

# Defence Procurement Procedure 2016: A Perspective on Indigenous Design and Development

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## Introduction

Defence acquisition is a complex decision-making process that needs to balance the competing requirements of expeditious procurement, development of an indigenous capability for defence sector and conformity to the highest standards of transparency, probity and public accountability. With opening up of the government's policy on Foreign Direct Investment (FDI) in defence sector coupled with steps taken for ease of doing business in India, leading arms manufacturers/producers/suppliers are lining up to explore possibilities to enhance their business prospects. While the dynamics and economics of such an initiative and its analysis with a business overhang is beyond the scope of this article, a well-crafted policy, clear procedural framework and its consistent application are essential to create state-of-the-art capability towards achieving not only self-sufficiency but also self-reliance.

Mr K Subrahmanyam, Convener, National Security Advisory Board aptly summarised the self-reliance in defence of a country as that which requires the anticipation of threats to national interest and requires being prepared to meet such challenges in terms of personnel, their training and military equipment. Self-reliant defence requires equipping the Armed Forces with the whole range of military and support equipment that would at least match, if not be superior to, those of the adversary.<sup>1</sup> For a country as young as India, aspiring to be in the reckoning at the international arena, self-reliance in defence is a prerequisite. For that to happen, it has perforce got to have its own technology, own weapons, own back up plans and own infrastructure to give muscle to its authority. *It must be remembered that no country has ever been able to catapult to the top league of superpowers based on borrowed technologies and imported equipment.* It necessitates that more and more impetus be given to the Indian industries to participate, create infrastructure and manufacture defence equipment to meet the demands of the Indian Armed Forces. However, we are still far away from meeting this target.

Defence Procurement Procedure (DPP) is the primary document which governs all Capital Acquisition by the Services. DPP has steadily evolved over the years and current edition has introduced new provisions to further boost indigenisation. In this article, an attempt has been made by the authors to specifically analyse provisions contained in Para 72 of DPP-2016 with an aim to articulate its implementation and also to identify gaps, if any, with recommendations for improving implementation to contribute towards self-reliance.<sup>2</sup>

**Self-reliance: A Status Check.** In a watershed change in April 2001, private companies were permitted to engage in defence production, subject to licensing and to an FDI cap of 26 per cent (presently, FDI in defence is allowed up to 100 per cent with conditions, FDI up to 49 per cent is allowed through automatic route).<sup>3</sup> The latest data on international arms transfers released by a global think-tank, Stockholm International Peace Research Institute (SIPRI) shows that India continues to remain the world's largest arms importer, accounting for 14 per cent of the global imports in the 2011-2015 timeframe, in yet another indicator of the country's enduring failure to build a strong domestic Defence-Industrial Base (DIB).<sup>4</sup> The data also shows that India's arms imports remain three times greater than that of China and Pakistan. The volume of Indian imports of major weapons rose by 111 per cent between 2004-08 and 2009-13, and its share of the volume of international arms imports increased from 7 to 14 per cent. SIPRI reiterated the

well-acknowledged fact that “a major reason for the high-level of imports is that the Indian arms industry has so far largely failed to produce competitive indigenously-designed weapons”.

Essentially there are three ways by which systems are developed/inducted in the Services. These are:-

(a) **Production Based on Foreign Technology.** In this the productionisation takes place through the industries, who manufacture based on Transfer of Technology (ToT) from foreign Original Equipment Manufacturers (OEMs). The ToT that comes to the country is however, essentially production ToT. In this process the capability of ‘*know how*’ for production is acquired but ‘*know why*’ does not come to the country. In addition, the perennial dependence on foreign OEMs for licenses to produce and supply critical items for example, T-72, T-90 tanks, SU-30s, MIGs etc. stays.

(b) **Design, Development by DRDO & Production by Indian Industry.** These systems are designed and developed by Defence Research and Development Organisation (DRDO) indigenously. In this the technology is developed by DRDO and product is realised through the industry. Wherever the developer and user work together, the projects have been successful leading to faster induction of the systems. However, if the developer and users work in their silos, it will lead to delayed timelines and production issues. Light Combat Aircraft (LCA) *Tejas*, torpedos, sonars, radars, electronic warfare (EW) systems, missiles etc. are few examples under this category (this option will be discussed in greater detail later in this article).

(c) **Design, Development and Production by Indian Industry.** In this, the equipment/system is pursued through design and development by Indian industries under ‘Make’. Systems developed through this route are yet to be inducted.

Of the three ways of realising equipment, as enumerated above, in our context it can be stated that sub-para (a) and (b) will account for more than 95 per cent of the total procurement. Production of equipment under sub-para (c) is yet to start in a meaningful way; although lot of concerted efforts are being made by all concerned towards making a success of ‘Make’ through industry.

### **Understanding DPP – 2016**

DPP over the years is being rationalised, improved and made inclusive to increase self-reliance. First DPP was drafted in 1992 and revised in the years 2002, 2003, 2005, 2006, 2008, 2009, 2011, 2013 and 2016.<sup>5</sup> The focus of DPP-2016 has been on self-reliance by giving a boost to ‘Make in India’ initiative of the Government of India.<sup>6</sup> The salient aspects of DPP-2016 contributing towards self-reliance are discussed below:-<sup>7</sup>

(a) A new category ‘Buy (Indian-IDDM)’, i.e. Indigenously Designed, Developed and Manufactured (IDDM) has been introduced to enable induction of systems/products from Indian vendor which have either been indigenously designed, developed and manufactured with a minimum of 40 per cent (raised from 30 per cent) Indigenous Content (IC) or minimum of 60 cent IC on cost basis of the total contract value, which may not have been indigenously designed and developed. Procedure for design and development has been spelt out at Para 72 of Chapter II.

(b) Flexibility has been landed with the Acceptance of Necessity (AoN) according authority to approve the IC in ‘Buy’ cases.<sup>8</sup>

(c) A new chapter on ‘Revitalising Defence Industrial Ecosystem through Strategic Partnerships’ (Chapter VII) has been added, for choosing a private sector partner for development of a specific, identified, strategic platform/systems or material, on a long term basis taking into consideration existing capacities in the public sector.

- (d) DPP-2016 has also introduced a provision for pursuing 'Make' category systems, in isolation, in sequence or in tandem with any of the other categories.

### **Analysis of Provisions at Para 72, Chapter II of DPP-2016**

The provisions in DPP-2016 for cases that are to be undertaken as Design and Development by DRDO are mentioned in Para 72, Chapter II and are analysed are below. Design and Development undertaken by DRDO/Defence Public Sector Undertaking (DPSUs)/OFB (Ordnance Factory Board) will be progressed under this Para.

(a) **Para 72 (a).** Normally all design and development cases will be selected from the Long Term Integrated Perspective Plan (LTIPP)/Annual Acquisition Plan (AAP) and will be initiated by the concerned Service Headquarters (SHQ) only after holding discussions with the development agency. Based on the requirement, DRDO shall undertake feasibility study to establish clarity on realisation of the user requirements. DRDO will need to be given adequate lead time by clear articulation of their requirements by the users and stay steadfast on it. Failure on part of the users to stick to their requirements will take the project through several iterations/design loops leading to corresponding delays.

(b) **Para 72 (b).** This is the most important operative part of Para 72. It implies one or some combination of the following possibilities:-

(i) SHQ to initiate Statement of Case (SoC) with Preliminary Services Qualitative Requirements (PSQRs) and Minimum Order Quantities (MOQs).

(ii) Users and DRDO share a common perception about the realisation of the system through development by DRDO.

(iii) Preliminary development of underlying technologies would have taken place based on draft PSQRs/Operational Requirements (ORs). Technology Readiness Level for major technologies is greater than six. The confidence level for realisation of the system is high and no technological uncertainties expected during the design and development phase.

(iv) It *de facto* ensures commitment from the users.

(v) In certain cases, where the quantities are limited and production by Industry is not feasible, production can be carried out by DRDO. However, identification of an Industry may still be required for providing necessary maintenance support.

(c) **Para 72 (c).** This Para relates to development of the prototype and selection of Development cum Production Partner (DcPP). It indicates the following:-

(i) Development would be carried out as per the DRDO internal procedures.

(ii) Development of prototype will be followed by trials and staff evaluation. This also implies that Maintainability Evaluation Trials (MET)/ Quality Assurance (QA) trials will be based on frozen PSQRs.

(iii) DPP states that Categorisation (Cat)/AoN be taken based on PSQRs only.

(iv) Validation trials, if required, would be carried out during the production phase and this aspect would be brought out during Staff evaluation.

(d) **Para 72 (d) and (e).**

(i) These two sub parts deal with the commercial aspects of the acquisition after successful evaluation and issue of the Request for Proposal (RFP). However, it must

be noted that DcPP would not be treated as a Single Vendor Case (SVC) or a resultant SVC.

(ii) Post staff evaluation, commercial RFP will be issued to the identified DcPP of DRDO by the Acquisition Wing, MoD. DRDO is mandated to assist the Users and Acquisition Wing in RFP vetting, cost benchmarking, contract vetting etc.<sup>9</sup>

### **Gaps in DPP-2016: A Perspective**

Most of the ongoing cases for Defence Acquisition Council (DAC) approvals under Para 72 of Chapter II have been accorded along with deviations of Para 72 (a) and 72 (b), since *a-priori* approval of DAC before initiating development had not been taken. These approvals have been accorded by DAC and pertain to systems that have already been designed and developed and have undergone limited or complete evaluation by users. However, no approvals have been granted by DAC for any design and development case to be taken up by DRDO or DPSUs under Para 72, Chapter II except for Airborne Warning and Control System (AWACS) (India) and Multi-Mode Maritime Aircraft (MMMA) for Indian Air Force (IAF) and Indian Coast Guard (ICG) respectively. This may be due to following reasons:-

- (a) As per the new guidelines, it is a prerequisite that the users finalise the SQRs and state the MOQs *a priori* which would be in contrast to the existing system of finalising the SQRs after trial evaluating the prototype. Earlier provisions did not bind the users till a very advanced stage of development.
- (b) Users will have to seek indulgence of the developers to technically visualise the equipment, finalise its QRs and take approval for the indigenous design and development, indicating the quantities required and MOQs.
- (c) 'Changed perceptions of the same equipment with change in personality' is a challenge.

The DPP-2016 though is one year old by now, expectedly, slowly but steadily its acceptance and a need to realign the cases to its provisions has been felt and accepted. Para 72, the most important provision on indigenisation is being interpreted differently by different stakeholders based on their experience. Based on the experiences of the authors, implementation aspects from a development perspective have been attempted in this article. The onus for implementing the provisions of Para 72 and taking necessary approvals lie with the SHQs. The start point lies with the users in that they have to clearly articulate their necessity, in the form of operational parameters, which will enable DRDO to undertake the design and development project. This needs to be followed with finalisation of SQRs, categorisation as design and development and AoN. Important issues that need to be elaborated upon and clear implementation modalities are summarised below:-

- (a) **Long Term Planning.** A mechanism to lay down vision and operational requirements by the users to the developing agencies, ab-initio, needs to be formulated and established.
- (b) **Freezing of PSQRs.** DPP mentions about freezing of PSQRs after development of prototypes and user trials to be conducted based on frozen PSQR followed by staff evaluation. The procedure to be followed for freezing of PSQR needs to be elaborated to avoid any difference of opinion amongst various stakeholders. Also it does not mention holding of General Staff Qualitative Requirement (GSQR) based trials in addition to PSQR based trials, which is an expectation of the SHQ. There is a need to unambiguously clarify this issue by issuing an addendum to the policy guidelines to guard it against multiple interpretations.

(c) **Trial and Evaluation.** The DPP indicates the need to optimise the acquisition cycle by cutting down on the multiplicity of trials. While developmental trials will help the developer to evolve equipment. Once developed, repetitive trials must be dispensed with to avoid colossal national wastage. DPP could be further elaborated to bring clarity on this aspect to make it binding on developer as well as User. Presently, there seem to be multiple series of trials for indigenously developed equipment. The need for condensing the trial and evaluation cycle has been remarked upon by various committees and must be seriously examined.

(d) **Involvement of QA.** DPP-2016 mentions about 'staff evaluation based on PSQR based trials' but does not allude to the role of QA whose mandate starts only after SQRs are ratified by the Staff Equipment Policy Committees (SEPCs). QA and MET trials are not conducted on PSQRs. The process of conduct of QA and MET trials sequentially after successful user trials need to be relooked into in order to condense the evaluation timelines. For example, the conduct of *Intensified Standard Alternating Tests* (ISAT) trials, if initiated concurrently with the development of the initial prototype, will reduce the evaluation time. Therefore, the activity which consumes maximum time in the evaluation process must commence at the earliest. The need for involving QA and MET agencies in all development projects right from initial stage itself could be included in DPP.

(e) **Holistic Approach.** There is need for all agencies to work with a common goal of succeeding in indigenous development rather than working towards maximising individual organisational goals. Joint Project Management Teams (JPMTs), involving all stakeholders with adequate delegation of powers could be constituted to ensure timely decision making for faster development. These JPMTs should be held responsible and accountable for the success of the project. The JPMTs need to be empowered to resolve all issues pertaining to development, trials and evaluation and acquisition cycle (categorisation, commercial documentation and acquisition process etc.).

(f) **Trust Deficit.** Para 72 of DPP-2016 mandates that 'SHQ will obtain Cat/AoN right at the beginning'. However, the SHQ seem to be wary of this provision as they feel that once committed, and in the event of DRDO's development getting delayed, they will not be able to progress their procurement from other routes. This myth must be dispelled. Therefore, unless the provisions are made and clearly stated to accommodate both designer to pursue indigenous development (without linking it to meeting immediate operational requirements of the services) and SHQ to procure their urgent operational requirements, the compliance of Para 72 will be suspect. Both the processes namely, SHQs acquiring immediate operational requirements off the shelf and indigenous design and development for the future needs must be encouraged as a hybrid solution to drive ourselves towards self-reliance. The commitment from the SHQ in terms of MOQs is a must to encourage the designer and the industries to stay interested and invest for the required infrastructure to be created. This apprehension gets even more pronounced in the case of private sector industry, where the business model is driven by maximising the stakeholders' wealth.

## Conclusion

There has been a constant endeavour by the government to reduce the import burden to equip our Armed Forces. Through 'Make in India' initiative, government has been trying to put in place a system which enables the Indian R&D/ DPSUs for in-house production to enhance the indigenous capability. With enunciation of various steps involved in capital acquisition, there is a definite need to articulate the implementable policy guidelines to bolster the indigenous design, development and production capabilities. This is a mandatory requirement so as to give sufficient lead time to the design and development agencies not only to realise the technology

but also create associated production and testing infrastructure. Para 72, chapter II of DPP-2016 has given provisions for DRDO/OFB/DPSU to spur the indigenisation process. With a common, collective and focussed aim of ensuring indigenisation, all stakeholders viz. users, developers, QA and Acquisition Wing have to operate jointly and zealously. Accentuated by easing of FDI in defence sectors and the government's focus on 'Make in India', it is expected that Indian industries will embark on private-public participation so as to meet the defence requirements of the Indian Armed Forces indigenously.

## Endnotes

<sup>1</sup> Sixth Kirloskar Memorial Lecture by K Subrahmanyam, Convenor, National Security Advisory Board, <https://www.idsa-india.org/an-oct-00-2.html>

<sup>2</sup> [http://mod.gov.in/dod/sites/default/files/dppm.pdf\\_0.pdf](http://mod.gov.in/dod/sites/default/files/dppm.pdf_0.pdf)

<sup>3</sup> <http://www.amritt.com/capabilities/analysis-of-the-indian-defense-procurement-process/>

<sup>4</sup> <http://www.thehindu.com/news/national/100-FDI-in-defence-What-does-it-mean/article14433877.ece>

<sup>5</sup> <http://pib.nic.in/newsite/PrintRelease.aspx?relid=160287>

<sup>6</sup> <https://www.sipri.org>

<sup>7</sup> <http://usiofindia.org/Article/?pub=Journal&pubno=557&ano=519>

<sup>8</sup> [http://www.idsa.in/issuebrief/DefenceProcurementProcedure2013\\_acowshish\\_110513](http://www.idsa.in/issuebrief/DefenceProcurementProcedure2013_acowshish_110513)

<sup>9</sup> <http://www.simplydecoded.com/2013/06/03/new-defence-procurement-policy-dpp-2013/>

<sup>10</sup> [http://www.business-standard.com/article/economy-policy/procurement-policy-undergoes-a-change-of-focus-113091001024\\_1.html](http://www.business-standard.com/article/economy-policy/procurement-policy-undergoes-a-change-of-focus-113091001024_1.html)

<sup>11</sup> [http://www.idsa.in/specialfeature/dpp-2016\\_lkbehera\\_120416](http://www.idsa.in/specialfeature/dpp-2016_lkbehera_120416)

<sup>12</sup> <https://www.drdo.gov.in/drdo/English/index.jsp?pg=public.jsp>

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