ANNEXURE 1
TO APPENDIX N
TO JDP/ACQ NO 2/04

REQUIRED OPERATIONAL CAPABILITY

INTRODUCTION

1. This section gives the format that must be used when writing a Required Operational Capability (ROC).

ROC FORMAT

2. When writing a ROC, the format as described below should be used.

SA ARMY/SAAF/SA NAVY REQUIRED OPERATIONAL CAPABILITY : NO.....

(Year in which ROC is presented, eg, 1998 (98) / consecutive number of ROC (.....) : TITLE

ORIGIN

a. Originator : (Person originating the ROC)

b. Sponsor Staff Division : (Staff Division sponsoring the ROC)

c. Related Statement(s) to the ROC) : (Correspondence, if any, which has reference

d. File Reference(s) : (Originator's file reference)

e. Priority : (Routine / Urgent)

f. Review Date : (Normally annually)

g. Amendments : (original document or sequential amendment number)

CONCEPT

3. The originator of the ROC must state why this ROC is necessary/needed, how it fits into his assigned task and responsibilities, and addresses the force design structure.

STATEMENT OF THE PROBLEM

4. Problem scenario. Shortly describe the problem in operational terms, eg, age, quality, quantity, standard, life span, repair, maintenance costs, available funds for facility, etc. It must also be stated how the process functions at present.

5. Capability Shortfall. The capability shortfall should be stated as a measure against the approved force design and structure; what is the present situation and the shortfall in reaching its goal.

6. Requirement. State required capability in functional and not physical terms, eg, what it must do and how it should perform; not how it should be achieved, as the solution is not yet known, nor is it to be dictated.

7. Restrictions. Name restrictions if any, otherwise, omit point.

PROPOSED SOLUTION

8. The proposed solution is to be given in generic terms. It should be described ito attributes and guidelines but never be prescriptive. Any known physical solution that exists may be referred to as an option. It should also refer to the required standardisation or requirement for commercial off the shelf items ito logistics.

DATE SOLUTION REQUIRED IN SERVICE

9. The solution is required in service by November ..... The possibility should exist to refer this date to the procurement or technological master plans.

USER SPECIALIST

10. The proposed user specialist must be named.

CO-ORDINATION

11. Specify other users in the SANDF and elsewhere which might have an interest in making use of the capability.

AUTHORISATION

12. Sponsor Division. The sponsor division should consult with a multi-disciplinary team and indicate if they support/not support the proposal.

13. Recommendation. Recommended by the Service Chief.

Approval. Approved by C J Ops.

ANNEXURE 2
TO APPENDIX N
TO JDP/ACQ NO 2/04

GUIDELINES FOR THE COMPOSITION OF A STAFF TARGET (ST)

1. The ST is compiled by the user and represents the "PROJECT DECISION" and as such, is regarded as the most important milestone of any project. This milestone is approved in principle by corporate management, and, like the acquisition plan, is a NON NEGOTIABLE document for all projects.

2. All aspects contained in Section 2, Chapter 2A, Function 1 & 2 must be addressed in this document. The example that follows below serves as a comprehensive example that may be used by project officers as a guide.

3. Finances are to be depicted concurrently in current Rand values and in Rand million (eg, RM100,035 for sums less than RM1000 as opposed to RM1 035,000 for sums in excess of RM1000).

4. Commentary from Directors on a separate commentary sheet as per internal procedures as well as the signature of the Chief of the Service or Division (or acting Chief of Service or acting Divisional Chief).

5. Confirmation is required of the following:

   a. That the code word has been registered by the Military Intelligence Division (Info Sec).

   b. That the project is registered on the Financial Management System (FMS).

   c. That the project is registered on the Logistic Information Management System (LIMS).

   d. That the project is registered on the SANDF Capital Acquisition Master Plan (SCAMP).

   e. That the project is registered on the Operations Division Capability Plan.

EXAMPLE OF A STAFF TARGET (IN SUBMISSION FORMAT)

SECURITY CLASSIFICATION

MEMORANDUM

File Reference

Telephone : 986-1234 Date
Telefax : 986-4321
Enquiries : Lt Col I.M. Admino

From: Chairperson of the AASB

To: Chairperson of the AAC

SUBMISSION: STAFF TARGET NO 1/94: PROJECT WARTHOG: ANTI-RUNWAY WEAPON

NOTE: The function that is to be performed by the system, and not hardware, is to be referred to after the project name, eg, not "Stand – off 250 Kg laser guided bomb".

AIM

1. The aim of this submission is to obtain approval for the Staff Target of Project WARTHOG.

SUMMARY

2. It is recommended that the following be approved:

   a. The Staff Target.

   b. Commencement of the next phase of the project.

   c. The spending of funds during the next phase in accordance with policy.

   d. The project financial ceiling if appropriate.

   e. The projected timescales of the next phase and total project.

   f. The contracting parties, if applicable.

   g. If the following phases in terms of the policy wish to be omitted, approval for, along with the motivation, must be requested here (see following Note).

   h. The appointment of a project officer.

NOTE: An example referred to in sub – par 2.g. is when off the shelf items can be procured to satisfy the requirement. Authority is then requested to proceed directly from the Staff Target to the acquisition study and mention is made that the following document that will be submitted for approval will be the Acquisition Plan.

ORIGIN

3. Initiator, eg Chief of the SA Air Force.

4. Special Supporting Division, eg, CJ Support.

5. Correspondence/file reference, eg, Required Operational Capability (ROC), or, Force Structure Plan, item no xxx CAF/S/123/2/1 dd .....19.....

6. Security classification of the project.

7. Project codename, eg, WARTHOG, and code number, eg, W1234.

8. Equipment category, eg, Cat 1.

9. Cost category, eg, 02 SD Acc.

10. Project classification, eg, Cardinal and non – cardinal (ito Section 1, Chapter 5 – Criteria for the Classification and Approval of Projects).

11. Planned Date of Commissioning

   a. Two dates are to be indicated here, namely, the date that the first systems are to be employed operationally/organisationally, and secondly, when the total requirement in terms of numbers, is to be in operational service.

   b. If phased acquisition is being planned, (eg, lots of 50 authorised as partial acquisition plans), planning dates are to be indicated.

   c. If the commissioning dates are not in accordance with the force structure plan, these are to be motivated.

DESCRIPTION AND DELINEATION OF EXISTING SYSTEM

12. Description

   a. State what the existing system comprises.

   b. It must also be stated which associated supporting systems of the existing system would form part of the system to be acquired and which supporting systems would not. Possible interfaces between the new system and those supporting systems outside the system to be acquired must be stipulated as well.

13. Shortcomings. The operational capability related shortcomings of the existing system and/or the inability of existing systems/equipment that has contributed to the present operational deficiency, must be stipulated here.

REQUIRED CAPABILITY

14. This is a short and concise exposition of the required operational capability to be performed by the system.

15. Briefly state the reasons that gave rise to the requirement for the new system, including new technological threats if applicable.

REQUIREMENT

16. The following aspects should be addressed:

a. A short explanation of the **operational aim**.

b. A brief description of the intended **missions** (broad & qualitative but not on tactical level).

c. A brief explanation of **functions** to be performed.

d. The intended **operational environment** in which the system is to be employed. Applicable Concept of Operations considerations must also be taken into account. (The basis of operational scope, mostly at organisational level and frequency from which quantities of level 4 system can be determined during subsequent milestones of the project.)

e. Indicate whether it is considered to be a totally new requirement. (ie, a force expansion).

f. Estimated Quantities. Where the estimated number of systems required is obvious and cannot be influenced by a possible technical solution, these are indicated here.

SYSTEM LEVEL

17. This is a provisional indication of the expected system level against which the requirement will be satisfied. Use may be made only of the accepted system levels, namely, combat grouping (7), user system (6), product system (5), product (4), product sub-system (3), component (2) and material/characteristics.

INTEGRATION INTO ORGANISATIONAL STRUCTURE

18. Indicate here how the intended system is to be integrated into existing/intended equipment/systems in own or other Services and what interfaces the project should establish.

RESTRICTIONS

19. First order general restrictions within which solutions for the problem is to be sought, particularly wrt time, finances, technology and the logistical environment, are to be indicated here. This includes areas where the end user has no interest in considering solutions, and as such must be kept out of contention during the entire project (eg nuclear power or amphibious related solutions).

CHOICE OF TECHNOLOGY

20. Refer here to relevant technology master plan(s) that may have an effect on the project. Furthermore, specifically indicate technology programmes and established capabilities that can/will be utilised by the project.

FINANCES

21. The estimated global project total as well as life cycle costs (coupled to a confidence figure), must be reflected here. Supplementary to the preceding, the following must be indicated:

a. An estimated ceiling within which a solution is to be sought and whether the ceiling is a restriction.

b. Where costs are vague, eg, as a result of various system options, a design to cost (DTC) limitation must be imposed based on relative costs versus the advantage that the requirement contains.

c. The funds that will be spent in achieving the following approval milestone must be indicated separately. A detailed cost breakdown must be appended to the main document.

d. Where available, budgetary figures are to be indicated.

e. Life Cycle cost data source to be used for comparative analysis and any other available figures pertaining to hardware and support costs must be indicated.

LOGISTICS

22. The broad logistic implications that are expected (also external to the system) including logistic related financial data relevant to the project are to be reflected here.

INFRASTRUCTURE

23. First order estimates of any infrastructure implications with accompanying broad timescales are to be shown here.

PERSONNEL

24. If the solution/system/equipment is obvious, the first order expected numbers regarding operational and logistical personnel required the following must be provided.

25. Project management personnel requirements, if applicable, must be mentioned here.

RECOMMENDATION

26. It is recommended that the following be approved:

a. The Staff Target.

b. Commencement of the next phase of the project.

c. The spending of funds during the next phase in accordance with policy.

d. The project financial ceiling if appropriate.

e. The projected timescales of the next phase and total project.

f. The contracting parties, if applicable.

g. If the following phases in terms of the policy wish to be omitted, approval for, along with the motivation, must be requested here.

h. The appointment of a project officer.

CHIEF OF THE SA AIR FORCE : LT GEN

Date:_____

OSC RECOMMENDATION (Separate Page)

27. It is recommended that the following be approved:

a. The Staff Target.

b. Commencement of the next phase of the project.

c. The spending of funds during the next phase in accordance with policy.

d. The project financial ceiling if appropriate.

e. The projected timescales of the next phase and total project.

f. The contracting parties, if applicable.

g. If the following phases in terms of the policy wish to be omitted, approval for, along with the motivation, must be requested here.

h. The appointment of a project officer.

RECOMMENDED/REFERRED BACK

REMARKS:

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(I.M. CHAIRPERSON)
CHAIRPERSON OF THE OSC: LT GEN

DATE:_____

MC RECOMMENDATION (Separate Page)

28. It is recommended that the following be approved:

a. The Staff Target.

b. Commencement of the next phase of the project.

c. The spending of funds during the next phase in accordance with policy.

d. The project financial ceiling if appropriate.

e. The projected timescales of the next phase and total project.

f. The contracting parties, if applicable.

g. If the following phases in terms of the policy wish to be omitted, approval for, along with the motivation, must be requested here.

h. The appointment of a project officer.

RECOMMENDED/REFERRED BACK

REMARKS:

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(I.M. CHAIRPERSON)
CHAIRPERSON OF THE MC: GEN

DATE:_____

AACB RECOMMENDATION (Separate Page)

29. It is recommended that the following be approved:

a. The Staff Target.

b. Commencement of the next phase of the project.

c. The spending of funds during the next phase in accordance with policy.

d. The project financial ceiling if appropriate.

e. The projected timescales of the next phase and total project.

f. The contracting parties, if applicable.

g. If the following phases in terms of the policy wish to be omitted, approval for, along with the motivation, must be requested here.

h. The appointment of a project officer.

RECOMMENDED/REFERRED BACK

REMARKS:

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(I.M. CHAIRPERSON)
CHAIRPERSON OF THE AACB: DEPUTY DIRECTOR-GENERAL

DATE:_____

AASB RECOMMENDATION (Separate Page)

30. It is recommended that the following be approved:

a. The Staff Target.

b. Commencement of the next phase of the project.

c. The spending of funds during the next phase in accordance with policy.

d. The project financial ceiling if appropriate.

e. The projected timescales of the next phase and total project.

f. The contracting parties, if applicable.

g. If the following phases in terms of the policy wish to be omitted, approval for, along with the motivation, must be requested here.

h. The appointment of a project officer.

RECOMMENDED/REFERRED BACK

REMARKS:

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(I.M. CHAIRPERSON)
CHAIRPERSON OF THE AASB: DIRECTOR-GENERAL

DATE:_____

AAC APPROVA eparate Page)

31. The following is approved:

a. The Staff Target.

b. Commencement of the next phase of the project.

c. The spending of funds during the next phase in accordance with policy.

d. The project financial ceiling if appropriate.

e. The projected timescales of the next phase and total project.

f. The contracting parties, if applicable.

g. If the following phases in terms of the policy wish to be omitted, approval for, along with the motivation, must be requested here.

h. The appointment of a project officer.

APPROVED/REFERRED BACK

REMARKS:

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(I.M. CHAIRPERSON)
CHAIRPERSON OF THE AAC: MINISTER OF DEFENCE

DATE:_____

ANNEXURE 3
TO APPENDIX N
TO JDP/ACQ NO 5/03

GUIDELINES FOR THE COMPOSITION OF A STAFF REQUIREMENT (SR)

1. The SR is compiled by the user and is basically a summary of the functional study (FS). Approval of the SR, namely, milestones "1.b., represents the concept decision.

NOTE 1 : Aspects contained in Section 2, Chapter 2A, Function 3 & 4 must be addressed in this document. The example below serves as a comprehensive example that may be used by project officers as they see fit.

AIM

2. The aim of the SR is to formulate and describe the functional user requirements and performances of the system in unambiguous user terms in order to satisfy the requirement to overcome the problem.

SCOPE

3. The SR comprises primarily of an introduction and background as to the origin of the requirement, project management requirements (PMR), functional user requirement statement (FURS), logistic user requirement statement (LURS) and a Memorandum of Understanding (MoU) between the DOD project management team and all internally and externally involved parties, whether they be Armscor, PWD, HRSC (DMPU) or other projects that may be producing suitable sub-systems. Both the FURS and LURS are subject to change during the course of the project.

NOTE 2: When appointing a project officer and system manager (where applicable), a letter of appointment containing complete instructions and the mandate wrt the envisaged project as well as interaction between individuals and divisions, is to be handed to him/her so that the detail info does not appear in the SR.

4. In principal, changes to tactics of the project, missions, time-scales, quantities of user system, finances and logistical support philosophy, are regarded as Class 1 changes and need to be authorized within this context.

5. The SR is to be compiled in such a manner that the designer can derive design parameters and technical requirements for the compilation of A – specifications in terms of MIL-STD-490A (DI-C MAN-80008).

EXAMPLE OF A STAFF REQUIREMENT

SECURITY CLASSIFICATION

File Reference

Telephone : 986-1234 Address
Telefax : 986-4321
Enquiries : Lt Col I.M. Admino Date

PROJECT (CODE WORD)/ SUB-PROJECT (CODE WORD): SERVICE STAFF REQUIREMENT NO 1/94 (AMENDMENT NO ....): THE ACQUISITION OF A.....

PART 1 : INTRODUCTION

1. During the introduction, certain statuses and confirmations have to be given that will serve as departure point for the compilation of the staff requirement. These embrace the following:

   a. Confirmation that staff target no .... Was approved on (date) ... by ... (authorizing authority) ... and that this document is still valid.

   b. Confirmation that this requirement is still valid as well as the operational necessity thereof ito the enemy's design for battle, threat analysis as well as force design.

   c. Confirmation that funds are on budget, on which account, and if not, from where, when and in what manner it is intended to procure such monies.

   d. Confirmation that funds expended in the preceding phase did not exceed the authorized amount.

   e. Confirmation that the intended date of commissioning is reconcilable with the requirement for this operational capability.

2. Origin of the Requirement. Aspects that require attention here are:

   a. A shortfall/deficiency in existing equipment, necessary replenishment/ replacement and possible phasing in/out.

   b. Development of new technology.

   c. A short description of unacceptable system concepts that were considered and must not enjoy further attention.

   d. Description of the system concept on at least user system level (even when a product system or lower system level is being acquired, the implications on the user system must be spelled out).

   e. System boundaries, by the identification of at least concept product systems that form part of the user system. However, this concept must not be viewed as restrictive on choices during the project study. For purposes of clarity, systems and interfaces not being provided by the project, should also be indicated.

3. Operational Environment and Employment. A clear description of the broad operational environment in which the new operational capability is to be used, is to be presented here. It is this essential to spell out the role and mission, potential targets and enemy weapon capabilities as well as the interaction between this capability and existing operational capabilities in the field.

4. Logistical Environment. A clear description of the existing logistical environment within which the system will be operated and maintained is to be provided here. It is thus essential to briefly indicate interaction with existing systems, facilities, infrastructure, personnel, information systems, etc.

5. Interfaces with other Projects. If there are interfaces to other projects within and out of the Defence Force, these interactions and associated tasks are to be clearly defined. Where applicable, the detail technical specifications pertaining to this project external interface (physical), is to be provided by the user to the design authority.

6. Influence on Existing Systems. Where the employment doctrine or life expectancy of the new system influences existing equipment, an indication is to be given of intended use/disposal of such equipment.

PART II : PROJECT MANAGEMENT REQUIREMENTS (PMR)

7. General Requirements. All project management information including background, requirements, instructions and programme plans needed for the execution of the next phase. These include:

a. Approach for the progress of the project, eg, approvals needed for specific requirements, approval for any deviations from laid down policy and authorizing levels, etc. When determining the approach, Armscor and the industries inputs are to be considered.

b. Internal and external organisations those are to be tasked, including requirements for which they will be tasked.

c. Confirmation that the industry identified to be contracted in the next phase, is the optimum one and that all such intended contracts have been reviewed by the user to determine acceptability.

d. Number of sub-projects with interfaces.

e. Broad work breakdown structure.

f. Responsibility matrix.

g. Project milestones for the project study phase.

h. Envisaged deliverables for the next phase.

i. Provisional planning wrt operational test and evaluation (OT&E) against set requirements as detailed below in the FURS and LURS.

8. Financial Requirements. As far as possible, the following is to be included here:

a. Esti d acquisition costs of the user system and if possible, of the product system.

b. Estimated life cycle costs (LSC) as per sub-par 8.a. based on the South African National Defence Force Manual for Products System Management Document No 05727-800-008 (not yet promulgated).

c. Estimated unit cost of the primary equipment.

d. Project management costs for the concept and definition phases (project study costs) as attribute to the project.

e. Estimated logistic support costs for non-recurrent and running costs (current R values) with a confidence figure.

f. Financial objective, absolute ceiling and any other restrictions wrt unit costs or LSC.

g. Estimated phasing out costs if special phasing out measures, precautions or procedures are required.

9. Estimated Quantities. Gauging from the operational scope of the requirement (eg, number of theatres), identified missions and recurrence, system concept and financial restrictions, an estimate is made of the number of products required within the main product system with emphasis on the prime equipment.

10. Time-scales. Indications wrt the following are to be provided:

a. Planned Date of Commissioning. This serves as a revision/update of the dates proposed in the staff target, ie, the date on which the first system/s can be organisationally employed and the date when the requirement is expected to be satisfied.

b. Expected time-scales and objective dates for the different phases (macro project milestones with expected maximum duration).

11. Security & Media. A Security & Media Plan in accordance with Section 1, Chapter 6 and Annexure 15 is to be compiled.

12. Restrictions. An identification is to be given of any restrictions under which the project is to be executed, whether political/strategic, technical, timescale or financial.

13. Value System. By using a value system, the user must analyse stated user performances against one another (especially the more important ones) to determine and stipulate relative importance so as to enable the design authority to conduct trade-off studies during the project study prior to submission of options to the user for selection of the optimum one.

NOTE 3: During the definition of functional requirements, a broad brush analysis is conducted to determine the balance between industrial-, technical-, and financial capabilities and that of the functional requirements. However, the objective remains the definition of functional requirements that can, with the aid of a value system, be made feasible.

PART III : FUNCTIONAL USER REQUIREMENT STATEMENT (FURS)

14. All functional requirements must be stated here in qualitative user terms. Note that these requirements are basically an expansion of the stated role and mission. Care must be taken to ensure that the required performance of the system is specified and not it's appearance.

15. Design

b. Physical Dimensions. Characteristics that are addressed here include weight limitations, measurements and spatial restrictions, crew area, layout of control centers, durability factors, command and control, vulnerability factors (NBC, fire, electromagnetic radiation, etc) as well as length, width, height, diameter, carrying capability and any other that influence physical configuration (the fore-mentioned can be stated as guide-lines or as design requirements, depending on the situation).

c. Performance. This paragraph is to reflect the minimum operational performance characteristics to meet the stated operational requirements, eg, dynamic requirements such as tempo's, accelerators, movement, repetitions, etc. The ability of the system is to be determined by the establishment of upper and lower performance limitations, ie, quantitative requirements.

d. Reliability.

i. As far as possible, reliability requirements are to be stated in quantitative terms so as to understand the degree of reliability, eg, the allocation of reliability values to functional areas as part of their attainment of system reliability (for detail refer to RSA-MIL-STD-105).

ii. Additionally, criteria such as accuracy, interpretation of tests and accuracy levels, and any other guaranties that the user requires, are to be stated.

e. Interchangeability. The requirements for interchangeability between assemblies with independent capabilities are to be indicated.

f. Environment. Environmental factors from the natural- as well as induced environment (temperature, shock, radiation, vibration, moisture, atmosphere, noise, dust, pollution, terrain, liquid chemical matter, interference from the electromagnetic spectrum, etc) as well as the exposure time are to be stated (Refer to Section 1, Chapter 5, Project Constraints).

g. Operational Availability. The required degree of availability wrt single systems or groupings of systems is to be indicated bmo, eg, a percentage. When availability in excess of 95% is required, the logistic implications and costs increase significantly.

h. Rationalization. As far as possible, this aspect is to be considered/applied.

i. Standardization. These may include the following:

i. Design restriction and –standards that are required to ensure system hardware compatibility.

ii. The definition of the main interfaces between the system that is being specified and other systems for which it is to be compatible.

j. Interoperability. Data interoperability must be defined in the following context:

i. The degree of interoperability of the new system must be specified ito Systems Level, Open Standard Interface (OSI) Layer (if required), Defence Information & Communications Technology Architecture (DICTA) domain.

ii. Protocol standards at all levels must be defined.

iii. All functional software elements should be coupled to the CMI Systems application portfolio ito unique application, common application, common enabling components & transversal systems.

k. Safety Factors. Safety factors that are fundamental to the design of the system are specified here. Examples include characteristics of the equipment, method of operation and environmental factors, safety of personnel and the influence of natural aging and wear and tear of the equipment. Refer to OHS Act (Reference O) & Section 1, Chapter 5, Project Constraints.

l. Precaution Measures. Precautions wrt health criteria, statutory regulations and legal aspects, radioactive radiation, etc, may be included here. (Refer to Reference O, Section 1, Chapter 5, Project Constraints).

m. Life-span. The required useful life expectancy of the equipment as well as the time span between upgrades is to be specified. The change in threat as well as technological environment is to be considered.

PART IV : LOGISTICAL USER REQUIREMENT STATEMENT (LURS)

16. All logistical support requirements contained in Section1, Chapter 3, ILS & Log 9 and 10 Pamphlet 1, Part 8 – Integrated Logistic Support, are to be addressed here. These include :

a. Maintenance planning ito tasks and organisations.

b. Support- and test equipment for all levels of user repair.

c. Supply support ito all consumables, parts and repair assemblies.

d. Reliability- and maintainability requirements (for detail refer to in Section 1, Chapter 3, ILS and RSA-MIL-STD-105).

e. Packaging, handling, preservation, storage and transport for both user- and product system as well as for the logistic support thereof.

f. Technical data such as codification and other that may be necessary for the operation of the procured system.

g. Infrastructure requirements such as terrain, buildings, roads, airfields, structures, Information & Communication Technology (ICT) support etc, that are required for the total life-cycle of the system.

h. Personnel and training ito number and caliber of persons required, proficiency levels, specialties, training facilities and –material.

i. Computer resource support (hard- and software) as required during the procurement and operation of the system, eg, a computer based maintenance system. All interfaces to existing info systems required as well as standard of data required for the new maintenance system.

ANNEXURE 4
TO APPENDIX N
TO JDP/ACQ NO 5/03

GUIDELINES FOR THE COMPOSITION OF A PROJECT STUDY REPORT (PSR)

GENERAL

1. The PSR is compiled by the user and represents the "SYSTEM DECISION". This decision represents SANDF milestone "IC" and is approved in principle by senior management and is thus accepted as the preferred option for the satisfaction of the user requirement statement.

2. Aspects contained in Section 2, Chapter 2B, Function 5 & 6 must be addressed in this document. The example below serves as a comprehensive example that may be used by project officers as they see fit.

AIM

3. The aim of the project study is to determine the most efficient and adequate product system(s)/solution(s) for the satisfaction of the staff requirement by weighing up/comparing the various options against one another against the same value system. The preferred option is then documented in an A – Specification(s).

SCOPE

4. The PSR consists of an introduction, trade-off analysis for each option considered, project management-, technical-, logistic-, and personnel implications of the preferred option.

EXAMPLE OF A PROJECT STUDY REPORT

SECURITY CLASSIFICATION

File Reference

Telephone : 986-1234 Address
Telefax : 986-4321
Enquiries : Lt Col I.M. Admino Date

PROJECT (CODE WORD)/SUB-PROJECT (CODE WORD): SERVICE PROJECT STUDY REPORT (AMENDMENT NO .....): THE ACQUISITION OF A.....

PART 1 : INTRODUCTION

1. The following is to be confirmed here:

   a. The validity of the operational requirement as contained in the latest approved staff target.

   b. That the preferred option meets the user requirements as specified in the staff requirement.

   c. That the project requirements conform to those specified in the latest staff requirement with reference to the configuration status of the latter document.

   d. That the restrictions wrt administrative, logistical, financial, time-scale, manpower, quantities, technological or any other aspect as contained in the staff requirement are complied with.

   e. That the approved financial ceiling of the preceding phase has not been completed.

   f. That the contractual deliverables of the preceding phase have been completed.

   g. That the project is still progressing according to plan, and if not, reasons for the accelerator or slip.

   h. That the technology (especially wrt the higher level at this stage) has been established to such an extent that the development time-scales are reasonably accurate and predictable and that the risk levels are acceptably low enough to bridge any outstanding technological gap within reasonable time.

PART II : OPTION SELECTION

NOTE: When product system options are being investigated during the project study, it may become necessary to carry out concept designs on product level or product sub-system level to justify options. Some of the product systems options may thus vary wrt product or product sub-systems only.

NOTE: Existing equipment in the SANDF is in all cases to be considered as one of the possible options, whether in modified or upgraded form. If existing equipment is not suitable for further employment, disposal actions are to be initiated. A disposal plan is therefore required with the Project Study Report if there is no intention to upgrade existing equipment.

2. A detail exposition of all the options considered with a clear explanation of advantages and disadvantages of all important matters such as:

   a. Operational capability and the measure that the set requirements are met.

   b. Quantities of the product system.

   c. Performance and the measure that the set requirements are met.

   d. Time-scales required for each option measured against the threat term.

   e. Total cost estimate (acquisition and life cycle) and annual cash flow set against budgetary ceiling.

   f. The quantity and quality of manpower required for operation and maintenance.

   g. Logistical requirements such as the use of existing facilities for training, accommodation, repair and maintenance, for example.

   h. Local or foreign production measured ito the availability of complete systems, sub-systems or components owing to the MTCR restrictions or any other similar considerations.

   i. Technological and practical feasibility with the available development- and industrial capability.

   j. Political and other risks as well as security considerations.

   k. Proven skills wrt involved parties and standardization wrt items.

NOTE: Results presented in tabular from with values allocated to each entry can be very helpful.

3. From the appreciation contained in par 2 above, the preferred option is motivated and described as set out below.

PART III : PROJECT MANAGEMENT IMPLICATIONS OF THE PREFERRED OPTION

4. The following may be included here :

   a. All background, requirements and instructions to, or required by any individual, department or party to manage the project effectively or to ensure smooth progress.

   b. Tactics for the definition phase, eg, approvals needed for specific requirements, approval for any deviations from laid down policy and authorizing levels, etc. (See following note)

c. Internal and external organisations that are to be tasked, including requirements for which they will be tasked.

d. Confirmation that the selected system supplier and/or system house identified to be contracted for the execution of the rest of the definition phase (this choice is confirmed again during the development phase) and where possible for the production phase (the latter is finalized in the acquisition plan) is the optimum one and that all such intended contracts have been reviewed by the user to determine acceptability.

e. Number of sub-projects with interfaces and financial allocations.

f. Broad work breakdown structure.

g. Responsibility matrix.

h. Programme plan for the system study and project milestones for inter alia the development- and logistic study as well as deliverables such as B-specifications, ISP – 2, etc.

i. Envisaged deliverables for the definition phase.

j. A graphic representation of the project management plan with an exposition of activities coupled to time-scales and finances. Examples of activities that can be addressed here are development, industrialization, production, acceptance, commissioning, handing over the system from the project officer to the system manager, etc.

NOTE: Depending on the results of the project study and, ito, the circumstances contained in Chapter 2B, Function 7a, it is possible to proceed directly to the acquisition plan for the entire system or to partial acquisition plans for products or even special materials. Note that an acquisition plan can be compiled only if the equipment development test and evaluation is compiled.

5. Financial Requirements. As far as possible, the following is to be included here:

a. Estimated acquisition costs of the user system and if possible, of the product system.

b. Estimated life cycle costs (LSC) as per South African National Defence Force Manual for Products System Management Document No 05727-800-008 (not yet promulgated).

c. Estimated unit cost of the primary equipment excluding royalties for licensed production.

d. Project management costs for the definition and development phases.

e. Estimated logistic support costs for non-recurrent and running costs (current R values) the definition and development phases.

f. Financial objective, absolute ceiling and any other restrictions wrt unit costs or LSC.

g. Confirmation that the funds are on budget and on which account, and if not, from where, when and in what manner is the funding to be transferred.

h. The costs of diverse items also have to be addressed by the person responsible for the budget, whether through the project or by another party. Examples include:

i. Optional and additional on board equipment such as radios, rescue equipment, etc.

ii. Additional operational support equipment such as cranes, tractors, fire tenders, boats, etc.

iii. Weapons and mobilization ammunition.

iv. Initial spares, reserve motors, etc.

v. Special tools, maintenance- and test equipment.

vi. Communications equipment, including link-ups to existing static facilities such as radio- or radar stations or the establishment of such new facilities.

vii. Possible adaptation cost of existing IS system required to allow new system pass data.

viii. Possible adaptation of protocol standards to accommodate the requirements of the new system.

ix. Training equipment and simulators.

x. Technical publications including inspection- and maintenance schedules.

xi. Initial adaptive training (if overseas).

xii. Translations.

xiii. Codification and cataloguing.

xiv. Installations and modifications.

xv. Supervision and inspections.

xvi. Bank guaranties, price escalations and interest.

xvii. Evaluation- and commissioning costs.

xviii. Special clothing.

xix. Delivery costs (packaging, shipping, insurance).

xx. Travel and subsistence for special missions.

xxi. Capital investments.

xxii. Documentation.

xxiii. Additional personnel costs (operational, technical and administrative).

xxiv. Additional maintenance spares.

xxv. Maintenance by private contractors.

xxvi. Acquisition- and implementation costs of computerized information systems.

6. Quantities and Allocations. This serves as confirmation or adjustment of quantities required and organisational allocation of the product system as determined in the staff requirement.

7. Time-scales. Indications for the following are to be given :

a. Time-scales and milestones for the definition phase. Projected time-scale for the development phase.

b. Planned date of commissioning. This serves as a revision/update of the dates proposed in the staff requirement, ie, the date on which the first system(s) can be organisationally employed and the date when the requirement is expected to be satisfied.

c. Operational life expectancy of the user system and projected first upgrade.

8. An updated Security & Media Plan ito Section 1, Chapter 6 and Annexure 15 must be attached.

9. A Memorandum of Understanding (MoU) between the SANDF project management team and all internally and externally involved parties, whether they be Armscor, PWD, HRSC (DMPU) or other projects that may be producing suitable sub-systems, is to be compiled and attached to the PSR.

PART IV : TECHNICAL IMPLICATIONS OF THE PREFERRED OPTION

10. The A - specification (in accordance with MIL-STD-490A) for the preferred product system with correct configuration status must be attached/available or referred to in the PSR.

PART V : LOGISTIC IMPLICATIONS OF THE PREFERRED OPTION

11. All logistical support requirements contained in Section 1, Chapter 3, ILS & Log 9 and 10 Pamphlet 1, Part 8 – Integrated Logistic Support are to be addressed here. These include:

a. Maintenance planning ito tasks and organisations.

b. Support- and test equipment for all levels of user repair.

c. Supply support ito all consumables, parts and repair assemblies.

d. Reliability- and maintainability requirements (for detail refer to Section 1, Chapter 3, ILS and RSA-MIL-STD-105).

e. Packaging, handling, preservation, storage and transport for both user- and product system as well as for the logistic support thereof.

f. Technical data such as codification and other technical publications (iaw specifications) that may be necessary for the operation of the system.

g. Particulars and costs of structures, where such construction does not qualify as turn-key project, must be considered iaw the under mentioned:

i. Purchase of ground and site preparation.

ii. Expansion of base facilities.

iii. Technical buildings such as, eg, hangars, stores, workshops, magazines, stop-walls, security fences, telephones and services.

iv. Administrative buildings such as, eg, offices, operation rooms and guard rooms.

v. Domestic buildings such as, eg, quarters, amenities, recreational- and sporting facilities, telephones, water, electricity and sanitation services.

h. Confirm that the time-scales for the erection of the buildings and facilities is reconcilable with the delivery of the product system.

i. In conjunction with C Log (D Facilities), confirm that no suitable existing facilities are at the disposal of or adaptable for the product system.

j. Computer resource support (hard- and software) as required during the procurement and operation of the system, eg, a computer based maintenance system. All interfaces to existing info systems required as well as standard of data required for the new maintenance system.

PART VI : PERSONNEL IMPLICATIONS FOR THE PREFERRED OPTION

12. The total personnel requirement identified in the staff requirement must be confirmed or adapted here. The under mentioned can serve as guide-lines:

a. Staffing

i. The number and type of operational crews and maintenance personnel required for each deployment method for normal- and emergency cases is to be indicated.

ii. Provision must also be made for the training of instructor personnel(number and type) who will manage further training.

iii. The description of the type of training is to include the following entry requirements:

(1) Educational qualifications.

(2) Training requirements.

(3) Physical- and medical requirements (including psychological selection profile if applicable).

iv. Any additional CMIS support personnel required with an indication of their function, tasks and training levels.

b. Training

i. Contractor's- or state responsibility for training requirements that arise with the inception of new equipment, including the concept of how the training is to be conducted, eg, school-, unit- or contractor's training.

ii. Training time, facilities and instructional personnel for effective training programmes.

iii. Quantitative and qualitative requirements for course material and training aids to support the specified training.

c. Training Equipment. The following is of importance:

i. Estimates of the number of equipment to be developed exclusively for training purposes.

ii. The need for the development of simulators including requirements and characteristics.

PART VII : MARKETING

13. The project study report that is submitted for approval, is to make recommendations pertaining to the following:

a. South African name for the armament.

b. Foreign marketing (commercial) name.

c. Marketing of items or parts of the system.

d. Marketing of Technology.

14. Pertaining to the above-mentioned recommendations, the project team (Arm of Service and Armscor) is to complete all the staff work, eg, clarify names with the Intelligence Division ito policy, prior to submission.

ANNEXURE 5
TO APPENDIX N
TO JDP/ACQ NO 5/03

GUIDELINES FOR THE COMPOSITION OF A DEVELOPMENT PLAN (DP)

GENERAL

1. The DP is an output of the system study (SS) and is compiled by the user and represents the "DEVELOPMENT DECISION", ie, SANDF milestone "2 C".

AIM

2. The aim of the development plan is to gain authority for the execution of the development phase by confirming the decisions reached during the system study pertaining to the identification of configuration items (CI's), B- specifications for the CI's, the industry identified for the development of the CI's as well as the choice of existing products that are to be integrated into the system.

SCOPE

3. The DP consists of an introduction, project management-, technical- and logistic requirements.

4. Aspects contained in Section 2, Chapter 2B, Function 7 & 8 must be addressed in this document. The example below serves as a comprehensive example that may be used by project officers at their own discretion.

5. It needs to be noted that the DP overlaps previous documentation to a large degree in so far as content is concerned. The differences are primarily in the refinement of detail, eg, smaller tolerances, uncertainties, etc.

EXAMPLE OF A PROJECT DEVELOPMENT PLAN

SECURITY CLASSIFICATION

File Reference

Telephone : 986-1234 Address
Telefax : 986-4321
Enquiries : Lt Col I.M. Admino Date

PROJECT (CODE WORD)/SUB-PROJECT (CODE WORD) : DEVELOPMENT PLAN: THE ACQUISITION OF A .....

PART I : INTRODUCTION

1. Aspects that must get attention here include:

   a. Confirmation that the results of the project study report are still valid with reference to the configuration status of the valid PSR.

   b. A short description of all the configuration items (CI's) that are to be developed, with reasons as well as an evaluation of the technological, financial and time-scale risks attached to each.

   c. A description of existing prime items that have been selected to form part of the system solution.

   d. Confirmation that the technology, especially wrt the identified CI's has been established to such an extent that the development time-scales are reasonably accurate and predictable and that the risk levels are acceptably low enough to bridge any outstanding technological gap within reasonable time.

PART II : PROJECT MANAGEMENT REQUIREMENTS (PMR)

2. All project management information including background, requirements, instructions and programme plans required by any individual, department or party to manage the development phase of the project effectively. These include:

   a. Tactics for the development phase, eg, approvals needed for specific requirements, approval for any deviations from laid down policy and authorizing levels, etc.

   b. Internal and external organisations those are to be tasked, including requirements for which they will be tasked.

   c. Confirmation that the industry selected for the development of the individual CI's during the development phase is the optimum one and that all such intended contracts have been reviewed by the user to determine acceptability.

   d. Involvement with factory test and evaluations (F.T&E) as well as the requirement for involvement with technical tests and evaluations (T.T&E) (ostensible field trials conducted by the contractor).

   e. Preliminary operational tests and evaluations (P.OT&E) that the user will conduct in won right to determine if the requirements contained in the staff requirement correctly portrayed the users operational requirement.

   f. Testing Plan for interoperability.

   g. Number of sub-projects with interfaces and financial allocations.

   h. Broad work breakdown structure.

   i. Responsibility matrix.

   j. Macro project milestones as well as provisional interim milestones for the development phase which are typically interdependent with the planning of the various development models. Quantities and time-scales for specific development models are specified in the development contract.

   k. Envisaged deliverables for the development phase.

3. Financial Requirements. As far as possible, the following is to be included her:

   a. Preliminary estimation of development costs per development model that also includes development logistics.

   b. Estimated acquisition costs of the user system and if possible, of the product system.

   c. Estimated life cycle costs (LSC) as per sub-par 3.b. based on South African National Defence Force Manual for Products System Management Document No 05727-800-008.

   d. Estimated unit cost of the primary equipment.

   e. Project management costs for the development phase.

   f. Estimated logistic support costs for non-recurrent and running costs (current R value) the development phase.

   g. Financial objective, absolute ceiling and any other restrictions wrt unit costs or LSC. These represent the design to cost (DTC) objectives.

   h. Confirmation that the funds are on budget and on which account, and if not, from where, when and in what manner is the funding to be transferred.

   i. Confirmation that the funds expended in the preceding phase did not exceed the financial authority.

4. Time-scales. Indications for the following are to be given:

   a. Time-scales and milestones for the development phase. These milestones are coupled to risk reduction, technical performance measurement, preliminary design review, development tests and evaluation and where possible, preliminary operational tests and evaluation for the envisaged individual development models.