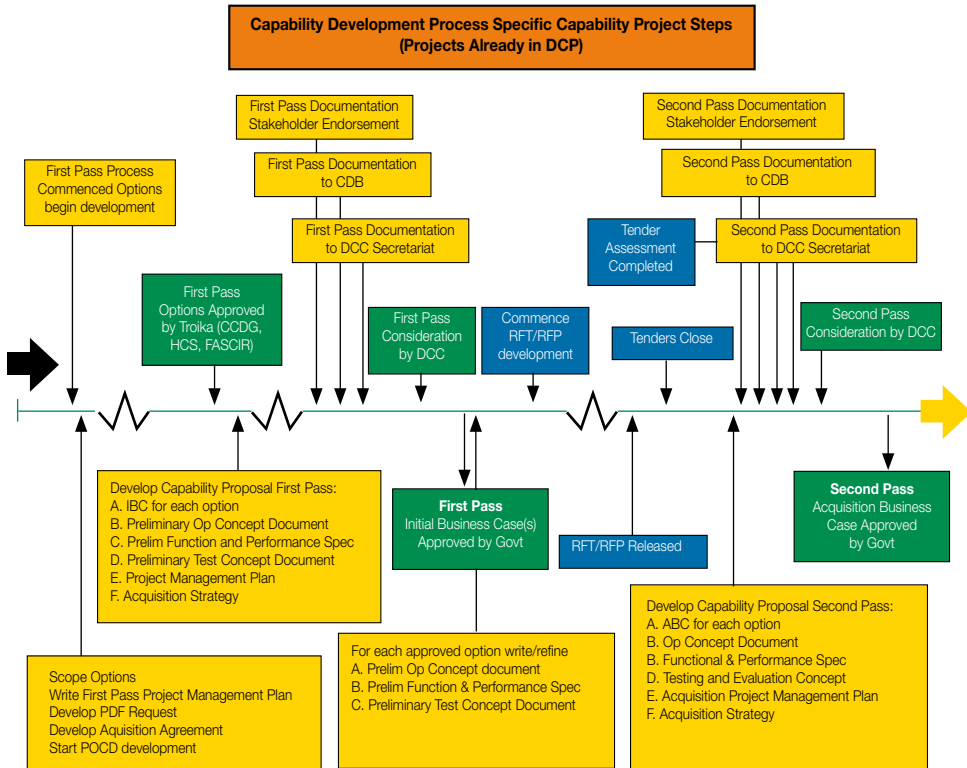


Figure 3-1 - Overview of the Requirements Phase

3.12 Capability development projects vary enormously with regard to their type, cost and complexity. For this reason, it is difficult to assess the likely lead times involved in moving through the various steps of the two-pass process. Each project needs to be assessed on an individual basis, but it is not uncommon for a project to take up to ten years from the time Government approves a project for inclusion in the DCP to when Government approves a specific capability solution at Second Pass approval.

3.13 The two stage decision making process directed by Government consists of:

- a. **First Pass approval** - at which Government considers alternatives and approves a capability development option(s) to proceed to more detailed analysis and costing, with a view to subsequent approval of a specific capability; and

- b. **Second Pass approval** - at which Government agrees to fund the acquisition of a specific capability system with a well-defined budget and schedule, and to allocate future provision for through life support costs.

## First Pass Approval

- 3.14 As indicated above, First Pass approval is, in effect, approval to proceed with more detailed analysis and costing of broad capability proposals. More specifically, First Pass provides Government approval and acknowledgement of:
- a. the broad functions and performance of the proposed capability;
  - b. the proposed timing of Second Pass approval (YOD) and other key milestones;
  - c. the set of feasible options to be explored in more detail;
  - d. the broad costing for the capability options, including all relevant FIC aspects and NPOC estimates;
  - e. the timings of the development of the option(s);
  - f. the technical risk analysis of the options and costing of risk mitigation;
  - g. the broad acquisition strategy(ies) for the options, including any solicitation to be conducted prior to Second Pass (see Section 5-2);
  - h. the studies or other activities required to support the development of options for Second Pass, and funding to conduct those studies/activities;
  - i. industry engagement to develop a business case for Second Pass approval;
  - j. the broad strategy for the transition of FIC during the Acceptance into Service (AIS) process; and
  - k. the funding needed for Defence to undertake the detailed analysis of the approved options, including any test and evaluation (T&E) required.
- 3.15 It is important to note that, in providing First Pass approval, the Government is not committed to acquiring the capability, only to the conduct of detailed studies, analysis and, possibly, funded industry studies.

## Second Pass Approval

- 3.16 As indicated above, Second Pass approval is formal approval by Government of a specific capability solution to an identified capability development need. Second pass provides Government approval and acknowledgment of:
- a. a preferred specific capability solution selected from the options approved at the First Pass approval stage;
  - b. the specific functions and performance of the proposed capability;
  - c. the implications of any identified changes to each of the FIC elements;
  - d. the planned ISD, IOC and FOC;
  - e. budgetary provision for acquisition and operation of the capability solution, including all relevant FIC aspects and NPOC;
  - f. the technical risk assessment for the capability solution and costing analysis;
  - g. the acquisition strategy for the proposed capability;
  - h. the strategy for managing the transition of FIC including acquiring the capability and its transition to in-service; and

- i. critical issues to be tested, the associated T&E strategy and the resource and funding requirements to support that strategy.

## Additional Consideration/Review by Government

- 3.17 Although the Requirements Phase can, in general, be described as a two-pass approval process for capability proposals, there is sometimes a need to have additional decision points. This need arises particularly in the case of capability proposals of major strategic significance, that have very high costs or that are politically sensitive. Proposals for new combat aircraft or for major surface or sub-surface combatants are examples of capability development projects likely to involve additional decision points.
- 3.18 The purpose of instituting additional approvals is generally to allow Government to make key intermediate decisions (eg approval of the Acquisition Strategy or selection of key industry partners). Intermediate passes may also be required where significant new information becomes available or strategic circumstances substantially change and Government direction is required in relation to the project's scope or direction.

## Combined First and Second Pass

- 3.19 Government accepts that Defence may bring forward a proposal seeking single consideration for project approval for less complex projects, where formal project definition phases have been completed, and for follow-on activity under contract options. These are the only circumstances noted in the Cabinet Handbook which establishes the policy for combined pass approvals. Defence may argue that a combined pass submission is appropriate for a follow-on phase of a previously approved capability, or as a consequence of strategic assessments, which require acquisition of additional quantities of an extant capability. For example, Government may approve a combined pass proposal for the re-supply of weapons acquired previously, particularly if Defence can accurately determine costs internally.
- 3.20 The use of a combined pass proposal recognises that the time taken to move from First Pass approval to Second Pass approval is around two years, which may be an unnecessary interval for less complex follow-on project phases.
- 3.21 Any proposal to adopt a combined pass approach must be endorsed by CCDG prior to any detailed project development work being undertaken.

## Key Mechanisms for Managing the Requirements Phase

- 3.22 The main organisational mechanisms used by CDG staff for managing the process of investigation of options and obtaining guidance and/or decisions by Defence committees and/or Government are:
- a. **Integrated Project Teams (IPT)** - These teams are specific to each capability development project and provide guidance and technical expertise from key stakeholders in the process and/or outcomes of the capability development proposal. IPTs are usually formed at the very early stages of the Requirements



Phase, and their importance cannot be overstated. Properly formed and managed, they provide a base for undertaking the capability development process in a thorough and systematic way, particularly the consideration of FIC issues, and for engaging in a meaningful and timely way with all capability development stakeholders.

- b. **Options Review Committee** - This committee comprises CCDG, HCS and FASCIR, and is commonly known as the “Troika”. The Troika meets early in the Requirements Phase to consider initial analysis and assessments on ways to overcome identified capability gaps. The Committee provides broad advice on the generic options that should be pursued in the lead up to obtaining First Pass approval and on the general development of the project throughout the Requirements Phase. (see also 4.33)
- c. **Capability Development Board (CDB)** - This board is a mechanism for ensuring quality control of project development within CS Div. Through this board, HCS agrees to the release of capability proposals and supporting documentation for the presentation to Defence committees and to Government for approval.
- d. **Defence Committees** - There is an array of higher level committees within Defence designed to help reach a corporate view on capability development proposals, especially MCE proposals, before these proposals are put to Government for approval. Most projects will generally be considered by the DCC, although projects of high value or significant strategic importance may also be considered by DCIC.
- e. **Independent investment review** - CIR Div plays an important role in the Defence decision making process with regard to proposed MCE initiatives. CIR Div provides higher Defence committees with an independent assessment of capability development proposals from CS Div. CIR Div staff write the Submissions for the Minister and/or Cabinet seeking approvals for projects (in consultation with stakeholders), and oversee the lodgement of Submissions with Government.
- f. **FIC input and review** - Where capability proposals are affected by specific FIC elements, the relevant committee will review proposals prior to consideration by higher Defence committees. For example, the Defence Information Environment Capability Management Committee (DIECMC), for projects affecting the Defence information architecture; the Defence Infrastructure Sub-Committee (DISC), for projects with significant facilities (>\$4.5m) and/or environmental and heritage management implications; and/or the Defence People Committee (DPC) for projects with significant workforce implications, will review proposals prior to consideration by higher level Defence committees.
- g. **NPOC input and review** - CIR Division’s Cost Analysis Branch, together with the CFO Resource Analysis and Performance Branch, provide direction on developing the Personnel and Operating Costs (POC) for capability development and manage the annual NPOC review for inclusion in the DMFP.
- h. **Central agency review** - The Department of the Prime Minister and Cabinet (PM&C) and the Department of Finance and Administration (DoFA), provide an additional level of scrutiny and advice on capability development proposals, from a whole-of-Government perspective. This is especially the case for major capital

expenditure decisions on new capabilities and decisions having important political and/or financial implications for Government.

- i. **Industry fora** - The CDAF, and its subsidiary domain specific Environmental Working Groups (EWGs), are fora for dialogue between CS Div and Australian industry on future capability requirements. These fora provide useful avenues for CS Div to engage with Australian defence industry on matters such as current and emerging technological competencies in Australian industry, and industry cost conditions and structures.
- j. **Defence Science and Technology Organisation (DSTO) technical support** - DSTO provides a wide range of advice to CS Div on matters relating to technical risk assessment, operations research, prototype development, options analysis, performance assessment, Science and Technology (S&T) planning, etc. For each major capability project a DSTO scientist is appointed as the project S&T Adviser and as a member of the IPT. A number of other DSTO staff who are embedded or collocated with CS Div provide ongoing advice and support throughout the Needs and Requirements phases. DSTO's support to major capability projects within the Requirements and Acquisition phases is managed via its Capability Development and Acquisition Program (CDAP).

## Key Stakeholders

- 3.23 CDG staff need to engage with the following key stakeholders in exploring and analysing options for meeting an agreed capability need:
- a. the Minister and the Government (Note: this is generally conducted at the two-star (MAJGEN and SES Band 2 (E)) level and above);
  - b. Single Service headquarters;
  - c. Joint Force headquarters;
  - d. DMO;
  - e. DSTO;
  - f. CSIG;
  - g. Defence Personnel Executive (DPE);
  - h. Chief Information Officer Group (CIOG);
  - i. CFO;
  - j. Strategy Group;
  - k. Intelligence and Security Group;
  - l. Commonwealth central agencies, especially PM&C and DoFA;
  - m. Defence industry; and
  - n. allies, via established fora on interoperability issues.



# SECTION 3-4

## The Requirements Phase in Practice

- 3.24 Translating the Capability Need established with Government into the Capability Proposals at First and Second Pass for consideration by Government is a complex and demanding process. As the lead Group, CDG is responsible for the processes that will allow Defence to present high quality Initial and Acquisition Business Cases. It involves the application of several specific investment, engineering, technical and project planning techniques. Applied in isolation, these techniques rely upon their internal consistency to ensure that the outcomes they produce are high quality and fit for purpose. This consistency cannot be guaranteed when the processes operate in parallel, as they must in practice. As a result, the planning processes are characterised by ongoing tradeoffs between cost, capability, schedule, industry involvement and risk within and among the major streams of work.
- 3.25 A practical challenge that arises is ensuring that the decisions reached during these tradeoffs are regularly tested by senior management. In addition to formal committee consideration, more regular (and less formal) review within the line management structures of CDG and the other groups involved will go some way to ensuring that all the pressures on the project or group of projects have been identified and are given appropriate consideration in their development.