

Chapter IIIA

PROCEDURE FOR ACQUISITION OF SYSTEMS DESIGNED AND DEVELOPED BY DRDO/DPSU/OFB

Background

1. The aim of this procedure is to enable acquisition and induction of equipment/ system developed by DRDO/DPSU/OFB into the Services. This process will help not only in translating the existing indigenous technological capability into systems, but also in implementing 'Make in India' with indigenous technology through Indian industry. This chapter describes the procedure for design and development of equipment/ systems by DRDO/DPSU/OFB in detail which will lead to subsequent induction. The procedure covers the development of systems from inception till induction by Services and life cycle support, as per flow chart given at **Appendix A** to this Chapter.

2. While technology levels in defence systems in the country have reached global standards in a number of areas, however, in other areas we need to follow a spiral development model to keep pace with the international standards. Moreover, technology is ever-changing; and to constantly remain at par with global technologies, indigenous technology development must continue, through spiral development, if required. Spiral Development model is proposed to be adopted for indigenous capability building, wherever considered essential and feasible keeping operational requirement of Services in mind.

Development and Acquisition Process

3. On the basis of Operational Requirements (ORs), SHQ shall identify the cases which could to be undertaken for Design and Development (D&D) by DRDO/DPSU/OFB for subsequent induction. All such cases would be categorised as 'Buy (Indian-IDD)' for subsequent induction from the industry partner of DRDO or DPSU/OFB. Normally, DRDO would nominate DcPP(s) ; but in case of DPSU/OFB the entire D&D and subsequent production may be undertaken by themselves. In exceptional cases DPSU/OFB may nominate a DcPP/PA from Indian industry.

4. The acquisition process for the systems designed and developed by DRDO/DPSU/OFB would involve the following functions:-

- (a) Initiation of D&D case by SHQs.
- (b) Accord of Acceptance of Necessity (AoN).
- (c) Issue of Project Sanction Letter.

- (d) Design and Development.
 - (i) Identification of Development cum Production Partner (s) by DRDO/DPSU/OFB.
 - (ii) Detailed Design Review (DDR).
 - (iii) Issue of Trial Directive by SHQ.
 - (iv) Critical Design Review (CDR) by DRDO/DPSU/OFB
 - (v) Realisation of prototype.
 - (vi) Development trials, with assistance of Users(SHQ).
- (e) Freezing of PSQRs (conversion of PSQRs into SQRs).
- (f) Issue of Commercial Request for Proposal (RFP) to Development cum Production Partner (s) – DcPP(s)/ Production Agency (ies)- PA(s) of DRDO / DPSU/OFB.
- (g) Field Evaluation Trials (FET).
- (h) Staff Evaluation.
- (j) Commercial negotiations by Contract Negotiation Committee (CNC).
- (k) Approval of the Competent Financial Authority (CFA).
- (l) Award of contract/ Supply Order (SO).
- (m) Contract Administration and Post-Contract Management.

Initiation of D&D Case by SHQs

5. The Statement of Case (SoC) for these would be initiated by the concerned SHQ in consultation with DRDO/DPSU/OFB and circulated to all concerned stakeholders, for comments.
6. The SoC for seeking AoN shall, inter-alia, include the feasibility study report, PSQRs, MOQ and total quantity requirements and a methodology to quantify and verify each PSQR parameter.
7. The SoC for seeking AoN will, inter alia, highlight the following:-

- (a) Recommended level of Indigenous Content.
- (b) Minimum Order Quantity (MOQ) which can be exclusively committed for the identified project, post the successful development of prototype. In case, SHQs have opted for multi-stage PSQRs SoC shall separately list out MOQ for each stage.
- (c) Envisaged 'Development Timelines' for prototype.
- (d) Estimated development cost of project.
- (e) Estimated production cost of orders for subsequent procurement under Buy (Indian-IDDM) category.
- (f) Acceptability of multiple (DcPP(s)/ PA(s) and division of ordered quantity among successful DcPP(s)/ PA(s), where applicable.

8. PSQRs will be formulated by SHQs in consultation DRDO/design agency, specifying essential and desirable parameters. The applicability of spiral development would also be considered during the PSQR formulation itself.

9. Along with the PSQRs, a methodology to quantify and verify each PSQR parameter should also be finalised to avoid any subjectivity in formulation of PSQR.

Accord of Acceptance of Necessity (AoN)

10. After incorporating the comments on the SoC, as feasible, SHQ shall field the case in SPB/DPB/DAC, as applicable, for accord of AoN.

11. DcPP(s)/ PA(s) identified by DRDO shall not be considered as Single vendor case. Similarly, if the D&D is by DPSU/OFB without any DcPP ,it would not be treated as SVC.

12. Validity of AoN for D&D projects by DRDO/DPSU/OFB will be six months from the date of approval of SQRs (post freezing of PSQRs after successful developmental trials) by relevant SEPC ie Commercial RFP would have to be issued by SHQ to DcPP of DRDO or DPSU/OFB within six months of approval of GSQR by SEPC.

Design and Development

13. Design and development would be undertaken as per DRDO/DPSU/OFB procedures. The major activities to be carried out during D&D are described in the following paragraphs.

Design and Development cum Production Partner (s)

14. DRDO shall indentify DcPP(s) during the initial stages of development as per DRDO procedures. The number of DcPP(S) selected will be based on the quantities required, response of the vendors, complexities of the technology, risk mitigation, expertise available within the Indian industry etc. But effort should be to have at least two DcPP(s). If two DcPPs are not available DRDO may justify the same to AoN according authority when AoN is sought. In case of D & D by DPSU/OFB there may not be any DcPP. In case there is a DcPP ,provisions as applicable to DRDO will apply.

15. In certain cases, where the quantities are limited and production by industry is not feasible, production can be undertaken by DRDO/DPSU/OFB with approval of AoN according authority. DRDO will however identify a suitable maintenance agency as per its internal procedures to provide life cycle support for the equipment. DPSU/OFB may provide the product support without involving any private industry.

16. The DcPP(s) shall be involved during the development cycle of the project in order to enable absorption of technology. Infrastructure required for production should be established by the DcPP(s).

Review and Monitoring

17. The Detailed Design Review (DDR) and Critical Design Review (CDR) would be conducted as per internal procedures of design agency. Project reviews would also be done as per internal procedure to assess the progress and suggest corrective measures, if any.

18. DRDO/DPSU/OFB will constitute a Joint Project Management Team (JPMT), chaired by two-star officer from the concerned SHQ and co chaired by a Scientist 'G' of DRDO/ GM Level officer in case of DPSU/OFB with representatives from design agency ie DRDO/DPSU/OFB , MoD (Acqn Wing), DGQA/DGAQA/DGNAI, reps from maintenance branch, as required and other experts if considered necessary. Domain experts, if considered necessary may also be included. The suggested constitution and role of JPMT is as at Appendix B.

19. Quarterly Review Meeting (QRM) of all DRDO projects will be carried out by concerned Vice Chiefs ,Secretary Defence R&D and DG (Acquisition). All JPMTs will render progress report during the QRM. The QRM may recommend foreclosure of any project and SHQ would then field the case before AoN according authority for foreclosure . A six monthly update of all DRDO projects would be given by DRDO to DPB.

Issue of Trial Directive

20. Trial Directive will be issued by SHQ after completion of the project Detailed Design Review (DDR) for Developmental trials based on PSQRs.

21. The Critical Design Review (CDR) would consider all aspects of trial directive.

22. Aspects of QA, Environmental tests, EMI/EMC checks and maintainability would also be addressed in the trial directive.

23. DRDO/DPSU/OFB and SHQ shall jointly agree to the parameters which will be evaluated during the development trials. A certificate of conformance (CoC) will be issued by DRDO/DPSU/OFB to certify that these parameters need not be re-evaluated during FET.

Realisation of Prototype

24. Prototype shall be realized by the DcPP(s) in case of design by DRDO; and by DPSU/OFB in case no DcPP is engaged by them.

Development trials

25. Design agency , in close consultation with SHQ, would initially carry out development trials to validate the performance of the system against the PSQR parameters.

26. Development trials shall be conducted on the prototype manufactured by the DcPP(s).

27. JPMT to support conduct of developmental trials by providing platforms, ranges, logistic support etc.

Freezing of PSQRs (conversion into SQRs)

28. After successful completion of developmental trials by DRDO, PSQRs shall be converted into SQRs and approved by the relevant SEPC.

Issue of Commercial Request for Proposal (RFP)

29. In case of non-issuance of commercial RFP within the stipulated period, ie six months after freezing of PSQRs, the AoN would need to be revalidated.

30. For better price discovery, commercial RFP would be issued and bid received prior to commencement of Field Evaluation Trials (FET). RFP, besides seeking commercial inputs will also seek costing details for life-sustenance support.

Field Evaluation Trials (FET)

31. The Trial Directive will be formulated by the SHQ in consultation with design agency and must specify the fundamental points that need to be addressed for validating the 'essential' parameters, along with EMI/EMC, Maintenance and Quality requirements. Trial directive will be issued on the basis of trial methodology. CoC submitted by design agency shall be taken into account while formulating the Trial directive for FET.

32. The following documents should be made available to users/Trial agencies, at the start of the FET:-

- (a) Requisite technical documentation.
- (b) Draft maintenance manuals.
- (c) List of components/ parts (for maintainability trials)

33. FET would be conducted by trial team/ nominated by SHQ, with rep of design agency as a member, in accordance with the trial directive. Specific platform(s); required for conducting FET will also be nominated and made available to the trial team. JPMT will coordinate the conduct of FET with the SHQ and trial team.

Staff Evaluation

34. The FET result, as applicable, the Staff Evaluation report will be accepted at the SHQs by the CISC/VCOAS/VCNS/DCAS/DG ICG.

35. Staff evaluation may also recommend for 'Limited Validation Trials' (LVT)/First of production Model (FOPM) trials, if required. Both LVT and FOPM trials shall address only those parameters not tested or proven in the FET, and considered essential by the SHQ.

Commercial negotiations and processes thereafter

36. Commercial negotiations by contract Negotiation Committee (CNC) and stages thereafter would be progressed as per provisions of DPP.

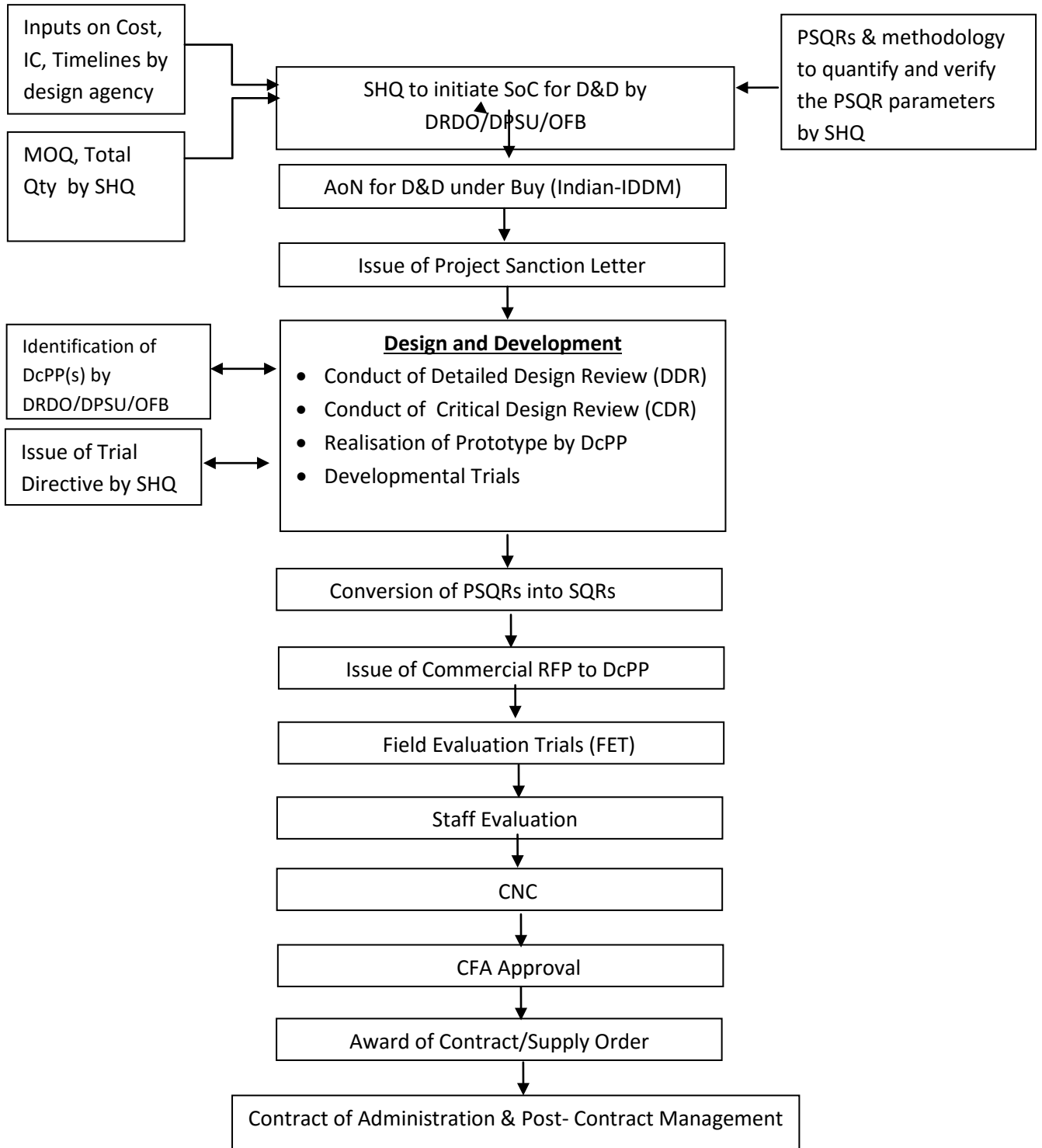
Cases for Ex-post-facto AoN

37. For on-going cases, where the development had commenced prior to accord of AoN, ex-post facto approval may be accorded by the DAC.

38. In case where the PA(s) are being nominated by the DRDO post development of prototype, the commercial RFP would be issued to the PA(s) nominated by DRDO/DPSU/OFB.

Appendix A

(Refer to Para 1 of Ch IV)

Flowchart for Acquisition of Systems Designed & Developed by DRDO/DPSU/OFB

Appendix B

(Refer to Para 18 of Chapter IV)

CONSTITUTION AND ROLE OF JOINT PROJECT MANAGEMENT TEAM (JPMT)

1. All DRDO/DPSU/OFB projects would be monitored by the JPMT with members as indicated below.
2. The suggested constitution of JPMT is as follows:

(a) Two Star Rank officer from concerned SHQ	-	Chairman
(b) Director, Nodal Lab/GM of DPSU/OFB	-	Co-Chair
(c) Dy TM from MoD(Acq n Wing)	-	Member
(d) Reps of participating labs/DPSU/OFB	-	Member
(e) Rep of DISB,as applicable	-	Member
(f) User Rep	-	Member
(g) Rep of CEMILAC, if required	-	Member
(h) Rep of DGQA/AQA, if required	-	Member
(j) DFA/Dy. IFQ/Jt. IFA/Director (Fin)	-	Member
(k) Subject experts from R&D Centers/Academia/ other DRDO labs, if required	-	Member
(l) Rep of Maintenance Agency, if required	-	Member
(m) Project Director of DRDO/DPSU/OFB	-	Member Secretary

Note: Chairman may co-opt/nominate other members as and when necessary.

3. JPMT shall meet bi-monthly. Chairman JPMT may call for a meeting of the team at a short notice during the critical phase of the project.
4. The role of JPMT is as follows:-
 - (a) Reviewing detailed schematic/product Tree (indicating Bought out/BTP/ BTS) with current status.
 - (b) Reviewing technical progress of project as per original Gantt/PERT chart clearly indicating any change from reference base line (milestones linked) financial outlay and timelines) prepared and approved at the time of sanction of the project.
 - (c) Discussion on unresolved technical issues and their proposed solutions.
 - (d) Deliberation on key issues including new issues brought up for approval.

- (e) Review of procurement issues vis-à-vis expenditure debited, commitment made pipeline cases etc.
- (f) Recommending enhancement of funds, PDC extension and closure of projects.
- (g) Preparation of draft Trial Directive (methodology, timelines and platforms).
- (h) Facilitate conduct of developmental trials and FET with service HQ.