

**REQUEST FOR PROPOSAL**  
**BY**  
**MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY**  
**GOVERNMENT OF INDIA**  
**FOR**  
**DEPLOYMENT LINKED INCENTIVE FOR**  
**DESIGN, DEVELOPMENT, MANUFACTURE, VALIDATION AND**  
**DEPLOYMENT OF TWO TYPES OF SECURE SYSTEMS ON CHIPS (SoCs)**  
**USING INDIAN OWNED PROCESSOR BASED ON OPEN SOURCE ISA**

**RFP Ref. No: MeitY/SoC/DLI/01/2022-2023**

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**DOCUMENTS TO BE SUBMITTED ALONG**  
**WITH TECHNO-COMMERCIAL PROPOSALS**

The list of documents which needs to be duly completed & mandatorily submitted by the Bidders as part of the Proposal are placed below. Non-submission of the documents may result in disqualification of the proposal: -

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**REQUEST FOR TECHNICAL AND COMMERCIAL PROPOSAL**  
**FOR**  
**DEPLOYMENT LINKED INCENTIVE FOR**  
**DESIGN, DEVELOPMENT, MANUFACTURE, VALIDATION AND DEPLOYMENT OF TWO**  
**TYPES OF SECURE SYSTEMS ON CHIPS (SoCs) USING INDIAN OWNED PROCESSOR**  
**BASED ON OPEN SOURCE ISA**

Dear Sir/Madam,

1. The Ministry of Electronics and Information Technology in association with Ministry of Defence, Government of India, having taken note of the requirement of Secure Processors in Defence Systems and equipment in Ministry of Defence, with a view to facilitate indigenous design and manufacture of secure semiconductor devices, took up an initiative (hereinafter called Project) to provide ‘**Deployment Linked Incentive (DLI)**’ against deployment of designated number of SoCs to enable availability of secure semiconductor devices from indigenous sources. This RFP accordingly seeks participation of Indian companies working in the area of design and manufacture of Semiconductor devices to “**Indigenously Design, Develop, Manufacture, Validate and Deploy Secure Systems on Chip (SoCs) using Indian Owned Processors based on Open Source ISA and deploy the SoCs for various applications as indicated in the RFP.**

2. A family of four such SoCs, named Bharat Secure Chips (BSC-1, BSC-2, BSC-3 & BSC-4) are expected to cover a significant part of the requirement of SoCs for defence systems/ equipment from low-end embedded system to server class computing systems. As these SoCs are also expected to meet the requirements of semiconductor devices in various commercial products, the combined volume is being considered for economic viability of the project and also to extend the gains from this initiative to the commercial segment. The Project is intended to be rolled out in two phases as under-

(a) **Phase-I.** Involves Design, Development, Manufacture, Validation and Deployment of two lower-level variants of secure systems on Chips (SoCs) based on open source ISA. These two SoCs will be named BSC-1 & BSC- 2.

(b) **Phase-II.** Involves Design, Development, Manufacture, Validation and Deployment of two higher level variants of secure systems on Chips (SoCs) based on open source ISA. These two SoCs will be named BSC-3 & BSC-4.

3. **The present RFP is for the Phase-I of the Project.**

**Synopsis**

4. **Broad Description of the Task and Deliverables.** As brought out at Para1 above, the primary outcome of the project is to indigenously Design and Develop two variants of secure Systems on Chip (SoCs) i.e., BSC-1 & BSC- 2 and Manufacture & Deploy totaling 5 lakh numbers of these SoCs. The ultimate deliverable of the project is the deployment of these SoCs in various commercial and defence applications/ systems. The Bidder is required to satisfy the manufacturers/ suppliers and end-users of the equipment/ systems where these SoCs are deployed, on the technical compliance, security features,

reliability and price competitiveness of the SoCs. The core of the SoCs is to be based on processors designed and owned by Indian entities, design based on Open Source ISA. In addition to design, the development and packaging has to be in India by Indian entity, the major design IPs ie Processor, Secure Boot and Security IPs of such processors are to be owned by Indian entities. The ratio of BSC-1 & BSC-2 SoCs should be such that proportion of one of the SoCs deployed (as per discretion of the Bidder) shall at least be 30% (1.5 lakhs numbers) of the total quantity. Further, out of the deployment of total awarded quantity of 5 lakhs numbers SoCs at least 10% of the SoCs i.e 50000 numbers are to be deployed in systems/ equipment meant for defence forces in military role i.e, those ordered by Ministry of Defence or by Army/ Navy/ Air Force/ Coast Guard on their primary vendors or ordered by their primary vendors on their lower tier vendors.

5. The salient aspects and timelines of the proposal are tabulated below. In case of any variation in the details furnished below or in any Annexure(s) with that mentioned in the RFP, information furnished in the main body of the RFP at referred Paragraph is to be followed: -

SL. No.	Description	Details	Reference Para of the RFP
(a)	Primary Outcome of the Project	Design, Develop, Manufacture, Validate & Deployment of 5 lakh numbers BSC-1 & BSC- 2 Systems on Chips.	2
(b)	Deliverables	Deployment of above chips in various defence and commercial equipment/ systems in the ratio of minimum 1:9.	2(c)
(c)	Quantity Covered under the Project	5 lakh numbers. The bidders are required to quote "DLI" for the entire quantity of 5 lakhs chips. The proportion of deployment of one of the SoCs between BSC-1 & BSC-2 should not be less than 30% of the total quantity i.e 1.5 lakhs as decided by the bidder. Out of total deployment of awarded quantity of 5 lakhs numbers, at least 10% of SoCs i.e 50000 numbers should be deployed in Equipment/ Systems meant for defence forces in military role.	2
(d)	IC Content Required	The core of the SoCs is to be based on <b>processors designed and owned by Indian entities, designed based on 'Open Source' ISA. In addition to design, development and packaging in India, the major design IPs ie Processor, Secure Boot and Security IPs of such processors are to be owned by Indian entities.</b> This is expected to yield at least 50% of indigenous content by value and ownership of all security related and unhindered utility of SoCs by Indian companies. In this regard, the bidders needs to provide the details of the shareholders with shareholding pattern, board of directors, FDI, Joint Venture, Partner Ship	9

		deep, Subsidiary Firm, Sister Concern etc. of their business/consortium partners as applicable in support of Indian Entities as mandated in the RFP.	
(e)	Number of Bidders Considered for Selection	One technically qualified Bidder who quotes the lowest offer for DLI the total 5 lakhs numbers SoCs as per RFP requirement.	35
(f)	Place(s) of Delivery	As chosen by Bidder(s)	--
(g)	Period Scheme	Three and half (3 <sup>1/2</sup> ) years for BSC-1 and Four years for BSC- 2 from the date of the Contract. Two years from successful development and validation of production grade BSC-1 and BSC-2 SoCs each. Further, deployment of designated number of each SoCs in next two years @ 25% every 6 months commencing latest from the 24 <sup>th</sup> month after the date of contract for BSC-1 and 30 <sup>th</sup> month for BSC-2. Early completion of Deployment will carry defined incentives.	Para 3 & <b>Appendix-C</b>
(h)	Warranty Period	2 years post deployment i.e Three and half (3 <sup>1/2</sup> ) years for BSC-1 and Four years for BSC- 2 from the date of the Contract.	6
(j)	Bid Securing Declaration Letter	Bid securing Declaration Letter.	Para 21 & <b>Appendix-G</b>
(k)	Ownership of IPs generated	Ownership of IPs generated shall rest with the bidder	48(s)
(l)	RFP Release Date	<b>T<sub>0</sub>: 07.09.2022</b>	15
(m)	Last date for submission of written queries for clarifications	<b>T<sub>0</sub>+3 weeks: 28.09.2022 at 18:00 HRS IST</b>	15
(n)	Contact person & contact details for queries	Smt. Sunita Verma Scientist 'G' and Group Coordinator (R&D in E&IT). Ministry of Electronics and Information Technology Electronics Niketan, 6, CGO Complex New Delhi- 110003 Email id: <a href="mailto:sunita@meity.gov.in">sunita@meity.gov.in</a>	15
(o)	Date of pre-bid Meeting/ briefing & venue	<b>T<sub>0</sub>+5 weeks; 12.10.2022 at 14:30 HRS IST</b> & Ministry of Electronics and Information Technology Electronics Niketan, 6, CGO Complex New Delhi- 110003	16

(p)	Bid Submission Start Date	T <sub>0</sub> +8 weeks: 02.11.2022 at 09:00 HRS IST	
(q)	Last Date (Deadline) for submission of Bids	T <sub>0</sub> +11 weeks: 23.11.2022 at 15:00 HRS IST	20
(r)	Opening of Bids received.	T <sub>0</sub> +11 weeks 23.11.2022 at 15:30 HRS IST	
(s)	Opening of Pre-Qualification Bids/covers	To be informed later	25
(t)	Opening of Technical bids/covers	To be informed later	25
(u)	Opening of Financial bids/covers	To be informed later	31

6. **Special Features of the RFP.** Unlike in any typical acquisition cases that usually involve supply of goods, the deliverable in the instant project is **the deployment** of designated quantity of two types of SoCs, that are designed, manufactured, tested and validated by the bidder. The other special features of the RFP are as follows: -

(a) **Bid Price.** Bidders are to submit the bid for the amount of Viability Gap Fund hereafter referred to as 'Deployment Linked Incentive' (DLI) expected from MeitY for design, development, manufacture, validation and deployment of 5 lakh numbers of BSC-1 and BSC-2 SoCs with one of the SoCs (either BSC-1 or BSC-2 as chosen by the Bidder) constituting at least 30% of the total designated quantity for deployment up to 90% commercial graded SoCs for commercial applications and a minimum of 10% SoCs for military & aerospace applications.

(b) **Criteria for Award of Contract.** Selection of bidder for the award of contract will be based on the lowest DLI sought by the bidder for deployment of five Lakh SoCs. The Bidder shall quote for deployment of 5 Lakh of SoCs. The Bidder with the lowest DLI amount for deployment of 5 Lakh SoCs will be selected for award of contract, irrespective of the following: -

(i) Proposed proportion of deployment of BSC-1 & BSC-2 SoCs, as long as one of them constitutes a minimum of 30% of the total quantity.

(ii) Proposed level/ capability of BSC-1 & BSC-2, as long as BSC-1 & BSC-2 offered by Bidders meet the minimum indicated broad specifications of BSC-1 & BSC-2 indicated at Para 11 of RFP.

(c) **Contract Amount.** The contract is for disbursement of incentive in the form of Viability Gap Fund amount for secure SoCs for successful design, development, manufacture, validation and deployment of designated number of SoCs. The DLI amount sought by the potential Bidder deemed to be the support amount to enhance the capabilities to accomplish the stated task.

(d) **Applicability of GST for the DLI amount & Incentive amount for Early Development:**



As the subject project is falling under Grant-in Aid/sponsored project from MeitY and hence there is no applicability of GST on the DLI amount as well as Incentive amount (for Early Development) to be disbursed to the successful bidder. Successful Bidder also have to submit the Utilization Certificate as per GFR 12-A of Rule 238 (1) against settlement of Advance.

(e) **Minimum Indicated Broad Specifications.** While bidders are free to arrive at the optimum design/ configuration/ layout/ architecture of the SoCs to meet the market requirements and to enhance their marketability, it is mandatory for the SoCs to meet the **Minimum Indicated Broad Specifications** and features mentioned in the RFP. Bidders are free to include additional features and functionalities to meet the chosen applications and end user's requirements. If the bidder wishes to develop variants of BSC-1 & BSC-2 to optimize the utility on more applications, they may do so as long as they don't dilute the Minimum Indicated Broad Specifications, as mentioned in the RFP.

(f) **Testing and Validation.** Bidders are expected to adequately test and validate the SoCs and ensure their quality, reliability and compliance to Environmental tests, Mechanical tests, Electrical tests and Security tests at various stages, so as to satisfy the end users/ manufacturers/ suppliers of the equipment/ systems where the SoCs are intended to be deployed, relevant documents are to be submitted while claiming the advance amount at corresponding stage for verification by the MeitY committees/ entities. The MeitY through its committees may choose to physically verify or conduct random tests to ascertain that the SoCs meet the minimum standards of stability, functionality, performance, reliability and quality requirements for minimum indicated broad specifications as well as security features before disbursement of DLI. Bidder is expected to independently interact with prospective product manufacturer and draw out testing and validation requirements and satisfy them. For validation/ testing of SoCs intended to be deployed in defence systems, the Bidder shall explore relevant market opportunities. The onus of meeting the technical specification as per the RFP lies with the Bidder to prove it as and when required by the PRSG Committee. In addition, the bidder needs to fulfill the selection criteria including Testing and Validation certificate if required to fulfil criteria of commercial and defence bids in order to be selected as per the requirement of Technical Committee (TC). Qualification of Testing and compliance certification of specifications will be based on this RFP and application being developed by bidder and in close co-ordination with TC and with approval from TC.

(g) **Security as a Special Feature.** Information security is the fundamental essence of this initiative. The bidders are expected to take utmost care to ensure information security at the design, fabrication and packaging stage to ensure protection against malware, malicious codes, backdoor etc. The SoCs shall be validated through verification of the Proof of Concept (PoC) & security certification by qualified certifying agencies. It is mandatory for SoCs to meet minimum security requirements and security standards in vogue as well as those specified by the users, MeitY may choose to carry out verification and random checks of such features as brought out at Para 6(e), above.

(h) **Deployment Aspects.** Eligibility for DLI will be deemed to be attained only on successful deployment of SoCs on equipment/ product as required for each tranche i.e 1.25 Lakhs numbers SoCs (Total 5 Lakhs numbers divided in 4 tranche) and the satisfactory functioning of each equipment/ product is established. The SoCs shall be considered deployed only if the following conditions are met: -

(i) The SoCs are to be deployed at least on 10 different commercial applications/ products and two different defence applications/ products.

(ii) The products manufacturers for commercial applications shouldn't have any Conflict of Interest with Bidder(s) with respect to equity, joint ownership, Common Board of Directors etc.

(iii) In case, the SoCs are to be deployed in any of the sister concern having conflict of interest with the Bidder(s), the number should be limited to only 10% of deployable SoCs i.e 12,500 numbers in each tranche. If more SoCs are deployed, the maximum weightage will be limited to 10% of deployable target for each tranche.

(iv) The overall sum total value/ price of the commercial products should be at least 30 times (30X) of the DLI amount sought and in this regard necessary documentary proof to be submitted as demanded. While calculating the sum total value of the products from sister concerns where SoCs are deployed will be limited to 10% of the total quantity of 5 lakhs numbers.

(v) Deployment of SoCs is not limited only to sale of SoCs to the product manufacturers. In each tranche, at least 20 % of them i.e 25000 SoCs should have been deployed on the final/ end product and 10% of these final/ end products i.e 2500 SoCs should have reached the end users and are under active exploitation by the end of the next tranche. This aspect shall be ascertained by MeitY during determining the eligibility for payment for the subsequent tranche of deployment. The 10% of the DLI amount pertaining to the final i.e fourth tranche of 125000 SoCs will be withheld till completion of physical deployment & exploitation of SoCs in the final/ end products.

(vi) The deployment has to be in such a proportion that one of the two SoCs constitutes at least 30% of the total quantities assigned to Selected Bidder. DLI for one of the two SoCs will be limited to a maximum of 70% and the remaining 30% will be disbursed against the deployment of other SoCs. The bidder(s) may plan and execute accordingly.

(vii) Eligibility for each tranche of DLI will be deemed to be attained only after deploying at least 10% i.e 12500 of the corresponding tranche of the designated quantity of each type of SoC (BSC-1/ BSC-2) in systems/ equipment meant for defence forces in military role, i.e., ordered by Ministry of Defence or by Army/ Navy/ Air Force/ Coast Guard on their primary vendors or by their primary vendors on their vendors. Further, deployment of a minimum of 30% of one of the SoCs independently in both commercial and military applications for each tranche is must to claim DLI.

(i) **Financial Aspects.** Bidders are expected to meet the expenditure towards design, development, manufacture, validation and deployment of SoCs from their initial investment and proceeds earned from the sale and deployment of SoCs. However, as an initiative to facilitate indigenous development and availability of secure SoCs, in order to cater for additional expenditure expected to be incurred towards enhanced security features, MeitY will provide a DLI for the corresponding number of SoCs deployed. The conditions for eligibility of the DLI are as follows: -

(i) Qualification of SoCs designed and manufactured against the project will be reviewed by MeitY Committee(s). The bidder should independently carry out the process of verification, testing and validation for satisfying the end users for deployment in their respective systems and provide necessary documentation to MeitY Committee for review. In addition, MeitY may randomly carry out sample tests as part of qualifying process to check the conformity of SoCs with the latest standards in vogue to verify the eligibility for release of the DLI amount.

(ii) Payment of DLI will be against physical deployment of SoCs against verifiable documentary proof. BSC-1 SoCs deployed after 3<sup>1/2</sup> year and BSC-2 SoCs deployed 4 years after contract date period will not be eligible for DLI.

(iii) DLI will be disbursed in four tranches against deployment of 25% of the designated quantity within a total period of 2 years from the date of successful development or 3<sup>1/2</sup> year for BSC-1 and 4 years for BSC-2 from the date of signing of contract whichever is earlier. The bidder is free to complete the development earlier than 1<sup>1/2</sup> & 2 years and commence deployment earlier than the targeted time. 10% of the payment of the 4<sup>th</sup> tranche will be paid only on verification of physical deployment of SoCs as at para 4(g)(v), above.

(h) **Incentive for Early Development.** Time being the essence of this development project, in order to encourage early development of SoCs, an incentive up to 20% of DLI amount for early completion of development and deployment of both BSC-1 and BSC-2 at 10% additional incentive for every six months will be provided. The bidder, if seeking to avail the incentive is required to advance deployment of all tranches by 6 months for every 10% incentive availed and complete deployment accordingly. For the purpose of calculation of incentive, the incentive will be calculated at 10% of the DLI amount for deployment of 5 lakh SoCs.

(j) **Advances.** The Selected Bidder will have an option to seek advances up to 30% of the DLI amount. However, the same shall be disbursed against Advance Bank Guarantee issued by scheduled bank for the equivalent amount claimed. The Advance Bank Guarantee shall be valid for a period of 3 years from the date of its issuance and if required the same need to be extended for further period on demand. The advance, if sought by the Bidder, will be paid in four phases of 10%, 5%, 5% and 10% of the DLI amount upon submission of documents in support of fulfillment of requirement of each stage & satisfactory validation of associated documents by the MeitY. The advance will be adjusted against the amount payable against successful deployment of SoCs.

(k) **Recovery of Advances.** The advances will be recovered as follows: -

(i) Grace period may be allowed for development stage. However, extension of development time due to grace period shall not result in extension of overall time for deployment. The grace period for each stage of development is 6 months and the overall grace period is limited to six months. Failure to accomplish each stage of design/development within the permissible maximum grace period will result in recovery of advance paid for entire stage.

(ii) Failure to deploy designated number of SoCs in each tranche, in which case advance proportionate to the shortfall in the deployment of SoCs will be recovered from the DLI payable against the corresponding tranche. If the advance paid towards the unfulfilled quantity is more than the DLI amount payable at each tranche, the residual advance after adjusting the eligible DLI will be recovered from the Advance Payment Bank Guarantee (APBG). However, the bidder is free to deploy the remaining quantity during the subsequent tranche, but within the overall period of the contract.

(l) **Performance-cum-Warranty Bank Guarantee.** The Selected Bidder is required to provide Performance cum-Warranty Bank Guarantee (PWBG) from scheduled bank for 3% of the DLI quoted in commercial bid within 30 days from the date of Notification of Award of contract but before signing the contract. The PWBG has to be valid for six years from the date of its issuance and the same need to be extended on demand. The PWBG will be recovered in the following cases: -

(i) Not passing any of the stages of development within 6 months over the permissible grace period of each stage and/ or overall grace period of 6 months for development stage and readiness for deployment within 24 months from the date of signing of the contract.

(ii) Failure to deploy at least **10%** of the designated quantity of even one of the two types of SoC by the minimum number of any one of the SoCs in the time indicated for deployment of second tranche.

(iii) Failure of more than 20% of deployed SoCs during the warranty period and / or inability of the bidder to provide warranty replacement to the satisfaction of their customers within 2 weeks of the reporting of failure as stated at para 5(t).

(m) **Exit Clause & Termination of the Order.** If the Indian processors fail to qualify in the stability checks, the project will not be progressed further without any financial liability to GoI. If bidders fail to develop the SoCs or SoCs developed by them fail to qualify the requirements for deployment within the grace period indicated at Para 6 (k) (i) above and/ or if bidders fail to deploy at least 10% of the designated number of SoCs by the end of second tranche as at Para 6(k) (ii) above, the contract will be terminated, PWBG will be encashed and the advances will be recovered, if the advances are not already recovered as at Para 6(k), above.

All design, architecture, development, testing and source code related documents would be kept in ESCROW account after validation of the same by CDAC. The beneficiary of the ESCROW will be C-DAC. The documents would be released to C-DAC from ESCROW before invocation of exit clause or in the case of Bidder not complying with the terms of RFP.

(n) **Pre Contract Integrity Pact (PCIP).** The bidders will be required to sign and submit a Pre Contract Integrity Pact (PCIP) along with Bid Securing Declaration Letter. . This would be submitted in a separate envelope clearly marked as 'PCIP and Bid Securing Declaration Letter' at the time of submission of Technical and Commercial offers.

(o) **Bid Securing Declaration Letter.** Bid Securing Declaration letter as per format given in Annexure-G in lieu of EMD to be submitted by the bidders as per the instruction given in the RFP. MSME & Startups also need to submit the Bid Securing Declaration letter without fail.

(p) **Applicability of Other Govt. Schemes/ Incentives.** Bidders are free to avail other Govt. schemes/ incentives/ PLI schemes for the products covered under this RFP.

(q) **Preliminary Project Report (PPR).** A PPR is to be submitted along with the Technical Offer. The PPR should indicate the broad details against the aspects furnished in the RFP that includes plan to execute Project and deliver outcomes by dates indicated, method for validation of indigenous processor, details of probable processor candidate, proposed area of deployment, details of collaborators/ outsource partners, proposed work share arrangement, method for validation/ certification of different aspects of successful development of SoCs and the Standards and testing methods and agencies proposed to be engaged for testing etc. are to be indicated. The bidders are required to provide details of security arrangement with various entities to whom any activity of manufacture is outsourced.

(r) **Project Report (PR).** Post contract signing, the Selected Bidder shall submit a PR covering the key aspects highlighted in the PPR and detailed project implementation plan along with the details of the activities to be executed by them along with supporting documents like MoUs with concerned agencies and also major activities/ milestones.

(s) **Warranty.** The Selected Bidder shall provide comprehensive warranty for the SoCs for 2 years from the date of deployment. The Bidder is required to replace the faulty SoCs with a compatible SoCs and associated hardware within 2 weeks from the receipt of the service request/ warranty claim from the end user/ equipment manufacturer. Towards meeting this requirement, the Bidder is expected to set up suitable mechanism as stated in Para-6 of the RFP.

(t) **Penalty for Failure/ Warranty Shortfalls.**

(i) If the failure is more than 10% of total SoCs, for every 1% or part thereof, above 10%, a penalty of 1% of the DLI will be levied on the Bidder. The overall penalty will not be more than 10% of the total DLI amount quoted by the successful bidder for this subject RFP.

(ii) If the Bidder fails to provide replacement within the stipulated period, the payment due on completion of warranty for the corresponding number of SoCs will be deducted from the last stage payment.

(iii) In addition, failure of more than 20% of total SoCs shall make the Bidder liable for forfeiture of PWBG.

7. MeitY reserves the right to extend the quantity of the project for payment of DLI beyond the present quantity of 5 lakh SoCs as well as proportionately vary the timelines of the project, as deemed necessary and appropriate.

8. MeitY by themselves or through their representatives, MeitY shall reserve the right to verify the documents in support of the claims submitted by the bidder. In case of any discrepancy/ malpractice MeitY may terminate the contract and invoke PWBG. Further, MeitY reserves the right to impose ban/ penalties on the firm as per extant regulations/ penalty guidelines.
9. The Government of India, invites responses to this RFP only from the Indian bidders meeting the requirements in accordance with the eligibility conditions stated at **Appendix-A** of the RFP and having proven track record on design/ manufacture of semiconductor devices as stated in the RFP.
10. This RFP is being issued with no financial commitment; and the Ministry of Electronics and Information Technology reserves the right to withdraw the RFP and change or vary any part there of or foreclose the procurement case at any stage. The Government of India also reserves the right to disqualify any Bidder(s) should it be so necessary at any stage on grounds of National Security.
11. This RFP is non-transferable.
12. RFP and corrigenda there on shall be published on [www.meity.gov.in](http://www.meity.gov.in), [www.cdac.in](http://www.cdac.in) & [www.eprocure.gov.in/e-publish/app](http://www.eprocure.gov.in/e-publish/app)
13. The receipt of the RFP may please be acknowledged.

**Ministry of Electronics and Information Technology**  
**Electronics Niketan, 6, CGO Complex**  
**New Delhi- 110003**

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## **DISCLAIMER**

This RFP is neither an agreement nor an offer by the MeitY to the prospective Bidders or any other person. The purpose of this RFP is to provide interested parties with information that may be useful to them in submitting their proposals pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by the MeitY in relation to the Project. This RFP document and any assumptions, assessments and statements made herein do not purport to contain all the information that each Bidder may require. The Bidder shall bear all its costs associated with or relating to the preparation and submission of proposal pursuant to this RFP. Wherever necessary, MeitY reserves the right to amend or supplement the information, assessment or assumptions contained in this RFP. The MeitY reserves the right to withdraw the RFP or foreclose the procurement case at any stage. The issuance of this RFP does not imply that the MeitY is bound to shortlist a Bidder for the Project. The MeitY also reserves the right to disqualify any Bidder should it be so necessary at any stage on grounds of National Security.

## **About this RFP**

1. **Objective of RFP.** Objective of the RFP is to select an Indian entity that can design, develop, manufacture, validate and deploy two types of SoCs by providing suitable Deployment Linked Incentive (DLI) for developing a family of Secure Systems on Chips for defence applications. The bidder(s) is / are expected to meet the expenditure towards design, development, manufacture, validation and deployment of SoCs from their initial investment and proceeds earned from the sale and deployment of SoCs. However, as an initiative to facilitate indigenous development and availability of secure SoCs, in order to cater for additional expenditure expected to incur towards enhanced security features, MeitY will provide a DLI for the corresponding number of SoCs deployed. The contract would be awarded to one bidder according to the evaluation procedure, bidders has the option to form consortium before bidding to leverage expertise in functions such as manufacture, supply, marketing, support etc. Under “Make-in-India initiatives”, MSME and Startup companies have been given waiver on some of the pre-qualification criteria requirements. The pre-qualification criteria requirements to be met by the bidder are laid down in RFP and appended as **Appendix-A**. The commercial bids of only those bidders who qualify the Technical Evaluation Criteria mentioned in RFP & evaluated as per **Appendix-B** will be opened.

## **Scope of work**

2. The Selected Bidder shall design, develop, manufacture, Validate, deploy and provide warranty support for designated number of SoCs (5 lakhs) of BSC-1 & BSC-2 SoCs. The deployment shall be in such a proportion that one of the SoCs has a minimum of 30% deployment with minimum 10% of them on defence & aerospace applications. In this process the Selected Bidder is to identify a suitable 64-bit Indian owned processor based on Open Source ISA and check its stability & suitability to design and develop the SoCs. The SoCs has to meet the minimum indicated broad specifications mentioned in RFP. Towards the above, the scope of work includes: -

- (a) The Selected Bidder shall have to select a 64-bit Indian Owned Processor core based on Open Source ISA and check its stability & suitability for the intended purpose.
- (b) The Selected Bidder shall have to submit a report on stability & suitability of core and that it meets the minimum specifications of the SoCs and the requirement of prospective deployment in the identified applications.
- (c) The final outcome of the project will be successful deployment of the designated quantity i.e. 5 Lakh number of SoCs in Defence and Civil commercial applications/ Systems with any one of them constituting 30% of total quantity and at least 10% of them deployed on defence & aerospace applications.
- (d) The project viability will be verified at various milestones/ stages to ascertain the feasibility for further continuation by the designated Technical Committee. These stages/ milestones are as follows: -
  - (i) Checking stability & suitability of Indian processor core.
  - (ii) Proof of Concept.
  - (iii) Testing & validation of Prototype SoC.
  - (iv) Testing & Validation of Production Grade SoCs; BSC-1 & BSC-2.



- (v) Sample Implementation by Deployment on Equipment/ System.
- (vi) Deployment of SoCs in designated time period.
- (vii) Warranty & Life Cycle Support.

(e) Since Security is the fundamental essence of the program. The bidder is to make suitable arrangement to ensure information security of the SoCs at every stage, i.e., at design stage, during tape-out & fabrication stage, during assembly & packaging stage. Towards this, the bidder shall make suitable arrangements/ collaborations with design, fabrication & packaging entities as indicated in the RFP and provide documentary proof. The bidder is to select suitable protocols/ standards to ensure functional security of the SoCs as required for the applications as specified by the end User. The same shall be verified by the MeitY committees at relevant stages.

(f) Bidder shall accomplish the design, development, validation & deployment of the designated quantity in a stipulated timeframe of four years from the date of signing the contract. One and half year for BSC-1 & two years for BSC-2 for successful development and validation of production grade SoCs and another two years for deployment of designated number of SoCs at a rate of 25% of designated / contracted quantity in every 6 months, commencing latest from the 24<sup>th</sup> month for BSC-1 and 30<sup>th</sup> month for BSC-2 from the date of contract. The DLI will be paid as per percentage of total DLI as indicated at Para 3, below, for each stage on completion of the deployment of designated quantity of SoCs. No DLI amount will be paid for completing deployment after three and half years for BSC-1 and four years & BSC-2.

(g) **Incentive for Early Development and Deployment.** Time being the essence of this development project, in order to encourage early development of SoCs, an incentive up to 20% for early completion of development and deployment of both BSC-1 and BSC-2 at 10% additional incentive for every six months will be provided. The bidder seeking to avail the incentive is required to advance deployment of all tranches by the 6 months for every 10% incentive availed and complete deployment accordingly. For the purpose of calculation of incentive, the incentive will be calculated at 10% of the DLI amount for deployment of 5 lakh SoCs.

(h) The deployment of SoCs will be executed in total four tranches. Bidder shall have to deploy at least 10% of the designated quantity to qualify for the payment of DLI for the first tranche. In first tranche, 25% of the total quantity of BSC-1 SoCs will be deployed. In subsequent tranches, SoCs will be deployed at a rate of 25% of the total designated quantity, but, with a minimum of 30% of any one of the SoCs. The deployment will be completed in a period of 2 years from the date of validation of the sample deployment stage ie completion of Phase-I. The DLI amount payable is indicated at Para-3, below in the table for Phase-II of the project. DLI payment will be made on prorata basis proportionate to the quantity deployed. In case of lesser numbers of SoCs are deployed, recovery of 30% of the advance for unfulfilled quantity will be affected from the payment. Bidder shall retain the sale invoices & maintain auditable records i/r/o deployment of the SoCs, which will be verified by the MeitY Technical Committee. The milestone based DLI payment will be made only after verification of successfully meeting all conditions laid down in the RFP.

(j) Bidder shall provide warranty/ post-sales support for minimum two years & post deployment of chip. Bidder is required to replace the faulty SoCs with a compatible SoC &

associated hardware within 2 weeks from the receipt of the service request/ warranty claim from the end user / equipment manufacturers. registering complaint / service request by the buyer.

(k) The schedule of work is divided into three phases; each phase is further divided into stages as per milestones. Same are elaborated in subsequent paragraphs.

(l) Bidder shall get acknowledgement copy of the successful deployment of the SoCs from the equipment manufacturer/ end user along with satisfactory functional test reports of the equipment, on which deployed. Additionally, MeitY Committee(s) may choose to carry out physical verification from the equipment manufacturer / end user.

(j) CDAC, Noida is the Implementing Agency for this RFP which will be overall responsible for reviewing and monitoring the entire project starting from RFP release till the closure of the project. C-DAC, Noida will separately receive a fee for above mentioned role an amount equal to 15% of the Total Project cost plus applicable GST from MeitY.

**Schedule of Activities & Timelines**

3. **The Schedule of Work & Timelines of Stages.** The Schedule of Work and the method of verification is as follows: -

Stage	Activity	Timelines (in months)		Qualification Criteria	DLI Payment
		BSC-1	BSC-2		
<b><u>Phase1: Design, Development &amp; Validation of BSC-1 &amp; BSC-2 SoCs.</u></b> The payment of DLI shall be made based on the deployment milestones as mentioned in the Phase-II. However, if required and sought by the Bidder, the advance on completion of certain development activities is provisioned to be paid against Advance Payment Bank Guarantee (APBG) of equal amount in the linked to successful completion of the activities as mentioned below:-					
I	<b>Checking Stability &amp; Suitability of the Indian Owned Processor based on Open Source ISA &amp; Submission of Project Report.</b> Checking stability & suitability of the 64-bit Open Source ISA Indian Processor for intended purpose and submission of Project Report.	T <sub>0</sub> +4		Verification of the test report for Stability & Suitability of the microprocessor for desired application. Scrutiny of Project Report.	No DLI/ advance linked to this stage. However, the reports & results of checking the stability & suitability of the Open Source ISA based Indian processor (undertaken by the Bidder) shall be scrutinized by the PRSG Committees/Committees identified by MeitY to make a suitable decision on further continuation of the project. The project continuation will be based on successful stability checks of the said processor.
II	<b><u>Design &amp; Development.</u></b>	T <sub>0</sub> +9	T <sub>0</sub> +14	Verification of documents for	10% of total DLI payment against Advance Payment

	Successful testing of the Proof of Concept (PoC) for design of <b>BSC-1 &amp; BSC-2.</b>			Successful qualification of PoC.	Bank Guarantee APBG for same amount will be released post verification & acceptance of the PoC (if sought by the Bidder).
III	<b><u>Testing &amp; Validation of Prototype BSC-1 &amp; BSC-2 SoCs.</u></b> Successful qualification of prototype SoCs.	T <sub>0</sub> +12	T <sub>0</sub> +18	Verification of documents & test reports for Prototype testing of SoCs complying with Minimum Broad Indicated Specifications & Security requirements.	5% of total DLI payment against APBG for same amount after successful completion of the stage (if sought by the Bidder).
IV	<b><u>Testing &amp; Validation of Production Grade BSC-1 &amp; BSC-2 SoCs.</u></b> Successful qualification of production grade SoCs for various cyber & security protocols and necessary certification for commercial & defence use.	T <sub>0</sub> +15	T <sub>0</sub> +21	Verification of documents in respect of successful testing of Production grade SoCs & validation of various protocols.	5% of the total DLI payment against APBG for same amount after successful completion of the stage (if sought by the Bidder).
V	<b><u>Sample Implementation.</u></b> Sample deployment of minimum 40 (BSC-1 & BSC-2) SoCs equally on four different applications in such a way that one of the applications is for defence equipment and other three for Commercial/ civil equipment/ systems. The activity also includes preparation of boards, interfaces, associated peripherals and acquiring certification for commercial applications.	T <sub>0</sub> +18	T <sub>0</sub> +24	Verification of functional test reports & related documents of equipment / systems on which BSC-1 & BSC-2 SoCs are deployed.	10% of the total DLI payment against APBG for same amount after successful completion of the stage (if sought by the Bidder).

**Note:** - The Selected Bidder, even in case of MSMEs/ Start-ups shall have to deposit APBG equal to the amount sought as advance linked to completion of specified stage. There is no exemption for MSMEs/ start-ups, in case of APBG.

**Phase-2: Deployment of BSC-1& BSC-2 SoCs.**

**Deployment of Designated Quantity.** Successful deployment of 25% of total designated quantity of BSC-1& BSC-2 SoCs on Commercial/ defence & aerospace equipment/ Systems in every six months' time period with minimum 10% of them on defence & aerospace equipment/ Systems. The phase is divided into a total of four stages/ tranches as follows:-

Tranch	Timeline	Activity	Deployment Quantity		Qualification Criteria	DLI Payment
			BSC-1	BSC-2		
I	T <sub>0</sub> +18* to T <sub>0</sub> +24*	Deployment of 25% of the designated quantity of SoCs.	25%	-	Verification of sales invoices & acknowledgements from the buyer/ equipment manufacturer by PRSG for deployment & satisfactory functional test results/ field reports of the equipment on which SoCs are deployed.	15% of the total DLI amount. <b>OR</b> Prorate DLI payment of first tranche if lesser number of SoCs are deployed but not less than 10% of total quantity. In case Recovery of upto 30% advance paid or actual against unfulfilled quantity.
II	T <sub>0</sub> +24 to T <sub>0</sub> +30	Deployment of next 25% & cumulative to 50% of the SoCs	25% of the designated quantity of SoCs with one of them minimum 30% of the deployed quantity.			15% of the total DLI amount plus balance payment of previous tranche if any after deduction of applicable penalty. <b>OR</b> Prorate DLI payment of second tranche, if more number of SoCs are deployed in addition to minimum 50% quantity requirement of total SoCs. The payment shall be processed upon submission of Utilization certificate of previous payment including advances if any. Recovery of upto 30% advance paid or actual against unfulfilled quantity.
III	T <sub>0</sub> +30 to T <sub>0</sub> +36	Deployment of next 25%	25% of the designated quantity			15% of the total DLI amount. <b>OR</b>

		cumulative to 75% of the designated quantity of SoCs	of SoCs with one of them minimum 30% of the deployed quantity.		Prorate DLI payment of third tranche if more number of SoCs are deployed in addition to minimum 75% quantity requirement of total SoCs. The payment shall be processed upon submission of Utilization certificate of previous payment including advances if any. Recovery of upto 30% advance paid or actual against unfulfilled quantity.
IV	T <sub>0</sub> +36 to T <sub>0</sub> +42	Deployment of next 25% cumulative to 100% of the designated quantity of SoCs.	25% of the designated quantity of SoCs with one of them minimum 30% of the deployed quantity.		15% of the total DLI amount. <b>OR</b> Recovery of upto 30% advance paid or actual against unfulfilled quantity. The payment shall be processed upon submission of Utilization certificate of previous payment including advances if any. For final tranche, the last payment of 10% of the total DLI amount will be withheld till completion of physical deployment & exploitation of the final/end products.

**Note:-**

1. T<sub>0</sub>. The date of signing the contract.
2. \*-A grace period of six months for commencing deployment is provided i.e., deployment of first stage/ tranche of BSC-1 can commence till T<sub>0</sub>+ 24<sup>th</sup> month and that of BSC-2 till T<sub>0</sub>+30<sup>th</sup> month. However, this grace period is not be carried forward for further stages/ tranches and completion of deployment of designated quantities of BSC-1 & BSC-2 will have to be in timeframe specified in RFP.
3. **If DLI advance is not taken, either as a whole or for any one or more stages (stage-II- V of Phase-1), the payment for each Tranche at Stage-I to III of Phase-2 will be enhanced to 25% of the DLI advance not taken.**

<b>Phase 3: Warranty and Life Cycle Support for BSC-1 &amp; BSC-2 SoCs.</b>					
<b>Stage</b>	<b>Activity</b>	<b>Timelines in months</b>		<b>Activity</b>	<b>Timelines</b>
		<b>BSC-1</b>	<b>BSC-2</b>		
I	Implementation of warranty support system to facilitate end users.	T <sub>0</sub> +42 to T <sub>0</sub> +66	T <sub>0</sub> +48 to T <sub>0</sub> +72	Verification of Successful implementation of warranty support system like establishing of help desk and maintenance of auditable record to ascertain failure rate. Assessment of Bidder performance of & fulfilment of Warranty obligations. PRSG may carry out through C-DAC for necessary validation and verification as required to ascertain the same.	10% of the total DLI payment after approval from MeitY Committee(s). If the failure exceeds 10%, the DLI amount will be deducted @1% for corresponding 1% failure of SoCs. If replacement not provided for SoCs, DLI amount for corresponding number of SoCs will be deducted. If the failure exceeds 20 % PWBG will be forfeited.

### **Phase-Wise Details of Activities**

4. **Phase- 1: Design, Development & Validation.** This phase involves checking of stability & suitability of the 64-bit Indian Owned Processor based on Open Source ISA for using on the intended purpose and submission of detailed Project Report on plan for design, development, manufacturing, validation & deployment of BSC-1 & BSC-2 SoCs. Selected Bidder shall carry out these activities at his end, submit relevant documents while claiming the advance amount at relevant stage/ milestone. The payment shall be released after verification & acceptance of the stage completion by MeitY. MeitY may choose to physically verify or conduct random tests at each stage. An offset of five months is provided between timelines of BSC-1 and BSC-2 for progressive design, development, manufacturing and validation of the two SoCs with initial focus on BSC-1. This phase is divided into five stages. The timelines for each SoC are tabulated at **Para 3**, above. The details of the activities involved in each stage are elaborated as follows: -

- (a) **Stage-I: Checking Suitability of Indian Processor & Submission of Project Report.** Bidder shall select a **64-bit Indian Owned Processor based on Open Source ISA** (designed in India) and check its stability & suitability for the intended purpose. After completion of the stability check, Bidder shall submit the stability checks reports along with the detailed Project Report covering all the aspects of the project. Activities involved in the phase are as follows: -

- (i) Bidder shall select a **64-bit Indian Owned Processor based on Open Source ISA** (designed in India) and undertake necessary checks to ascertain its stability & suitability for the stated SoCs. If the Indian processor fails to qualify the stability checks, the project will not be progressed further without any financial liability to MeitY/ GoI.
  - (ii) Bidder shall prepare and submit detailed Project Report covering details of all the aspects of the Preliminary Project Report and the salient aspects of the project like arrangement with fabrication & packaging entities for ensuring security of SoCs, details of the activities / work share envisaged to be performed by each consortium partners, target application for commercial deployment and the plan of action for deployment etc.
  - (iii) The PRSG will scrutinise & verify the test reports and Project Report for of the project for further continuation. The decision on continuation of the project will be taken by MeitY based on the results of the report & project report. The decision will be conveyed to the Bidder accordingly.
  - (iv) Bidder shall apply for payment of DLI advance applicable and submit an Advance Bank Guarantee for an equal amount, as specified in the RFP.
- (b) **Stage-II: Design & Development.** The Bidder shall prepare Proof of Concept (PoC) of the design of **BSC-1 & BSC-2** and submit to PRSG along with list of various IPs and protocols to be utilised along with their source. The activities involved in this phase are as follows: -
- (i) Selected Bidder shall acquire information & finalise the broad area of application for commercial use. For utility in defence and aerospace systems, the MeitY / suitable agency nominated by it shall provide the probable areas of applications during Pre-bid meeting.
  - (ii) PoC of the design of the BSC-1 & BSC-2 must comply with the Minimum Indicated Broad Specifications and latest security features/ protocols in vogue. However, the Bidder is free to include additional specifications to meet the application specific and end user's requirements.
  - (iii) PoC of the SoCs, incorporating all the features must be submitted/ demonstrated to Technical Committee of MeitY. The Technical Experts Committee may choose to verify/ validate the POC in-house or through a third party.
  - (iv) Any deviation with respect to the Minimum Indicated Broad Specifications shall be discussed with bidder. The decision of the MeitY Committee on acceptance of the same shall be final & binding.
  - (v) MeitY Committees, on successful approval of the PoC will clear the DLI advance payment associated to the stage, if sought by the Bidder.
- (c) **Stage-III: Testing & Validation of Prototype BSC-1 & BSC-2.** This stage involves testing of prototype by the Bidder under his own arrangements and submit the documents & test reports to MeitY committees for verification & approval. The stage will be considered

completed and acceptable on successful testing, qualifying of Prototype & accord of approval by MeitY for manufacture of production grade BSC-1 & BSC-2 SoCs. Activities involved in this phase are: -

- (i) Based on approved PoC, bidder shall produce the prototype BSC-1 & BSC-2 as per timelines at Para-3, above.
- (ii) Bidder shall undertake testing of the prototype SoCs to validate various IPs and security protocols used. The test reports & results will be submitted to MeitY Technical Experts Committee for verification and validation.
- (iii) PRSG shall verify the test reports & results and if assessed to be successful, approve the manufacture of production grade SoCs and the payment of DLI advance associated to the stage.

(d) **Stage-IV: Testing & Validation of Production Grade BSC-1 & BSC-2.** The Bidder shall produce production grade SoCs and undertake validation of ICD and testing of the protocols required for specific application/ specified by the equipment manufacturer/ end user. The Bidder is expected to independently interact with prospective product manufacturer and draw out testing and validation requirements and satisfy them. For validation/ testing of SoCs intended to be deployed in defence systems, the Bidder may explore the relevant market opportunities. Bidder is expected to adequately test and validate the SoCs and ensure their quality, reliability and compliance to Environmental tests, Mechanical tests, Electrical tests and Security tests at various stages, so as to satisfy the end users/ manufacturers/ suppliers of the equipment/ systems where the SoCs are intended to be deployed. The stage will involve following activities: -

- (i) Bidder shall manufacture the production grade BSC-1 & BSC-2 SoCs and undertake testing of complete parameters, interface control, cyber & security and protocols validation as required for the specific application or defined/ specified by the equipment manufacturer/ end user. Bidder shall also acquire suitable certificates required for commercial deployment of the SoCs. The intent of validating is to meet the end user and application specific & security requirements.
- (ii) The test results & the details of the acquired certificates will be submitted to TC. The TC will verify and validated the test results and in case of any deviations discuss with the Bidder. TC will submit the final report to PRSG. The PRSG on approval of these reports will release the DLI advance payment associated with the stage.
- (iii) All design, architecture, development, testing & validation related documents would be kept in ESCROW account after validation of the same by CDAC. The beneficiary of the ESCROW will be C-DAC. The documents would be released from ESCROW before invocation of exit clause or in the case of Developer not complying with the terms of RFP.



(e) **Stage-V: Sample Implementation.** Once the production grade SoCs are successfully tested & validated, bidder shall select a minimum of four applications viz one for Defence and three for Civil commercial utility and deploy a minimum Quantity of 40 SoCs in equal proportion, meeting the packaging requirement for utility/ application. Apart from this one each Development /Reference Boards for BSC-1 and BSC-2 will also be submitted to MeitY/CDAC. This may be useful to have more applications from third parties. E.g. Raspberry Pi. Activities involved in this phase are: -

- (i) Preparation of the boards, peripherals and interfaces and implementation of the standards & protocols required for deployment of BSC-1 & BSC-2 on equipment/ systems.
- (ii) Functional testing of the equipment/ systems post deployment of SoC on board.
- (iii) The bidder shall acquire the certificate for deployment from the manufacturer/ user and maintain serial number-wise auditable record of deployment of SoCs.
- (iv) The Bidder shall submit the documents of deployment status along with equipment/ system (with BSC-1 or BSC-2 SoCs on-board) functional testing report to TC.
- (v) The Technical Committee (TC) will verify the documents
- (vi) Approval of the successful testing of the end user equipment report and the bidder(s) records submitted by PRSG to MeitY will qualify the milestone.

5. **Phase 2: Deployment of BSC-1 & BSC-2 SoCs.** The phase is associated with deployment of the manufactured SoCs. The phase is divided into four tranches each of six-month duration. Bidder is required to deploy successfully 25% of the total quantity of SoCs in every six months so as to complete the deployment in two years from successful validation of production grade BSC-1 & BSC-2 SoCs or three & half years and four years respectively from the date of contract signing. A grace period of six months for commencement of deployment is provided i.e. deployment of first tranche of BSC-1 can commence from  $T_0+24^{th}$  month and that of BSC-2 till  $T_0+30^{th}$  month. This grace period is not carried forward for subsequent tranches. Bidder shall ensure that at least 10% of the designated quantity of SoCs is deployed on the defence & aerospace equipment/ systems. Bidder shall qualify for DLI payment associated with each tranche on deployment of at least 10% of the SoCs designated for the respective tranche on the defence & aerospace equipment/ systems. The DLI payment associated with each tranche will be released on completion of deployment as per the aspects listed at Para 5(a) and submission of relevant documents as listed at Para 5(h), below.

(a) **Deployment Aspects.** Eligibility for DLI will be deemed to be attained only on successful deployment of SoCs on equipment/ product as required for each tranche and the satisfactory functioning of each equipment/ product is established. The SoCs shall be considered deployed only if the following conditions are met: -

- (i) The SoCs are to be deployed at least on 10 different commercial applications/ products and two different defence applications/ products.
- (ii) The products manufacturers for commercial applications shouldn't have any Conflict

of Interest with Bidder(s) with respect to equity, joint ownership, Common Board of Directors etc.

- (iii) In case, the SoCs are to be deployed in any of the sister concern having conflict of interest with the Bidder(s), the number should be limited to only 10% of deployable SoCs in each tranche. If more SoCs are deployed, the maximum weightage will be limited to 10% of deployable target for each tranche.
- (iv) The overall sum total value/ price of the commercial products should be at least 30 times (30X) of the DLI amount sought and in this regard necessary documentary proof to be submitted as demanded. While calculating the sum total value of the products from sister concerns where SoCs are deployed will be limited to 10% of the total quantity of 5 lakhs numbers.
- (v) Deployment of SoCs is not limited only to sale of SoCs to the product manufacturers. At least 20 % of them should have been deployed on the final/ end product and 10% of these final/ end products should have reached the end users and are under active exploitation by the end of the next tranche. This aspect shall be ascertained by PRSG during determining the eligibility for payment for the subsequent tranche of deployment.
- (vi) The 10% of the DLI amount pertaining to the final i.e fourth tranche of 125000 SoCs will be withheld till completion of physical deployment & exploitation of SoCs in the final/ end products.
- (vii) The deployment has to be in such a proportion that one of the two SoCs constitutes at least 30% of the total quantities assigned to Selected Bidder. DLI for one of the two SoCs will be limited to a maximum of 70% and the remaining 30% will be disbursed against the deployment of other SoCs. The bidder may plan and execute accordingly.
- (viii) Eligibility for each tranche of DLI will be deemed to be attained only after deploying at least 10% of the corresponding tranche of the designated quantity of each type of SoC (BSC-1/ BSC-2) in systems/ equipment meant for defence forces in military role, i.e., ordered by Ministry of Defence or by Army/ Navy/ Air Force/ Coast Guard on their primary vendors or by their primary vendors on their vendors and deployment of a minimum of 30% of one of the SoCs independently in both commercial and military applications.
- (ix) Submission of sale invoices and other necessary documents to C-DAC in support of sales executed by the bidder

(b) **Activities.** Activities involved in the phase are: -

(j) **Stage/ Tranche-1.** This stage earmarks completion of deployment of 25% of the total designated quantity of BSC-1 within six months ( $T_0+18$  to  $T_0+24$  months) from date of signing contract. However, a grace period of six months for commencement of deployment is provided i.e. deployment of first tranche of BSC-1 can commence till  $T_0+24^{\text{th}}$  month and that of BSC-2 till  $T_0+30^{\text{th}}$  month. Bidder shall be eligible for 15% of the DLI payment on prorated basis on deployment of at least 10% of total quantity of SoCs. The payment will be on prorated basis, for lesser number of SoCs deployed. A recovery of upto

30% advance, if paid against unfulfilled quantity will be affected. In case, the advance paid exceeds the tranche DLI payable, the excess amount will be recovered from the APBG.

(ii) **Stage/ Tranche-2.** The tranche will be considered completed on deployment of next 25% quantity with a minimum 30% of one of the SoCs & a Cumulative figure of 50% of designated quantity of both SoCs during next six months (T<sub>0</sub>+24 to T<sub>0</sub>+30 months) from the date of signing the contract. Bidder shall be eligible for payment of an installment of next 15% of the DLI on successful completion of 50% of designated quantity of SoCs or Prorate payment for the additional number of SoCs. A recovery of upto 30% advance paid against unfulfilled quantity will be affected. In case, the advance paid exceeds the tranche DLI payable, the excess amount will be recovered from the APBG.

(iii) **Stage/ Tranche-3.** The tranche will be considered completed on deployment of next 25% quantity with a minimum 30% of one of the SoCs & a cumulative of 75% of designated quantity of both SoCs during next six months (T<sub>0</sub>+30 to T<sub>0</sub>+36months). Bidder shall be eligible for payment of an installment of next 15% of the DLI on successful completion of 75% of total designated quantity of SoCs (BSC-1 & BSC-2) or Prorate payment for the additional number of SoCs deployed. A recovery of upto 30% advance, if paid against unfulfilled quantity will be affected. In case, the advance paid exceeds the tranche DLI payable, the excess amount will be recovered from the APBG.

(iv) **Stage/ Tranche-4.** The tranche will be considered completed on deployment of next 25% quantity with a minimum 30% of one of the SoCs & a cumulative of 100% of total designated quantity of both (BSC-1 & BSC-2) SoCs during next six months (T<sub>0</sub>+36 to T<sub>0</sub>+42 months). Bidder shall be eligible for payment of next 15% of total DLI amount on successful completion of 100% of designated quantity of BSC-1 & BSC-2. A recovery of upto 30% advance paid against unfulfilled quantity will be affected. In case, the advance paid exceeds the tranche DLI payable, the excess amount will be recovered from the APBG.

(c) **Financial Aspects.** MeitY will provide a DLI for the corresponding number of SoCs deployed. The conditions for eligibility of the DLI are as follows: -

(i) Qualification of SoCs designed and manufactured against the project will be reviewed by MeitY Committee(s). The bidder should independently carry out the process of verification, testing and validation for satisfying the end users for deployment in their respective systems and provide necessary documentation to MeitY Committee for review. In addition, MeitY may randomly carry out sample tests as part of qualifying process to check the conformity of SoCs with the latest standards in vogue to verify the eligibility for release of the DLI amount.

(ii) Payment of DLI will be against physical deployment of SoCs against verifiable documentary proof. BSC-1 SoCs deployed after 3<sup>1</sup>/<sub>2</sub> year and BSC-2 SoCs deployed 4 years after contract date period will not be eligible for DLI.

(iii) DLI will be disbursed in four tranches against deployment of 25% of the

designated quantity within a total period of 2 years from the date of successful development or 3<sup>1/2</sup> year for BSC-1 and 4 years for BSC-2 from the date of signing of contract whichever is earlier. The bidder is free to complete the development earlier than 1<sup>1/2</sup> & 2 years and commence deployment earlier than the targeted time. 10% of the payment of the 4<sup>th</sup> tranche will be paid only on verification of physical deployment of SoCs as at para 4(g)(v), above.

(iv) If DLI advance is not taken, either as a whole or for any one or more stages (stage-II to V of Phase-1), the payment for each Tranche at Stage-I to III of Phase-2 will be enhanced to 25% of the DLI amount.

(d) **Incentive for Early Deployment.** To encourage early development of SoCs, an incentive up to 20% for early completion of development and deployment of both BSC-1 and BSC-2 at 10% incentive for every six months will be provided. The bidder seeking to avail the incentive is required to advance deployment of all tranches by the 6 months for every 10% incentive availed and complete deployment accordingly. For the purpose of calculation of incentive, the incentive will be calculated at 10% of the DLI amount for deployment of 5 lakh SoC.

(e) **Database for Deployment.** Bidder shall maintain a database having serial number wise sale of SoCs, Buyers details, record of the equipment on which SoCs are deployment, feedback from equipment manufacturers/ end users along with record of service requests/ warranty claims received and fulfillment of warranty obligations. Bidder shall share this data on the ESCROW account or otherwise periodically (quarterly basis) to enable MeitY committees to assess the performance and fulfillment of warranty obligations

(f) Provide a progress-cum achievements report on quarterly basis MeitY Technical Experts Committee iro the deployment of the SoCs, failures reported and the replacement executed.

(g) Bidder shall also to manage inventory to meet the market demand.

(h) **Documents to be Submitted for Claiming DLI for each Tranche.** Bidder shall provide necessary documents to PRSG for claiming DLI payments. Bidder shall submit following documents for claiming the milestone achievement DLI payment for each tranche of deployment to MeitY. The payment will be approved after recommendations and clearance by PRSG: -

- (i) The details of the buyers/end users/equipment manufacturers i.e Company Name, shareholders names, Board of directors, Partners details, Proprietors, GST certificates, Registration Certificates and any other relevant documents as demanded by PRSG.
- (ii) Copy of the invoice(s) & the sales memo confirming the sale.
- (ii) Acknowledgment copy from the equipment manufacturer/ end users confirming purchase & deployment of the SoC.
- (iii) Test reports/ functional test/ field report from buyer/ end user confirming and satisfactory functioning of the SoCs on their equipment.

- (iv) Extracts of the database iro feedback / complaints, service requests/warranty claims from the equipment manufacturer/ end users.
- (v) Confirmation on utility / exploitation of the end products on which SoCs are deployed.

6. **Phase 3: Warranty and Life Cycle Support for BSC-1 & BSC-2 SoCs.** Selected Bidder shall provide comprehensive warranty for the SoCs for 2 years from the date of deployment. Bidder is required to replace the faulty SoCs with a compatible SoC and associated hardware within 2 weeks from the receipt of the service request/ warranty claim from the end user/ equipment manufacturer. Towards meeting this requirement, Bidder is expected to set up the following mechanism: -

- (a) Bidder is to prepare the database of SoCs deployed with the quantity provided to each of the equipment manufacturer with the list of range of their products where the SoCs are deployed.
- (b) A customer helpdesk is to be set up for the duration of warranty period and two months beyond, to receive the complaints/ service requests for claiming warranty. A mechanism to receive feedback from the equipment manufacturers in a suitable format for MeitY designated agency to assess the performance of the Bidder in providing relief against warranty and also to assess the failure rate during warranty period is to be instituted. MeitY designated agency may undertake random checks for establishing the robustness of the mechanism and the authenticity of the information.
- (c) Bidder will establish an ESCROW account at their cost. All design and development related documents would be kept and updated regularly in ESCROW account after validation of the same by C-DAC or its designated agency as per the periodicity decided by the latter. The consolidated summary of the database is to be shared at the end of 2 years for C-DAC to assess the performance of Bidder and fulfilment of warranty obligations to decide the amount of DLI payment to be made out of the remaining 10% of the total. The cost of establishment and maintenance of ESCROW will have to be borne by the successful bidder(s).

7. **Penalty for Failure/ Warranty Shortfalls.**

- (a) If the failure is more than 10% of total SoCs, for every 1% or part thereof, above 10%, a penalty of 1% of the DLI will be as per the table below: -

Failure Percentage	Penalty Amount ( as %age of Total DLI)	Remarks
10.1% - 11%	1% of total DLI amount.	
11.1% - 12%	2 % of total DLI amount.	
12.1% - 13%	3% of total DLI amount.	
⇓	⇓	
18.1% - 19%	9% of total DLI amount	
19.1%-20%	10% of total DLI amount	

(b) If Bidder fails to provide replacement within the stipulated period, the payment due on completion of warranty for the corresponding number of SoCs will be deducted.

(c) In addition, failure of more than 20% of total SoCs shall make the Bidder liable for forfeiture of PWBG.

8. **Schedule of Work & Timelines.** The schedule of work/ activities encompassing all the phases & stages of the project along with the specified timelines and relevant DLI payment for each milestone is placed as **Appendix-C.**

9. **Indigenous Content.** The core of the SoCs is to be based on processors designed and owned by Indian entity and based on 'Open Source' ISA. In addition, packaging & AMT of the SoCs is to be undertaken in India by Indian entities and the major design IPs ie Processor, Secure Boot and Security IPs of such processors are to be owned by Indian entities. The software/firmware (Linux OS, Board support packages, Boot loader, Development tools, etc.) required for the SoCs should either be Open Source or owned by Indian entity or combination of both. Notwithstanding that, the IC contents should also meet the financial criteria of 50% cost of the project. The right to audit Bidder/ sub-contractors/ suppliers/ technology partners shall vest in the Ministry of Defence and aspects of delivery, certification, payments, withholding of DLI payments and imposition of penalties shall be as prescribed in **Appendix-D.** Furthermore, Bidders will be required to submit their indigenization plan in respect of indigenous content as stipulated in **Appendix-D.**

10. **Pre-Qualification Criteria.** The Pre-Qualification criteria for Bidder participation is placed at **Appendix-A.** Bidders are to submit details as per the criteria along with the Technical Bids, which would be evaluated by the Technical Evaluation Committee.

11. **Technical Specifications & Standards.** The Minimum Indicated Broad Specifications are placed as **Appendix-E** of the RFP. These are to be strictly complied-with in the architecture of the SoCs. However, Bidder is free to arrive at optimum design/ configuration/ architecture and include additional features and functionalities as per the decided area of application for deployment. Similarly, if the bidder wishes to develop variants of BSC-1 & BSC-2 to optimize and enhance the utility on more applications, they may do so as long as they maintain (retain the listed specifications while enhancing applicability) the Minimum Indicated Broad Specifications, as mentioned in the RFP. Bidder shall comply to follow the necessary standards for design, development, manufacturing, testing & security of the SoCs so as to meet the equipment manufacturers/ end user's functionality, performance, reliability & quality requirements.

12. **Qualifying Industry-Standards & Benchmarks.** The Bidder shall follow the globally accepted EEMBC benchmarking. The bidder shall have been EEMBC certified qualifying for at least five benchmarks of EEMBC.

13. **Security Features.** Information security features of the SoCs are the basis of initiating this project. Bidders are expected to meet Security features, Standards and Protocols as per application/ specified by the equipment manufacturers/ end users to ensure information security at design, fabrication and packaging stage & protection against malware, malicious codes, backdoor etc. In order to ensure the operational security of the SoCs, the Bidder is to ensure that the packaging of the SoCs to be undertaken in India by Indian entities and the security IPs used are designed & owned by the Indian entities. The Bidder is to focus on the following aspects of security, which may be verified by the MeitY committees:-

(a) **Process Security.** Methodology to ensure security of process at various stages viz Design, Development, Fabrication, Validation and deployment of the SoCs. Also the viable arrangement with Fabrication and AMTP units to ensure security during each activity outsourced/ collaborated with different entities. Development to follow secure SDLC model, proven cyber security Standards IEC 62443-4-1 & UL 2900 or follow “Zero trust” architecture. Supply chain security measures to include Identification of HW components by capturing the behaviour of PUF at foundry. The packaging of ICs for security has to be at an Indian Entity.

(b) **Architectural Security.** The SoCs architect to include the latest & best standards and protocols on Cyber and Information Security in vogue for functional security to ensure protection against malware, malicious codes, backdoor etc. The Bidder shall follow the Zero Trust Architecture.

(c) **Functional Security.** The SoCs should qualify the level-2 (or latest in vogue) platform Security Architecture (PSA) of ARM for secure chips or have acquired compliance certification for same.

(d) **Testing / Validation of SoCs.** The Bidder to include best standards, protocols and testing parameters/ procedures for security tests for validation of SoCs at various stages of design & development and validation by the trusted agencies for certifying like STQC & SAG etc. to adequately meet intended applications and end user’s requirements. Additionally, the Bidder is expected to independently interact with prospective product manufacturer and draw out testing and validation requirements and satisfy them. For validation/ testing of SoCs intended to be deployed in defence systems, the Bidder shall explore the relevant market opportunities. Qualification of Testing and compliance certification of specifications will be based on this RFP and application being developed by bidder and in close co-ordination with TC and with approval from TC

#### 14. **Role of Stakeholders.**

MeitY role includes -

- i. Overall Administration of the project and encourage adoption of SoC at commercial level.
- ii. Release of RFP for selection of bidder for DESIGN, DEVELOPMENT, MANUFACTURE, VALIDATION AND DEPLOYMENT OF TWO TYPES OF SECURE SYSTEMS ON CHIPS (SoCs) USING INDIAN OWNED PROCESSOR BASED ON OPEN SOURCE ISA with aim on deployment linked incentive.
- iii. Place order on the selected Bidder.
- iv. Release of funds to C-DAC phase wise as mentioned in Section 8 Deliverables, Payments and Timelines.
- v. Constitute the Project Review and Steering Group (PRSG which shall audit the reports submitted by bidders to CDAC on successful deployment of Secure SoCs). PRSG shall monitor deliverables as per the schedule mentioned in RFP.

CDAC role includes –

- i. Complete bid evaluation process according to RFP.
- ii. Select the bidder on the basis of the evaluation of technical and financial proposals.
- iii. Place order on the selected Bidder.
- iv. Constitute a Tender Evaluation Committee (TEC) and Technical Committee (TC) as per the terms mentioned in consultation with MeitY and MoD.

- v. Monitor timely delivery of the milestones.
- vi. Validate the progress report submitted by the bidder on successful sale of the SoCs.
- vii. Validate the acknowledgement given by the bidder on successful deployment of the SoC.
- viii. Submit the progress report on quarterly basis to MeitY/PRSG.
- ix. Disburse the funds (received from MeitY) to the bidder phase wise as mentioned in RFP of Deliverables, Payments and Timelines.
- x. Participate in PRSG meeting.
- xi. C-DAC will separately receive a fee for above mentioned role an amount equal to 15% of the Total Project cost (excluding taxes) from MeitY.
- xii. Establish ESCROW account along with the successful bidder and regularly arrange to update all design related documents in ESCROW account after validation.

Further, following Committees will be created to evaluate and review the progress of the project:-

(a) **Project Review and Steering Group (PRSG)** MeitY will constitute a Committee viz., Project Review and Steering Group (PRSG) which will monitor a regular basis to oversee the implementation of the project as per RFP Deliverables, payments and timelines and recommend the release of next installment of MeitY's Support Amount. In case of delay in execution in the development or implementation phase, liquidated damages as mentioned in RFP shall be levied.

(b) **Tender Evaluation Committee (TEC).**

The Tender Evaluation Committee constituted by the CDAC in consultation with MeitY and MoD, shall evaluate the Bids.

The decision of the Tender Evaluation Committee in the evaluation of the Technical (including Pre-Qualification) and Financial bids shall be final. Technical Bid evaluation is to ensure that the proposed solution by the bidder meets the functional/technical requirements as outlined in the RFP Document. No correspondence will be entertained outside the process of negotiation/ discussion with the Committee.

To qualify the Technical Bid Evaluation, the bidder must conform to all the requirements stated in the RFP document and score at least 70% in technical evaluation criteria as mentioned in RFP.

(c) **Technical Committee (TC).**

A Technical Committee (TC) will be set up by CDAC in consultation with MeitY and MoD, during the start of the project The operational aspects of the TC need to be handled by C-DAC including maintaining monthly statuses, minutes of the meetings, project plans, etc.

(d) **Project Management.** Apart from the above mentioned functions, following roles for assessing and validating the outcome of each stage and payment of DLI, as applicable are also envisaged for above MeitY committees: -

Stage	Activity	Timelines (in months)		Qualification criteria	Responsibility for Validation
		BSC-1	BSC-2		
<b><u>Phase1: Design, Development, Validation &amp; Deployment of BSC-1 &amp; BSC-2 SoCs</u></b>					
I	<b><u>Checking Stability &amp; Suitability of the Indian</u></b>	T <sub>0</sub> +4		Verification of the test	Technical Committee



	<b><u>Owned Processor based on Open Source ISA &amp; Submission of Project Report.</u></b> Checking stability & suitability of the 64-bit Indian Owned Processor based on Open Source ISA for intended purpose and submission of project report.			report for Stability & Suitability of the microprocessor or for desired application & Project Report.	+ PRSG
II	<b><u>Design &amp; Development.</u></b> Successful testing of the Proof of Concept for design of BSC-1 & BSC-2.	T <sub>0</sub> +9	T <sub>0</sub> +14	Verification of documents for Successful qualification of the PoC.	Technical Committee or Agency designated by it.
III	<b><u>Testing &amp; Validation of Prototype BSC-1 &amp; BSC-2 SoCs.</u></b> Successful qualification of the prototype chip.	T <sub>0</sub> +12	T <sub>0</sub> +18	Verification of documents / test reports for Prototype testing of SoCs for inclusion of Minimum Broad Specifications & security requirements	Technical Committee + PRSG
IV	<b><u>Testing &amp; Validation of Production Grade BSC-1 &amp; BSC-2 SoCs.</u></b> Successful qualification of production grade SoCs for various standards (including Mil grade for defence use) testing, cyber, security and environmental tests including necessary certification to ensure commercial supply.	T <sub>0</sub> +15	T <sub>0</sub> +21	Verification of documents for successful testing of Production grade SoCs & validation of various protocols. For defence SoCs testing/ validation by MeitY.	Technical Committee + PRSG
V	<b><u>Sample Implementation.</u></b> Sample deployment of minimum 40 (BSC-1 & BSC-2) SoCs equally on four different applications in such a way that one of the	T <sub>0</sub> +18	T <sub>0</sub> +24	Verification of functional Test reports & related documents of equipment /	Technical Committee + PRSG

	applications is for defence equipment and other three for Commercial/ civil equipment/ systems. The activity also includes preparation of boards, interfaces, associated peripherals and acquiring certification for commercial applications.			systems on which BSC-1 & BSC-2 SoCs are deployed.	
<b>Phase-II: Deployment of Designated Quantity of BSC-1 &amp; BSC-2.</b> Successful deployment of 25% the total designated quantity of BSC-1& BSC-2 SoCs on Commercial/ defence & aerospace equipment/ Systems in every six months' time period with minimum of 10% on defence & aerospace equipment/ Systems and to complete the deployment of total designated quantity in three and half years and four years from date of contract for BSC-1 & BSC-2 SoCs respectively. The phase is divided into four stages/ tranches as follows: -					
I	Deployment of 25% of the designated quantity of SoCs.	T0+18 to T0+24*		Verification of sales invoices & acknowledgement from equipment manufacturer/ end user buyer for deployment & satisfactory functional test / field reports of the SoCs on equipment.	Technical Committee (Documents Verification) + PRSG (Adjudging DLI payment)
II	Deployment of next 25% cumulative to 50% of the SoCs.	T0+24 to T0+30			
III	Deployment of next 25% cumulative to 75% of the designated quantity of SoCs	T0+30 to T0+36			
IV	Deployment of next 25% cumulative to 100% of the designated quantity of SoCs	T0+36 to T0+42			
<b>Phase 3: Warranty &amp; Life Cycle Support</b>					
I	Implementation of warranty & establishment of life cycle support system to facilitate end users.	T0+42 to T0+66	T0+48 to T0+72	Verification of successful implementation of warranty support system like helpdesk establishment and maintenance of auditable records to ascertain	10% of the total DLI amount after approval from Technical Committee. Implementation of penalty & Warranty shortfall clauses as per para 7 of RFP. Tech Committee + PRSG.

				Bidder performance & fulfilment of warranty obligations	
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15. **Pre-bid Queries.** MeitY shall hold a pre-bid briefing meeting with the prospective bidders at New Delhi. The venue shall be intimated to the bidder(s) one week in advance. Any queries/clarifications to this RFP may be sent to this office by email to [sunita@meity.gov.in](mailto:sunita@meity.gov.in) or by post so as to reach the under mentioned address :-

Smt. Sunita Verma  
 Scientist 'G' and Group Coordinator (R&D in E&IT).  
 Ministry of Electronics and Information Technology  
*Electronics Niketan, 6, CGO Complex New Delhi- 110003*

- (a) All enquiries / clarifications from the bidders, related to this RFP, must be directed in writing exclusively to the contact person notified in this RFP document. Please refer to **Appendix-F “Request for Clarifications”** for pre-bid queries format.
- (b) The preferred mode of delivering written questions to the aforementioned contact person would be through fax or email. Telephone calls will not be accepted. In no event will the MeitY be responsible for ensuring that bidders' inquiries have been received by MeitY. The queries by the bidders will be provided in the format mentioned in **Appendix-F**.
- (c) After distribution of the RFP, the contact person notified by MeitY will begin accepting written questions from the bidders. MeitY will make efforts to provide a full, complete, accurate, and timely response to all questions. However, MeitY makes no representation or warranty as to the completeness or accuracy of any response, nor does MeitY undertake to answer all the queries that have been posed by the bidders.

16. **Pre-Bid Meeting.** A pre-bid meeting will be organized to answer any queries or clarify doubts regarding submission of proposals. The Bidder or his authorized representative is requested to attend. Necessary details may be sent a week in advance to office of Smt. Sunita Verma, to facilitate obtaining of security clearance.

**Bid Submission**

17. **Business Eligibility.** The bidder should be an Indian Vendor / entity/ registered company meeting the requirements in accordance with the eligibility conditions listed at **Appendix-A**. Other eligibility conditions are as follows: -

- (a) **Undertaking by Bidders.** The Bidder will submit an undertaking that they are currently not banned/ debarred/ suspended from doing business dealings with Government of

India/ any other government organization and that there is no investigation going on by MeitY against them. In case of ever having been banned/ debarred/ suspended from doing business dealings with MeitY/any other government organization, in the past, the Bidder will furnish details of such ban/ debarment along with copy of government letter under which this ban/ debarment/ suspension was lifted/ revoked. The Bidder shall also declare that their sub-contractor(s) /supplier(s) /technology partner(s) are not Suspended or Debarred by Ministry of Electronics and Information Technology or Ministry of Defence. In case the sub-contractor(s)/ supplier(s)/ technology partner(s) of the Bidder are Suspended or Debarred by Ministry of Electronics and Information Technology or Ministry of Defence, the Bidder shall indicate the same with justification for participation of such sub-contractor(s)/supplier(s)/ technology partner(s) in the procurement case.

(b) A company is considered as 'Owned' by resident Indian citizens if more than fifty percent (50%) of the capital in it is directly or beneficially owned by resident Indian citizens and / or Indian companies, which are ultimately owned and controlled by resident Indian citizens. Maximum permitted Foreign Direct Investment (FDI) shall be forty-nine percent (49%). No pyramiding of FDI in Indian holding companies or in Indian entities subscribing to shares or securities of the Applicant Company or the Strategic Partner shall be permitted. Indirect foreign investment shall be accounted for in counting the forty-nine percent (49%) FDI

(c) Subsequent to submission of bids if any sub-contractor(s)/ supplier(s)/ technology partner(s) of the Bidder is Suspended or Debarred by Ministry of Electronics and Information Technology or Ministry of Defence, the Bidder shall intimate the Ministry of Electronics and Information Technology and Ministry of Defence regarding Suspension or Debarment of its sub-contractor(s)/ supplier(s)/ technology partner(s) within two weeks of such order being made public.

(d) Compliance to OM the Rule 144 (xi) of the General Financial Rules (GFRs), 2017. The bidders from a country, which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) subject to get registered with the Competent Authority and comply with the restrictions, as imposed under Rule 144 (xi) of the General Financial Rules (GFRs), 2017 notified by Department of Expenditure vide OM No 6/18/2019-PPD dated 23rd July 2020. Accordingly, bidders are not permitted to have collaboration with a company from such country without such company having been registered with the competent authority as above and/ or to have a significant beneficiary from such countries.

(e) The Bidder(s) is not allowed to source any Active/ High-Active components manufactured by companies from a country which shares a land border with India or by the companies that have beneficial owner from such countries unless written permission is accorded by the Buyer. If using components from these entities is unavoidable, a proposal to this effect with suitable justification is to be made by the bidder before submission of the bids or in the technical proposal for consideration by MeitY.

(f) The bidder(s) shall be selected for award of contract based on a defined selection procedure. The bidder(s) will initially be qualified on the conditions of Pre-qualifications and further evaluated by the Technical Evaluation Criteria. The details of the parameters for Technical Qualification are placed as appendix to this document. A minimum score of 70 will be considered qualified for Technical Evaluation Criteria. The commercial bids of only the qualified bidder(s) will be evaluated and the lowest bidder will be selected as L1 and awarded the contract.

18. **Start-Up & MSMEs Definitions.**

(a) **Startup and MSME – Startup Definition (As defined by DPIIT).** Startups shall be defined as per the DPIIT notification dated 19th February 2019 or extant norms.

(b) **Definition of Micro, Small and Medium Enterprises.** MSMEs shall be defined as per the Gazette Notification by Ministry of Micro, Small and Medium Enterprises, dated 1st June 2020 or extant norms.

19. **Bid Submission Instructions**

(a) Bidders shall submit their offers in three parts Pre-Qualification Bid, Technical Bid and Commercial Bid as per format given in this document.

(b) Bidders shall submit following envelopes: -

<b>Envelope Number</b>	<b>Marked As</b>	<b>Contents of Envelope</b>
One	Response to Pre-Qualification criterion << Bidder Name >>  &  PCIP & Bid Securing Declaration Letter ( <i>as applicable</i> ) << Bidder Name >>  RFP for Design, Development, Manufacture, Validation and deployment of Bharat Secure Chip-1&2.	One Original Hard Copy & One Soft Copy (in CD) of the documents.  &  Bid Securing Declaration Letter along with PCIP.
Two	Technical bid <<Bidder Name>> RFP for Design, Development, Manufacture, Validation and Deployment of BSC-1 & BSC-2 SoCs.	One Original Hard Copy & One Soft Copy (in CD) of the documents.
Three	Commercial bid << Bidder Name >> RFP for Design, Development, Manufacture, Validation and Deployment of BSC-1 & 2 SoCs. Also, marked as “To be opened only post Technical evaluation”	One Original Hard Copy of the Commercial bid/proposal.

- (c) Bidders shall submit soft copy of technical bid on a non-rewritable CD media in a sealed envelope. Technical bid should be in a single file in PDF format.
- (d) The CD media must be duly signed using a permanent Pen/Marker and should bear the name of the bidder.
- (e) Bidders shall seal the response to the RFP, including response to pre-qualification criterion, Technical and Commercial Proposals in an outer envelope marked “**Response to RFP for Design, Development, Manufacture, Validation and Deployment of BSC-1 & BSC-2 SoCs.**”
- (f) The envelope shall indicate the name and address of the bidder.
- (g) The outer envelope shall indicate the name and address of the bidder to enable the proposal to be returned unopened in case it is declared “late”. Both inner and outer envelopes shall be addressed to MeitY address specified in the initial part of the RFP.
- (h) The original proposal shall be prepared in indelible ink. It shall contain no inter-lineation or overwriting, except as necessary to correct errors made by the bidder itself.
- (j) Any such corrections must be initialled by the person (or persons) who sign (s) the proposals.
- (k) All pages of the proposal must be sequentially numbered and shall be initialled by the Authorized Representative of the bidder.
- (l) A Bidder is eligible to submit only one Bid for the Project.
- (m) In case the bidder is either a Start-up or MSME, the required certificate from relevant ministry must be enclosed for availing the benefits.
- (n) In case the bidder has formed consortium to leverage expertise in functions such as manufacture, supply, marketing, support etc, the consortium formation documentation must be enclosed
- (o) Bidders must submit their Commercial bid/proposal Viable Gap Funding (DLI) amount for design, Develop, validate, manufacture, deploy and maintain 5 lakh quantity of BSC-1 & BSC-2 chips would confirm to supply the same as per awarded quantity specified at a Viable Gap Funding (DLI) price calculated on Viable Gap Funding (DLI) price per lakh basis.
- (p) In case the bidder is either a Start-up or MSME, the required certificate from relevant ministry must be enclosed for availing the benefits.
- (q) In case the bidders have formed consortium to leverage expertise in functions such as manufacture, supply, marketing, support etc., the consortium formation documentation must be enclosed.

(r) **Venue and Deadline for submission.**

- (i) Any proposal received by the MeitY after the above deadline shall be rejected and returned unopened to the bidder.
- (ii) MeitY shall not be responsible for any postal delay or non-receipt/ non-delivery of the documents. No further correspondence on the subject will be entertained.
- (iii) MeitY reserves the right to: -
  - (aa) Relax or waive any of the conditions stipulated in this RFP document as deemed necessary in the best interest of the Ministry and the objective of the scheme without assigning any reasons thereof and
  - (ab) Include any other item in the scope of work at any time after consultation in the pre-bid meeting or otherwise.
- (iv) MeitY reserves the right to modify and amend any of the above-stipulated condition/ criteria on depending upon project priorities vis-à-vis urgent commitments.
- (v) In case, the day of bid submission is declared holiday by Govt. of India, the next working day will be treated as day for submission of bids. There will be no change in the timings.

20. **Submission of Bids.** The Technical and Commercial Proposals along with Prequalification documents including Bid Securing Declaration Letter & PCIP (as applicable) should be sealed separately in three separate envelopes clearly indicating Commercial/ Technical/Prequalification, as applicable, and then put in one envelope and sealed and submitted to the undersigned at the following address.

**Smt. Sunita Verma**  
**Scientist 'G' and Group Coordinator (R&D in E&IT).**  
**Ministry of Electronics and Information Technology**  
**Electronics Niketan, 6, CGO Complex New Delhi- 110003**

21. **Bid Securing Declaration Letter.** Bid Securing Declaration letter as per format given in Annexure-G in lieu of EMD to be submitted by the bidders as per the instruction given in the RFP. MSME & Startups also need to submit the Bid Securing Declaration letter without fail.

22. **Pre-Contract Integrity Pact.** A Bidder is required to enter into an Integrity Pact with MeitY. For this, the bidder shall submit the original signed, stamped and notarized PCIP along with Pre-Qualification envelope as per dates mentioned, failing which, the Proposal submitted by the concerned bidder will be liable to be forthwith and summarily rejected. The details and format for the Integrity Pact is provided in **Appendix-H.**

23. **Technical Proposal Guidelines**

- (a) Bidders are expected to understand the complete design and development processes of BSC-1 & BSC-2 SoCs while preparing the Technical Proposal.

- (b) The technical proposal should contain a detailed description of how the functional and technical requirements outlined in this RFP are met by the proposed solution. Bidder(s) should provide a comprehensive approach and methodology meeting all the functional and technical requirements.
- (c) Bidders are required to provide details as of how the security features being incorporated design architecture & fabrication of the chips, arrangements for process security during design & development, market potential and proportional adaptation and deployment of BSC-1 & BSC-2 as listed in this RFP.
- (d) MeitY Technical Committee/ PRSG/ MeitY Committee(s) retains the right of the final say in the interpretation of the scope of the Project in terms of the functions and processes of BSC-1 & BSC-2 as listed in this RFP.
- (e) Since a process can be described in different manners, the bidder(s) should clearly understand that any possible variations to the processes during the Requirements Analysis phase from the way they are specified in this RFP should not be considered as deviations or extensions to the original process specifications.
- (f) Bidders are expected to submit their bid in the format specified. Failure to use the specified formats may result in disqualification of the proposal.
- (g) The Technical Proposals must be direct, concise, and complete. Any information which is not directly relevant to this RFP should not be included in the proposal by the bidder.
- (h) Bidders are requested to provide documentary evidence of experience, methodology or any other information provided in the Technical proposal, as required. The bidders are not expected to attach any promotional material or brochures with the proposal.
- (j) Bidders shall number all the pages of the Technical proposal including the annexure and other attachments. The authorized signatory should sign all pages.
- (k) The Technical proposal shall include the following major sections: -
- (i) **Section-I –Understanding of Scope of BSC-1 & BSC-2.**
- (aa) Understanding the specifications & functional requirements and scope of work in the form of a compliance matrix.
- (ab) Likely areas/ segments of deployment both in commercial and defence applications.
- (ac) Understanding of Market requirements & applications and submit brief deployment plan.
- (ad) Likely percentage of deployment of each SoC.



(ii) **Section-II –Proposed Approach and Methodology.**

(aa) Overall approach and process methodology to be followed for each part of the work/ activity including designing, manufacturing, testing & validation, packaging supply and deployment.

(ab) Details of the collaborators/ consortium partners along with the details of the activities undertaken by each entity. The documents like MoUs/ Agreements/ Protocols are to be annexed.

(ac) Details of architectural security and process security arrangements with consortium partners like designer & packaging agencies as well as outsourcing agencies like Fabrication plant etc.

(ad) Details of the recurring and non-recurring IPs being sourced.

(ae) Details of the testing standards and protocols to be used for testing and validation of each stage to be specified. This includes details of the testing planned to be undertaken in-house or through outsourcing or third party/ as well as out of country by foreign agencies.

(iii) **Section-III –Work Plan.**

(aa) Detailed work plan including timelines. Bring out timelines for plan of action, for completion of each stage and the project as a whole.

(ab) Any alternate plan considered superior to the offered one with detailed justification and advantages.

(ac) Proposed DLI advance requirements with detailed justification.

(iv) **Section-IV –Proof of Details of the Similar work done in Past.**

(aa) The capabilities, assets and infrastructure details of the Bidder and consortium partners.

(ab) Details of the projects undertaken, chips manufactured and supplied earlier with the quantity.

(ac) Financial details on net worth, turn-over, ITR and purchase orders values for previous years as per the pre-qualification criteria.

(ad) Work Order/Purchase Order/Contract & Completion Certificates from the client.

(ae) Work Order & Certificate of Completion by the statutory Auditors.

(af) OR Work Order/ Purchase Order/ Contract + Phase Completion Certificate for Projects for which Development is complete for the client.

(v) **Section-V – Exit Criteria and Management.** The Bidder(s) shall submit a structured & detailed Exit Management plan/ proposal including the major aspects covered in the RFP.

(vi) **Section-VI- Additional Information.** Additional information directly relevant to the scope of services provided in the RFP may be submitted to accompany the proposal. In submitting additional information, please mark it as supplemental to the required response. However, this information will not be considered for evaluation purposes.

24. **Submission of Preliminary Project Report.** The bidders along with Technical Proposal shall submit the Preliminary Project Report (PPR). The PPR should indicate the methodology adopted by the Bidder(s) to execute the program and meet the design, development and deployment schedule laid down in the RFP. The PPR also to include the Standards and testing methods and agencies proposed to be engaged for testing etc. are to be indicated. The bidders are required to provide details of security arrangement with various entities to whom any activity of manufacture is outsourced. The PPR has to be submitted in the format placed at **Appendix-J**. The PPR should broadly cover the following aspects: -

- (a) Project overview.
- (b) Method for validation of Indian Processor, details of the probable processor candidates.
- (c) Proposed areas of deployment and plans of execution of the same.
- (d) Details of the collaborations/ outsource partners and proposed work-share arrangements.
- (e) Definitions of key milestones based on indicative list of milestones and broad range of timelines specified at Para 3 to 6 of RFP.
- (f) Broad plan for execution of the Project as per delivery schedule indicated at Para 3 to 6 of RFP.
- (g) Plan for meeting the Indigenous Content (IC) stipulated in the RFP.
- (h) Lifetime product support plan.
- (j) Following additional aspects are also to be included: -
  - (i) Suggested approach to meet Technical specifications and operational requirements of SoCs.
  - (ii) Details on the proposed security protocols & design aspects to be implemented to make the SoCs functionally secure.
  - (iii) Methodology to be adopted to ensure architectural security of SoCs and the process security during design & development and other phases/ stages of the project.

- (iv) Envisaged arrangements/ collaboration with Fabrication and AMTP entities to ensure meeting of timelines & security during tapeout, fabrication, assembly and packaging stages.
- (v) An overview on the Standards, protocols and testing procedures to be adopted for testing and validation of SoCs at various stages.
- (vi) Proposed areas of deployment of the SoCs and broad outlines of the plan including business plans for board & interface development, marketing plan & outreach to manufacturers/ users.
- (vii) Plans for deployment of 10% SoCs for military applications, for which the Bidder(s) shall have to explore the feasibility and carry out the necessary liaison work.
- (viii) Additional and valid information pertaining to the subject, if not covered in the above sub-paragraphs may also be included suitably.

### **Bid Opening**

25. The Proposals will be opened by MeitY in the presence of bidders or their representatives who may be present at the time of opening. Any change in date and time for opening of Technical bid and Commercial bid would be communicated to the qualified bidders. The Bidder or his authorized representative is welcome to be present at the opening of the proposals. Necessary details may be sent at least one week in advance to facilitate obtaining of security clearance. The representatives of the bidders should be advised to carry the identity card or a letter of authority from the bidder firms to identify their bonafide for attending the opening of the proposal. There will be three bid-opening events: -

- (a) **Pre-Qualification Bid.** Eligibility of the Bidder as per criteria specified in RFP.
- (b) **Technical Bid.** The Technical Bids of only those bidders who qualify the Pre-qualification criteria will be opened.
- (c) **Commercial Bid.** The Commercial Bids of only those bidders who qualifies the Technical Criteria with a score equal to or more than 70 marks/ qualifying marks will be opened.

### **Bid Evaluation and Acceptance Process**

#### **26. Tender Evaluation Committee (TEC).**

- (a) The Tender Evaluation Committee (TEC) constituted by the CDAC shall evaluate the Pre-qualification, Technical Bid Evaluation and Financial Bid Evaluation.
- (b) The decision of the Tender Evaluation Committee (TEC) in the evaluation of the Pre-Qualification & Technical Bid shall be final. Pre-Qualification & Technical bid evaluation is to ensure that the bidder(s) meet the eligibility conditions and the proposed solution by them meets

the functional/ technical requirements as outlined in the RFP Document. No correspondence will be entertained outside the process of negotiation/ discussion with the Committee.

(c) Tender Evaluation Committee will evaluate and compare the bids determined to be substantially responsive. It is TEC's intent to select the proposal that is most responsive to the project needs and each proposal will be evaluated using the criteria and process outlined in this section.

(d) To qualify the Technical Bid Evaluation, the bidder(s) must conform to all the requirements stated in the RFP document and score at least 70% in technical evaluation criteria.

(e) Financial bids of only those bidders will be opened by the Tender Evaluation Committee who qualifies the Pre-Qualification & Technical bid evaluation. Actual final selection would be based on lowest financial bid (L1).

27. **Pre-Qualification Evaluation**

(a) The bidder(s) shall have furnished the necessary documents to establish their eligibility (indicating the page number in the bid) for each of the items given in the appointment for which the bid is submitted as per **Appendix-A**. Relevant portions in the documents should be highlighted. If a bid is not accompanied by all the necessary documents, it will be summarily rejected.

(b) A Bid that does not fulfill all the stipulated eligibility conditions/ criteria will not be considered.

28. **Technical Bid Evaluation**

(a) The Technical Offer submitted by the Bidder will be evaluated by a Tender Evaluation Committee (TEC) to confirm that the SoCs being offered meets the laid down technical specifications as per the RFP. The TEC will carry out a detailed evaluation of responses to the RFP and all supporting documents/ documentary evidence. Technical Bids received will be evaluated to determine whether they are substantially responsive to the requirements set forth in the Request for Proposal. In order to reach such a determination, Tender Evaluation Committee will examine the information supplied by the bidders, and shall evaluate the same as per the evaluation criteria specified in **Appendix-B**. In the event of inability to submit requisite supporting documents/ documentary evidence, bid shall be rejected. The Tender Evaluation Committee shall invite each bidder to make a Presentation. The purpose of such presentations would be to allow the bidders to present their proposed approach to the Tender Evaluation Committee and the key points in their respective proposals. The presentation will carry 40 marks in Technical Evaluation Criteria as mentioned in **Appendix-B**.

(b) The technical evaluation of Bids will be carried out to ensure technical and functional compliance with requirements mentioned in the RFP. For all technically qualified bidders the financial bids will be opened for further evaluation.

- (c) The decision of the Tender Evaluation Committee in the evaluation of responses to the Request for Proposal shall be final. No correspondence will be entertained in this regard.
- (d) Tender Evaluation Committee will evaluate bidder's proposal based upon its clarity and the directness of its response to the requirements of the project as outlined in this RFP.
- (e) Tender Evaluation Committee reserves the right to ask for more information in terms of customer name, experience or deliverables and the bidder is required to provide details about the information enquired.
- (f) The Tender Evaluation Committee reserves the right to reject any or all proposals on the basis of any deviations.
- (g) Technical Proposal will be evaluated on the criteria mentioned in **Appendix-B**. Financial bids of only those bidders will be opened whose technical proposal complies with the requirements mentioned in the RFP document and scores 70 per cent or above.

### **Commercial Bid Evaluation**

29. The Commercial Offer or bid will be submitted by the bidder(s) on 'Evaluation Criteria & Price Bid Format preformed placed as **Appendix-K**.

Commercial offers of only those Bidders who qualified in the Pre-qualification & Technical Bid Evaluations will be opened. The validity of the commercial offer should be for at least **24 months** from the last date of bid submission and applicability for the complete Project period.

**Commercial Bid Opening.** The Commercial Offers of technically qualified bidders will be opened by the Tender Evaluation Committee (TEC). If the Bidder desires he may depute his representative to be present at the time of opening of the offers. A representative shall be nominated & duly authorized in writing by the Bidder. The date, time and venue fixed for this will be intimated well in advance. The MeitY's TEC will determine the lowest bidder (L1), who quotes the lowest DLI amount for **5 lakh** SoCs, irrespective of the ratio of BSC-1 & BSC-2 SoCs proposed to be deployed as long as any one of the SoCs constitutes minimum 30% of the total quantity.

30. **Bid Evaluation.** The procedure followed will be as follows: -

- (a) A Bidder with a Technical Score of seventy (70) percent or above will be declared as qualifying the Technical Evaluation Criteria. Commercial Bids of only those bidders who qualifies the technical criteria will be opened by TEC. The Commercial evaluation will take into account the Deployment Linked Incentive (DLI) amount quoted by the Bidders in the Commercial Proposal, and shall evaluate the same as per the evaluation criteria specified in **Appendix-K** of this RFP. The Commercial Proposal must be firm, fixed & include inter-alia all taxes and duties. The validity of the bid should at least 18 months from the last date of submission.

(b) Commercial evaluation of the proposal will be carried out after determining whether the Commercial Proposals are complete, unqualified and unconditional. The Deployment Linked Incentive (DLI) amount quoted by the bidder for “design, development, manufacture, validate & deployment of **5 Lakh** of BSC-1 & BSC-2 SoCs” in **Appendix-K** shall be considered for this purpose. The quoted DLI amount indicated in the Commercial Proposal shall be deemed as final. Omissions, if any, in costing any item shall not entitle the firm to be compensated and the liability to fulfil its obligations as per the Scope of Work within the total quoted Support Price shall be that of the bidder.

(c) The Technically qualified bidders can submit bid as:-

(i) **Start-up and MSME.** The bidder shall submit bid as Start-up/ MSME with supporting documents. However, bidder cannot request to be considered as Start-up/ MSME, after the submission of bid without the required documents.

(ii) **Others.** The bidders shall submit the bid including information and documents sought for ascertaining pre-qualification & Technical Evaluation as well as financial surety like PCIP & Bid Securing Letter etc.

(iii) The Commercial Bid Price will be all inclusive and will include inter-alia all taxes.

(iv) Mention of any condition in the commercial bid will lead to summary disqualification of the entire bid.

(d) **Ascertaining of Lowest Bidder; L1.** The Bidder shall quote the DLI for a quantity of 5 Lakh SoCs (BSC-1 & BSC-2). The Lowest Bidder (L1) will be decided based on the lowest quoted DLI amount for quantity 5 lakh SoCs of combined BSC-1& BSC-2 irrespective of:-

(i) Proposed proportion of deployment of BSC-1 & BSC-2 SoCs, as long as one of them constitutes a minimum of 30% of the total quantity.

(ii) Proposed level/ capability of BSC-1 & BSC-2, as long as BSC-1 & BSC-2 offered by Bidders meet the minimum indicated broad specifications of BSC-1 & BSC-2 indicated at Para 11 of RFP.

(e) Mention of any condition in the bid which is not viable to the project will lead summarily rejection of the bid.

31. **Right to Accept any Proposal and to Reject any or all Proposals.** The MeitY reserves the right to accept or reject any proposal, and to annul the tendering process/public procurement process and reject all proposals at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for MeitY’s such action.

32. **Notification of Award.** Prior to the expiration of the validity period, MeitY will notify the successful bidder in writing or by fax or email, that its proposal has been accepted. In case the tendering process has not been completed within the stipulated period, MeitY reserves the right to extend the validity period of the bid. The notification of award will constitute the initial formation of the contract

which shall be valid till the execution of the agreement between the parties. Upon the successful bidder's furnishing of Performance Bank Guarantee, MeitY will notify each unsuccessful bidder and return their EMD.

33. **Appointment of Successful Bidder: Award Criteria.** MeitY will award the contract for design, development, validation, supply & deployment of 5 Lakh of BSC-1 & BSC-2 to L1 bidder and whose financial proposal for claim of DLI quotes the lowest amount and consider it as substantially responsive as per the process outlined above.

34. **Contract Document Signing.** After MeitY notifies the successful bidder that their proposals have been accepted, the bidder must submit bank guarantee against advance (only in case the advance amount is sought by the bidder) and 3% Performance Cum Warranty Bank Guarantee (PWBG) within 30 days of notification of award and must sign the contract / agreement within 30days of notification.

35. **Project Report (PR).** Post contract, the Selected Bidder shall submit a PR after completion of Stage-I of Phase-I i.e Checking Stability and Suitability of the Processor Core. The Project report will cover all the key aspects highlighted in the PPR and a detailed project implementation plans as per Delivery Schedule and Stages of Payment as mentioned at **Appendix-C** will be included. Project report will also include the details of the collaborators/ project partners and the work share to be executed by each along with documents like MoUs/ agreements/ protocols. Format for PR is placed at **Appendix-L**.

36. **Malicious Code Certificate.** The Bidder is required to submit a 'Malicious Code Certificate' along with the Technical Proposal. The format is placed at **Appendix-M**.

37. **Monitoring of Project Based on Contractual Milestones (as applicable).** After placement of order, the progress of the project will be monitored by the Buyer for compliance with various activities towards achieving contractual milestones involving design, development, manufacture, validation and deployment etc. The contractual milestones will be integral part of the contract. In case the project does not proceed as per the indicated timelines for various stages as mentioned, the Buyer will have the right to invoke Termination of the project. The indicative list of the schedule of work and the completion stages along with the broad timelines for the SoCs is placed as **Appendix-C**. The Selected Bidder(s) shall provide periodic feedback on the 'Progress Cum Milestones Achievement' and 'Deployment Feedback' to designated MeitY committees or authorities on the format placed at **Appendix-N**.

Bidder shall indicate the proposed timelines for the above milestones in the Technical Bid. On conclusion of the Contract, the Buyer will monitor these milestones.

The PRSG Meeting is to be organized at every **03-month** interval. The Selected Bidder shall attend the progress monitoring meetings through its suitably qualified representatives and shall submit progress reports to MeitY Technical Committee/ PRSG MeitY Committee(s).

38. **Failure to Agree with the Terms and Conditions of the RFP**

(a) Failure of the successful / Selected Bidder(s) to agree with the Legal Agreement and Terms & Conditions of the RFP shall constitute sufficient grounds for the annulment of the contract, in which event MeitY may award the contract to the next available lowest bidder after

matching the DLI amount as quoted by the Lowest L1 Bidder or call for new proposals from the interested bidders, is solely the discretion of MeitY.

(b) In such a case, the MeitY shall invoke the Bid Securing Declaration Letter, 3% PWBG & Bank Guarantee against Advance of the defaulting bidder.

39. **Deployment Linked Incentive (DLI)**. Deployment Linked Incentive (DLI) amount is a type of support provided by MeitY to the bidder for indigenously Design and Develop, Manufacture two variants of secure Systems on Chip (SoCs) i.e., BSC-1 & BSC- 2 and to complete total deployment of 5 Lakh number of these SoCs. The bidder is expected to meet the expenditure towards design, development, manufacture, validation and deployment of SoCs from their initial investment and proceeds earned from the sale and deployment of SoCs. However, as an initiative to facilitate indigenous development and availability of secure SoCs, in order to cater for additional expenditure expected to incur towards enhanced security features, MeitY will provide a DLI for the corresponding number of SoCs deployed. The conditions for eligibility of the DLI are as follows: -

(a) Qualification of SoCs designed and manufactured against the project will be reviewed by MeitY Committee(s). The bidder should independently carry out the process of verification, testing and validation for satisfying the end users for deployment in their respective systems and provide necessary documentation to MeitY Committee for review. In addition, MeitY may randomly carry out sample tests as part of qualifying process to check the conformity of SoCs with latest standards in vogue to verify the eligibility for release of the DLI amount.

(b) Payment of DLI will be against physical deployment of SoCs against verifiable documentary proof. BSC-1 SoCs deployed after 3 1/2 year and BSC-2 SoCs deployed 4 years after contract date period will not be eligible for DLI.

(c) DLI will be disbursed in four tranches against deployment of 25% of the designated quantity within a total period of 2 years from the date of successful development or 3 1/2 year for BSC-1 and 4 years for BSC-2 from the date of signing of contract whichever is earlier. The bidder is free to complete the development earlier than 1 1/2 & 2 years and commence deployment earlier than the targeted time.

(d) The deployment has to be in such a proportion that one of the two SoCs constitutes at least 30% of the total quantities assigned to Selected Bidder. DLI for one of the two SoCs will be limited to a maximum of 70% and the remaining 30% will be disbursed against the deployment of other SoC. The bidder(s) may plan and execute accordingly.

(e) Eligibility for each tranche of DLI will be deemed to be attained only after deploying at least 10% of the corresponding tranche of the designated quantity of each type of SoC (BSC-1/ BSC-2) in systems/ equipment meant for defence forces.

40. **Advances**. The payment of DLI shall be made based on successful completion of the deployment milestones. However, the bidder is provided an additional option to seek advances up to 30% of the DLI, only if sought. However, the disbursement of the advance amount shall be against Advance Bank Guarantee (APBG) from Scheduled Bank for an equal amount. The advance will be paid in four phases of 10%, 5%, 5% and 10% of the DLI amount upon submission of documents in support of



fulfillment of requirement of each stage & satisfactory validation of associated documents by the MeitY. The advance will be adjusted against the amount payable against successful deployment of SoCs. The Performa for APBG is placed at **Appendix-O**.

41. **Recovery of Advances.** The advances will be recovered as follows: -

(a) Grace period may be allowed for development stage. However, extension of development time due to grace period shall not result in extension of time for deployment. The grace period for each stage of development is 6 months and the overall grace period is limited to six months. Failure to accomplish each stage of design/ development within the grace period will result in recovery of advance paid for entire stage.

(b) Failure to deploy designated number of SoCs in each tranche, in which case advance proportionate to the shortfall in the deployment of SoCs will be recovered from the DLI payable against the corresponding tranche. If the advance paid towards the unfulfilled quantity is more than the DLI amount payable at each tranche, the residual advance after adjusting the eligible DLI will be recovered from the Advance Payment Bank Guarantee (APBG). However, the bidder is free to deploy the remaining quantity during the subsequent tranche, but within the overall period of the contract.

42. **Performance-cum-Warranty Bank Guarantee.** The Selected Bidder is required to provide Performance cum-Warranty Bank Guarantee (PWBG) from Scheduled Bank equal to 3% of the DLI amount quoted by Bidder in the commercial bid within 30 days of notification of award of contract but before signing of the contract. The PWBG has to be valid for Six years from the date of its issuance and the same need to be extended on demand. The PWBG Performa is placed at **Appendix-P**. The PWBG will be recovered in the following cases: -

(a) Not passing any of the stages of development within 6 months over the permissible grace period of each stage and/ or overall grace period of 6 months for development stage and readiness for deployment within 24 months from the date of signing of the contract.

(b) Failure to deploy at least **10%** of the designated quantity of even one of the two types of SoC by the minimum number of any one of the SoCs in the time indicated for deployment of second tranche.

(c) Failure of more than 20% of deployed SoCs during the warranty period and / or inability of the bidder to provide warranty replacement to the satisfaction of their customers within 2 weeks of the reporting of failure as stated at para 5(t).

43. **Termination of the Order.** If bidders fail to develop the SoCs and SoCs developed by them fail to qualify the requirements for deployment within the grace period indicated at Para 44 above and/ or if bidders fail to deploy at least 10% of the designated number of SoCs by the end of second tranche as at Para 45 above, the contract will be terminated, PWBG will be encashed and the advances will be recovered, if the advances are not already recovered as at Para 44 above.

## Terms and Conditions

### 44. Code of Conduct Terms and Conditions

(a) While every effort has been made to provide comprehensive and accurate background information on requirements and specifications, bidders must form their own conclusions about the solution needed to meet the requirements. All information supplied by the bidder(s) may be treated as contractually binding on the bidders, on successful award of the assignment by MeitY on the basis of this RFP.

(b) Government of India (GoI)/Ministry of Electronics and Information Technology/ Ministry of Defence/ DPSUs/ Defence Industry may ask the bidder (s) to supply SoCs at a government determined rates at the time of requirement by the government. The quantity of SoCs required and the rate shall be specified by GoI at that time. The bidder shall be obligated to provide such SoCs at such rates.

(c) Selected Bidder shall sign multi-party agreement with MeitY. In case of consortium, all the consortium members shall have to enter in a multi-party agreement with MeitY.

(d) If the bidder(s) quotes NIL charges/consideration, the bid shall be treated as unresponsive and will not be considered.

(e) Any notification of preferred bidder(s) status by MeitY shall not give rise to any enforceable rights by the bidder. MeitY may cancel the whole RFP process at any time prior to a formal written contract being executed.

(f) There shouldn't be any litigation pending against the bidder(s) which is likely to have materially adverse impact on their ability to perform in this project. The bidder is to submit an undertaking to this effect on the specified Performa named 'Litigation Impact Statement' placed as **Appendix-Q**.

(g) The response to this RFP should be full and complete in all respects. Failure to furnish all information required by the RFP documents or submission of a proposal not substantially responsive to the RFP documents in every respect will result in rejection of the Proposal.

(h) The bidder shall be responsible for all costs incurred in connection with participation in this process, including, but not limited to, costs incurred in conduct of informative and other diligence activities, Participation in meetings/ discussions/ presentations, preparation of proposal, providing any additional information required by MeitY to facilitate the evaluation process, and in negotiating a definitive Contract or all such activities related to the bid process. MeitY in no case will be responsible or liable for bearing those costs, regardless of the conduct or outcome of the bidding process.

(j) The bidder(s) shall be permitted to sell at lower price than the one quoted, however, cannot sell at higher price.

- (k) All materials submitted by the bidder(s) become the property of MeitY and may be returned completely at its sole discretion.
- (l) At any time prior to the last date for receipt of bids, MeitY may for any reason whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the RFP document by an amendment.
- (m) The amendments to RFP or part thereof, if any, will be published on the MeitY website.
- (n) In order to afford prospective bidders reasonable time in which to take the amendment into account in preparing their bids, MeitY may, at its discretion, extend the last date for the receipt of Bids.
- (o) MeitY deems it appropriate to revise any part of this RFP or to issue additional data to clarify an interpretation of provisions of this RFP, it may issue supplements to this RFP. Any such corrigendum shall be deemed to be incorporated by this reference into this RFP.
- (p) MeitY may, in exceptional circumstances and at its discretion, extend the deadline for submission of proposals by issuing a corrigendum published in the MeitY website in which case all rights and obligations of the project and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.
- (q) MeitY may terminate the RFP process at any time and without assigning any reason. MeitY makes no commitments, express or implied, that this process will result in a business transaction with anyone. The bidder must specifically indicate if there is any conflict of interest arising as a result of bidder or any consortium partner.
- (r) IPR must also reside in India so that India has access and complete control to these rights in times of emergency to protect our national interest.
- (s) Any IPs arising out of the design of the SoCs under this RFP(excluding IPs of the individual components that are part of the chip) and codes shall reside within the country & be owned by the bidder(s).
- (t) The successful bidder(s) shall comply with all applicable laws (including without limitation labor laws, insurance laws, etc.) while providing the services.
- (u) All clauses of the RFP shall mutatis mutandis apply to consortium members of the successful bidder to the extent of their scope of work.
- (v) Subcontracting is not permitted without prior written permission from appropriate authority of MeitY.
- (w) In case of any dispute on any matter related to the project during the course of its implementation, the decision of the Ministry of Electronics and Information Technology Secretary shall be final and binding.
- (x) This Contract and the rights and obligations of the Parties shall remain in full force and effect, pending the Award in any arbitration proceedings hereunder.

45. **Instructions for Consortium.** The Bidder can form consortium with the partners to leverage the expertise of the partners like Design/ Fabrication/ ATMP/ Sales or any other relevant expertise required to supply BSC-1 & BSC-2. They should abide by the following instructions: -

- (a) All members in the consortium should be registered legal entity in India and should have signed the Integrity Pact.
- (b) At least one member of consortium should meet the turnover, project experience and semiconductor chip supply requirement mentioned in **Appendix-B**.
- (c) The lead bidder should be liable for the entire scope of work and risks involved thereof (the liability should be for the entire value of the contract).
- (d) The non-lead bidders should be liable for the scope of work for which they are responsible along with the lead bidder (Liability should be limited to the value of the scope of work; while the lead bidders till carries the liability for the entire scope of work).
- (e) The maximum number of partners in the consortium shall not exceed 4.
- (f) Any change in the consortium member later would not be allowed without prior permission of MeitY for cases where the consortium has benefited from the non-lead bidder's credentials/ experience.
- (g) The members in a bidding consortium shall not participate in any other consortium for bidding under this RFP.
- (h) Consortium Agreement should clearly elaborate responsibility and expertise of each consortium member.

46. **Conflict of Interest**

- (a) The bidder shall specifically indicate if there is any conflict of interest arising as a result of any share or investment of the MeitY, (Govt. of India) or any of its department in the bidder or any consortium partner.
- (b) If there is a conflict of interest, the bidder(s) must mention such conflict of interest in their bid for evaluation by MeitY and if requested by MeitY, give such undertaking as may be required by MeitY to mitigate any adverse impact of such conflict on the project.
- (c) The bidder shall specifically indicate if there is any conflict of interest arising if any staff/ official who may be involved in the preparation, negotiation, management or enforcement of the contract has any private interest relevant to the proposal. If there is a conflict of interest, the bidder must give undertaking, indemnifying MeitY and confirming that the existence of any such staff/ official will not affect the project. The undertaking on conflict of interest Performa is placed as **Appendix-R**, the same will form a requirement of pre-qualification criteria.

47. **Inspection, Quality Control and Audit.** The Selected Bidder shall, whenever required, furnish all relevant information, records, and data to auditors and/or inspecting officials of MeitY and or any other agency designated by MeitY. The MeitY reserves the right to call for any relevant material information/report, which would help it in arriving at a decision.

48. **Manage Risks.**

(a) The Selected Bidder shall identify and bear all the risks associated with Design, Development, Manufacturing, Validation and Deployment & Maintenance of BSC-1 & BSC-2.

(b) MeitY shall not compensate for any losses, if incurred by the successful bidder(s) during entire contract period.

(c) In case the Selected Bidder fails to deliver the quantity as stipulated in the delivery schedule, MeitY reserves the right to get the expectations mentioned in the scope of work delivered from alternate sources at the risk, cost and responsibility of the Selected Bidder(s)

49. **Dis-qualification.** The proposal is liable to be disqualified in case the Selected Bidder fails to meet the bidding requirements as indicated in this RFP and also in the following cases:-

(a) Proposal not submitted in accordance with the procedure and formats prescribed in this document or treated as non-conforming proposal.

(b) During validity of the proposal, or its extended period, if any, the bidder increases its quoted bid Prices.

(c) Bidder's proposal is conditional and has deviations from the terms and conditions of RFP.

(d) Proposal is received in incomplete form.

(e) Proposal is received after due date and time.

(f) Proposal is not accompanied by all the requisite documents.

(g) Information submitted in bid proposal is found to be misrepresented, incorrect or false, accidentally, unwittingly or otherwise, at any time during the processing of the contract or during the tenure of the contract including the extension period if any.

(h) Bidder tries to influence the proposal evaluation process by unlawful/ corrupt/ fraudulent mean sat any point of time during the bid process.

(j) In case any one party submits multiple proposals or if common interests are found in two or more bidders, the bidders are likely to be disqualified, unless additional proposals/ bidders are with drawn upon notice immediately.

50. **Limitation of Liability**

(a) Neither Party shall be liable to the other Party for any indirect or consequential loss or damage (including loss of revenue and profits) arising out of or relating to the Contract.

(b) Except in the case of Gross Negligence or Willful Misconduct on the part of the successful bidder or on the part of any person acting on behalf of the successful bidder(s) executing the work or in carrying out the Services, the successful bidder(s), with respect to damage caused by the successful bidder(s) including to property and/ or assets of MeitY or its stakeholders shall regardless of anything contained herein, not be liable for any direct loss or damage that exceeds the DLI , however the Bidder may be entitled to receive from any insurance maintained by the Bidder to cover such a liability.

(c) This limitation of liability slated in this Clause, shall not affect the successful bidder's liability, if any, for damage by successful bidder to a Third Party's real property, tangible personal property or bodily injury or death caused by the successful bidder or any person acting on behalf of the successful bidder in executing the work or in carrying out the Services and shall also not affect indemnity provisions.

51. **Termination on Default.** MeitY may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the bidder, terminate the contract in whole or part: -

(a) If the bidder fails to deliver any or all of the deliverables within the period(s) specified in the Contract, or within any extension thereof granted by the MeitY pursuant to conditions of contract. Or

(b) If the bidder fails to perform any other obligation(s) under the Contract. In the event MeitY terminates the Contract in whole or in part, MeitY may procure, upon such terms and in such manner, as it deems appropriate, systems or services similar to those undelivered and the bidder shall be liable to MeitY for any excess costs for such similar systems or services. However, the bidder(s) shall continue the performance of the contract to the extent not terminated.

(c) If the contract is terminated under any termination clause mentioned in this RFP, the Selected Bidder shall hand over all documents/ information/ MeitY or its stakeholder's data or any other relevant information to MeitY in timely manner and in proper format as per scope of this RFP and should also support the orderly transition to MeitY as per the exit management clause. The Selected Bidder shall also support MeitY on technical queries/ process implementation or in case of provision for future upgrades. MeitY reserves the right to terminate a contract.

(d) **Termination for Insolvency.** MeitY may at any time terminate the contract by giving four weeks written notice to the Selected Bidder, without any compensation, if the Selected Bidder becomes bankrupt or otherwise insolvent or a bankruptcy or insolvency etc. proceeding is initiated against him.

(e) **Force Majeure.** If at any time, during the continuance of the contract, the performance in whole or in part by either party of any obligation under the contract is prevented or delayed by reasons of any war, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts, pandemic/epidemic acts of

God (hereinafter referred to as "events") neither party shall, by reason of such event, be entitled to terminate the contract, nor shall either party have any claim for damages against the other in respect of such non-performance or delay, provided the performance and/or delivery is resumed as soon as practicable after such event has come to an end or ceased to exist. The decision of MeitY as to whether the performance or delivery has so resumed or not, shall be final and conclusive, provided further, that if the performance in whole or in part or any obligation under the contract is prevented or delayed by reason of any such event for a period exceeding 30 days, the MeitY may at its option, terminate the contract without any obligation to compensate.

(f) **Governing Law.** The contract shall be interpreted in accordance with the laws of the Government of India without giving effect to conflict of law rules.

(g) **Dispute Resolution.** Any disputes or differences whatsoever arising between the parties out of interpretation or application of this RFP or in connection with this contract or in discharge of any obligation arising out of the contract (whether during the progress of work or after completion of such work and whether before or after the termination of this contract, abandonment or breach of this contract), shall be, as far as possible, be settled amicably resolved mutual consultations or negotiations: -

(i) The Party raising a dispute shall address to the other Party a notice requesting an amicable settlement of the dispute within seven (7) days of receipt of the notice.

(ii) The matter will be referred for negotiation between MeitY officials and the Authorized Official of the bidder. The matter shall then be resolved between them and the agreed course of action documented within a further period of 15 days.

(iii) In the event the dispute is not amicably resolved by mutual consultations or negotiation in the manner as provided above, a party may after giving prior notice of dispute to the other party refer the matter to arbitration. The arbitration shall be held in accordance with the Rules of the arbitration of the International Centre for Alternative Dispute Resolution, New Delhi ("the Rules"), or such other rules as may be mutually agreed by the Parties, and shall be subject to the provisions of Arbitration and Conciliation Act, 1996 or any statutory modification or reenactment thereof. The arbitrators shall hold their sittings at New Delhi. The arbitration proceedings shall be conducted in English language. Any appeal will be subject to the exclusive jurisdiction of courts at New Delhi.

(iv) The "Arbitration Notice" should set out the disputes between the parties, the intention of the aggrieved party to refer such disputes to arbitration. All notices by one party to the other in connection with the arbitration shall be in writing and be made as provided in this tender document.

(v) The arbitration award shall be final, conclusive and binding upon the Parties and judgment maybe entered there on, upon the application of either party to a court of competent jurisdiction. Each Party shall bear the cost of preparing and presenting its case, and the cost of arbitration, including fees and expenses of the arbitrators, shall be shared equally by the Parties unless the award otherwise provides.

(vi) The bidder shall continue work under the Contract and the rights and obligations of the Parties shall remain in full force and effect, pending the award in any arbitration

proceedings here under.

(h) **Fraud and Corrupt Practices**

(i) The bidder and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Selection Process. Notwithstanding anything to the contrary contained in this RFP, MeitY shall reject a Proposal without being liable in any manner whatsoever to the bidder, if it determines that the bidder(s) has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice (collectively the “Prohibited Practices”) in the Selection Process. In such an event, MeitY shall, without prejudice to its any other rights or remedies, forfeit and appropriate the Bid Security or Performance Security, as the case may be, as mutually agreed genuine pre-estimated compensation and damages payable to the Authority for, inter alia, time, cost and effort of the Authority, in regard to the RFP, including consideration and evaluation of such bidder’s Proposal.

(ii) Without prejudice to the rights of the MeitY under Clause above and the rights and remedies which MeitY may have under the Agreement, if a bidder, as the case may be, is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Selection Process, or after the execution of the Agreement, such bidder shall not be eligible to participate in any tender or RFP issued by MeitY during a period of 2 years from the date such bidder, as the case may be, is found by MeitY to have directly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case may be.

(iii) For the purposes of this Section, the following terms shall have the meaning here in after respectively assigned to them: -

(aa) “Corrupt Practice” means (i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of any person connected with the Selection Process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official of MeitY who is or has been associated in any manner, directly or indirectly with the Selection Processor has dealt with matters concerning the Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of MeitY, shall be deemed to constitute influencing the actions of a person connected with the Selection Process); or (ii) save as provided herein, engaging in any manner whatsoever, whether during the Selection Process or after the execution of the Agreement, as the case may be, any person in respect of any matter relating to the Project or the Agreement, who at any time has been or is a legal, financial or technical consultant/ adviser of MeitY in relation to any matter concerning the Project;



(ab) “Fraudulent practice” means a misrepresentation or omission of facts or disclosure of incomplete facts, in order to influence the Selection Process;

(ac) “Coercive practice” means impairing or harming or threatening to impair or harm, directly or indirectly, any persons or property to influence any person’s participation or action in the Selection Process;

(ad) “Undesirable practice” means (i) establishing contact with any person connected with or employed or engaged by MeitY with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Selection Process; or (ii) having a Conflict of Interest; and “Restrictive Practice” means forming a cartel or arriving at any understanding or arrangement among bidders with the objective of restricting or manipulating a full and fair competition in the Selection Process.

52. **Exit Criteria and Management.** If the Indian processor selected by the Bidder fails to qualify in the stability checks, the project will not be progressed further without any financial liability to GoI. In case of default of the Bidder, the termination of the contract shall be as per the terms and conditions laid down at Para 54, above. If bidder fails to develop the SoCs and SoCs developed by them fail to qualify the requirements for deployment within the grace period indicated at Para 44 above and/ or if bidders fails to deploy at least 10% of the designated number of SoCs by the end of second tranche as at Para 45 above, the contract will be terminated, PWBG will be encashed and the advances will be recovered, if the advances are not already recovered as at Para 44 above.

53. **Checklist.** Cover letters & the checklists for submitting Pre-qualifications criteria documents, Technical & Commercial bids are placed as **Appendix-S.**

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**PRE-QUALIFICATION CRITERIA**

<b>S. No</b>	<b>Criteria</b>	<b>Documentary proof to be submitted</b>
1	An applicant (referred to as “bidder”) shall be an Indian entity, which could include incorporation/ownership models as per Companies Act, Partnership Firm, Proprietorship and other types of ownership models including Societies as per relevant laws, complying with, besides other regulations in force, and the guidelines/licensing requirements stipulated by the Department for Promotion of Industry and Internal Trade (DPIIT) as applicable. The LLP/Company should be operational in India for at least last two (one year in case of and MSME and registered prior to 01 Jan 2022 for Start-up) financial years as of 31st March, 2021 as evidenced by the Certificate of Incorporation issued by the Registrar of Companies, India.	Documents in the format as mentioned in <b>Annexure –I to Appendix-A.</b>
2	The bidder should have an annual turnover of INR 25 crores or more in each of the last three financial years ending 31st March 2021 as evidenced by the audited financials of the company. In case of consortium, at least one member of consortium should meet the turnover requirement.	Documents in the format as mentioned in <b>Annexure -II to Appendix-A duly certified by the Chartered Accountant.</b> This requirement is waived for Start-up and MSME
3	The bidder should have a positive net worth for the last three financial years ending 31st March 2021 as evidenced by the audited financials of the company. Net worth is defined as sum of shareholders capital and Reserves & Surplus	Documents in the format as mentioned in <b>Annexure - II to Appendix-A duly certified by the Chartered Accountant.</b> This requirement is waived for Start-up and MSME
4	The bidder should have at least ‘1’ purchase order/work order/contract of value INR 5 crore related to design, manufacture, supply and maintenance of chips during the last 5 financial years (2017-18, 2018-19, 2019-2020, 2020-2021 & 2021-22). In case of consortium, at least one member of consortium should meet the project experience requirement	Documents in the format as mentioned in <b>Annexure-III to Appendix-A.</b> This requirement is waived for Start-up and MSME
5	The bidder should have designed, manufactured and supplied at least 3 different types of semiconductor chips and in last 5 financial years (2017-18, 2018-19, 2019-2020, 2020-2021 & 2021-22).in India with cumulative size of at least 50000 chips. In case of consortium, at least one member of consortium should meet the semiconductor chips supply experience requirement.	Should provide Documentary evidence This requirement is waived for Start-up and MSME
	For Start-up & MSME	As Start-up / MSME serial no 2 to 5 have been waived, the bidders in this group must elaborate its

		<p>relevant capability (in house or external) and experience for development of such semiconductor chips in following areas to establish its eligibility;</p> <ol style="list-style-type: none"> <li>1. Feasibility study and die size estimation</li> <li>2. Function analysis</li> <li>3. System Level Design</li> <li>4. Analogue Design, Simulation &amp; Layout</li> <li>5. Digital Design, Simulation &amp; Synthesis.</li> <li>6. System Simulation &amp; Verification</li> </ol>
		<ol style="list-style-type: none"> <li>7. Design For Test and Automatic test pattern generation</li> <li>8. (DFM)Design for manufacturability</li> <li>9. Mask data preparation</li> <li>10. Tape-out</li> <li>11. Wafer fabrication</li> <li>12. Die test</li> <li>13. Packaging</li> <li>14. Post silicon validation and integration</li> <li>15. Device characterization</li> <li>16. Tweaking when necessary</li> <li>17. Datasheet generation</li> <li>18. Production</li> <li>19. Yield Analysis</li> <li>20. Failure analysis</li> <li>21. Next generation chip design using initial product information</li> </ol>
6	The bidder should possess ISO 9000/9001 certification.	Copy of valid certificates. This requirement is waived for Startup and MSME
7	Firms/ Companies may enhance their qualifications/ competence by forming a Consortium with other firms/ companies. It is clarified that	Copy of Power of Attorney with

	in case of Consortium, the Lead Bidder, who shall submit the bid, shall be a firm established in India or a Company incorporated in India.	clear roles & responsibilities and defining joint and several liabilities and Consortium Agreement
8	The Bidder (Single firm or Consortium) shall not have been blacklisted by or entangled in legal disputes with Central Government or any State Government Organization/ Department PSU in India at the time of submission of the Bid.	Documents in the format as mentioned in <b>Annexure –IV to Appendix-A.</b>
9	The Bidder must have experts having in-depth knowledge in design of semiconductor chips	HR certified details of experience of two such professionals need to be provided.

**DETAILS OF BIDDER ORGANIZATION**  
**To be filled separately by each consortium members on Company Letter Head**

SI No.	Details of the bidder Organization	Details
1.	Name	
2.	Nature of the legal status in India	
3.	Nature of business in India	
4.	Date of Incorporation/Registration	
5.	Date of Commencement of Business	
6.	ROC Reference No	
7.	Address of the Headquarters	
8.	Address of Registered Office	
9.	Address of Development Center	
10.	Other Relevant Information	
11.	<b><u>Mandatory Supporting Documents: -</u></b> <p>(a) Certificate of Incorporation from Registrar of Companies (RoC) and Copies of valid Registration Certificates/Partnership Deed ,PAN Card,GST Registration certificate etc as applicable.</p> <p>(b) Relevant sections of Memorandum of Association of the company or filings to the stock exchanges to indicate the nature of business of the company.</p> <p>(c) Certification on commencement of business and MSME Certificate,start up certificate to be enclosed as applicable.</p> <p>(d) Copy of board resolution authorizing the bid signatory along with power of attorney.</p>	

**CERTIFICATE AS TO AUTHORISED SIGNATORIES**

I, <representative name>, the Company Secretary of <name of the organization>, certify that <representative name> who signed the above Bid is authorized to do so and bind the company by authority of its board/ governing body.

Date:

Name: Designation:

Signature:

(Company Seal)

**FINANCIAL INFORMATION OF THE BIDDER**

To be filled separately by consortium members

<Date>

<b><u>FINANCIAL INFORMATION</u></b>			
<b>Item</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>
Turnover (in INR crore)			
Profit Before Tax (in INR crores)			
Net Worth (in INR crores)			
Revenue from IT Development and Maintenance activities (in INR crore)			
Other Relevant Information			
<b><u>Mandatory Supporting Documents: -</u></b>  (a) Audited financial statements along with ITRs for each of the three financial years as mentioned above (Please include only the sections on P&L, revenue and the assets, not the entire balance sheet).  (b) Certification by the company auditors supporting the revenue break-up.			

<Signature>

<Company Seal>

Name:

Designation:

Name and Address of Auditor:

Membership Number / Registration Number

UDID No

**BIDDER'S EXPERIENCE**

(To be filled separately by consortium members)

<b>Bidder's experience completed/ Go-Live in the last 5 financial years from the date of publishing of RFP</b>	
<b><u>Client Information</u></b>	
Name of client	
Name of the person who can be referred to from Clients' side, with name, designation, postal address, contact phone, fax number, e-mail id,	
Nature of business / operations of client	
Project value in Crores	
<b><u>Project Details</u></b>	
Brief description of the Project	
Functional areas of business covered in the project	
Implementation Geographical Location/ Number of Locations at which the project is implemented	
Duration of engagement (with Start date and end-date/Go-Live date)	
Scope of the Project	
Number of semiconductor chips designed, manufactured and supplied	
<b><u>Supporting Documents.</u></b> Bidder to submit the following: - (a) Work Order/Purchase Order/Contract + Completion Certificates from the client; OR (b) Work Order/Purchase Order/Contract + Certificate of Completion by the Statutory Auditor; OR (c) Work Order/Purchase Order/Contract + Phase Completion Certificate for Projects for which Development is complete The above supporting document(s) should clearly specify the value of the project and project status (i.e. gone live/ completed) with date	

<On behalf of bidder Name>

Authorized Signature [In full and initials]:

Name and Title of Signatory:

Name of Firm:

Address:

Seal/Stamp of bidder:

**UNDERTAKING OF NOT BEING BLACK LISTED**

(To be submitted on the Letterhead of the bidder)

<Date>

<Address>

Dear Sir,

**Sub: Non-Blacklisting Declaration -RFP for Design, Development, Manufacture, Validation and Deployment of BSC-1 & BSC-2 SoCs- RFP Ref. No:MeitY/SoC/DLI/01/2022-2023-Reg.**

We confirm that our company is not blacklisted in any manner whatsoever by MeitY, any State Government, Central Government or any other Public sector undertaking or a Corporation or any other Autonomous organization of Central or State Government as on Bid submission date.

Further we confirm that, our company is not convicted of an offence (a) under the Prevention of Corruption Act, 1988; or (b) the Indian Penal Code or any other law for the time being in force, for causing any loss of life or property or causing a threat to public health as part of execution of a public procurement contract, during last 3 years from date of submission of this bid.

It is hereby confirmed that I/We are entitled to act on behalf of our company/ corporation/ firm/ organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Sincerely,

<Signature><Company Seal>

Name:

Designation:

Name and Address of  
Company:



**TECHNICAL EVALUATION CRITERIA**

S. No.	Criteria/Sub Criteria	Max Score	Document required
1.	The Bidder should have at least ‘one’ purchase order/ work order/ contract of value INR 5 crore related to design, manufacture, supply and maintenance of chips for Original Equipment Manufacturer (OEMs)/ Suppliers during the last 5 financial years (2017-18, 2018-19, 2019-2020, 2020-2021 & 2021-22) One purchase order/ work order/ contract of value INR 5 crore = 5 marks More than ‘one’ purchase order/ work order/ contract of value INR 5 crore = 10 marks	10	Documents as per the Annexure –II to Appendix-B format As this requirement is waived for Start-up and MSME, they will not be scored for this criteria
2.	Different types of Semiconductor chips manufactured and supplied to any organization in India in last 5 financial years(2017-18, 2018-19, 2019-2020, 2020-2021 & 2021-22). <input type="checkbox"/> 3-5 different type of semiconductor chips with cumulative size of at least 50000 = 5 marks <input type="checkbox"/> Greater than 5 different types of semiconductor chips with cumulative size of at least 50000 = 10 marks	10	Documents as per the Annexure –II to Appendix-B format As this requirement is waived for Start-up and MSME, they will not be scored for this criteria
	<b>For Start-up &amp; MSME.</b> As for Start-up/ MSME serial number 1 and 2 above have been waived, the bidders in this be scored capability and experience for development of such semiconductor chips in following: (i) Relevant own IP (ii) IP sourcing & qualification (iii) IC Design, simulation & validation (iv) FAB interaction and Relationship (v) FAB output chip verification & Validation <b>Or</b> Work order for design, simulation & validation or any activity listed above of 20% of the value indicated at SI No. (1) & (2), above will make them eligible for score indicated against SI No. (1) & (2) respectively.	4 4 4 4 4	
3.	Proposed mechanism and supporting arrangement like MoU/ collaboration/ outsourcing arrangement with Fabrication & packaging agencies for end to end security	10	
4.	Development and execution of Internal projects (1 No) for chip development which may not be sold commercially	5	
<b>Sub Total (A)</b>		<b>35</b>	

5.	Understanding of Scope, Approach Methodology, Project Implementation Plan & Timelines <input type="checkbox"/> Understanding of Business and Scope of work and all aspect of the Project <input type="checkbox"/> Approach for project implementation and bidder's plan for performing the required services as detailed in scope of work in the RFP and to meet the desired SLAs <input type="checkbox"/> Project Plan and Timelines <p style="text-align: right;"><b>Sub Total (B)</b></p>	25	Detailed Technical Proposal
6.	Technical Presentation <input type="checkbox"/> Approach and Methodology for project execution <input type="checkbox"/> Proof of capability <input type="checkbox"/> Marketing plan of BSC-1& BSC-2 SoCs with specific applications <input type="checkbox"/> Time schedule & detailed activities as per various phases <input type="checkbox"/> Transition and Exit Management <input type="checkbox"/> Quality Assurance <p style="text-align: right;"><b>Sub Total (C)</b></p>	40	Live Presentation for project execution
<b>Total (A+B+C)</b>		<b>100</b>	
<b>The Bidder needs to score at least 70% of total marks in technical evaluation criteria to qualify for financial bid evaluation .</b>			

**DELIVERY SCHEDULE AND MILESTONES FOR DLI PAYMENT**  
**The Schedule of Work & Delivery of Outcome at various Stages and DLI payment schedule**

Stage	Activity	Timelines (in months)		Qualification criteria	DLI Payment
		BSC-1	BSC-2		
<b><u>Phase1:Design, Development &amp; Validation of BSC -1 &amp; BSC-2 SoCs</u></b>					
I	<b><u>Checking Stability &amp; Suitability of the Indian Owned Processor based on Open Source ISA &amp; Submission of Project Report.</u></b> Checking stability & suitability of the 64-bit Indian Owned Processor based on Open Source ISA for intended purpose and submission of project report.	T <sub>0</sub> +4		Stability & Suitability of the microprocessor for desired application.	-
II	<b><u>Design &amp; Development.</u></b> Successful testing of the Proof of Concept for design of BSC-1 & BSC-2.	T <sub>0</sub> +9	T <sub>0</sub> +14	Successful qualification of the PoC.	10% of the total DLI amount against Advance Payment Bank Guarantee of same amount (if sought by the bidder)
III	<b><u>Testing &amp; Validation of Prototype BSC-1 &amp; BSC-2 SoC.</u></b> Successful qualification of the prototype chip.	T <sub>0</sub> +12	T <sub>0</sub> +18	Prototype SoC meeting specification & security requirements.	5% of the total DLI amount against Advance Payment Bank Guarantee of same amount after the completion of stage-III. (if sought by the bidder)
IV	<b><u>Testing &amp; Validation of Production Grade BSC-1 &amp; BSC-2 SoC.</u></b> Successful qualification of production grade SoC for various standards (including Mil grade for defence use) testing, cyber, security and environmental tests including necessary	T <sub>0</sub> +15	T <sub>0</sub> +21	Successful testing of Production grade SoCs against various standards and protocols.	5% of the total DLI amount against Advance Payment Bank Guarantee of same amount after the completion of stage-IV. (if sought by the bidder)

	certification to ensure commercial supply.				
	<p><b>Sample Implementation.</b> Sample deployment of minimum 40 SoCs (BSC-1 &amp; BSC-2) equally on four different applications in such a way that one of them is deployed on defence equipment and other three on Commercial equipment/systems. The activity also includes preparation of boards, interfaces, associated peripherals and acquiring certification for commercial applications.</p>	T <sub>0</sub> +18	T <sub>0</sub> +24	Successful verification of functionality of the equipment / systems with the BSC-1 & BSC-2 SoCs deployed on-board.	10% of the total DLI amount against Advance Payment Bank Guarantee of same amount after completion of stage-V. (if sought by the bidder)

**Phase-2: Deployment of BSC -1 & BSC-2 SoCs**

**Deployment of Designated Quantity.** Successful deployment of total designated quantity in two years from date of successful validation of production grade SoCs or three and half years and four years from date of contract for BSC-1 & BSC-2 respectively with 25% of the designated quantity on Commercial/ defence equipment/ Systems in every six months' time span with 10% of them on defence equipment/ Systems. The phase is divided into a total of four stages/ tranches as follows:-

I	Deployment of 25% of the designated quantity of SoCs.	T <sub>0</sub> +18 to T <sub>0</sub> +24*	T <sub>0</sub> +24 to T <sub>0</sub> +30*	Acquiring deployment Certificates & Verification by the designated MeitY Technical Experts Committee	*15% of the total DLI amount. <b>OR</b> Prorate DLI payment of first tranche if lesser number of SoCs are deployed but not less than 10% of total quantity. In case Recovery of upto 30% advance paid or actual against unfulfilled quantity.
II	Deployment of next 25% cumulative to 50% of the SoCs.	T <sub>0</sub> +24 to T <sub>0</sub> +30	T <sub>0</sub> +30 to T <sub>0</sub> +36		*15% of the total DLI amount plus balance payment of previous tranche if any after deduction of applicable penalty. <b>OR</b> Prorate DLI payment of second tranche, if more number of SoCs are

					<p>deployed in addition to minimum 50% quantity requirement of total SoCs. The payment shall be processed upon submission of Utilization certificate of previous payment including advances if any. Recovery of upto 30% advance paid or actual against unfulfilled quantity.</p>
III	Deployment of next 25% cumulative to 75% of the designated quantity of SoCs	T <sub>0</sub> +30 to T <sub>0</sub> +36	T <sub>0</sub> +36 to T <sub>0</sub> +42		<p>*15% of the total DLI amount. <b>OR</b> Prorate DLI payment of third tranche if more number of SoCs are deployed in addition to minimum 75% quantity requirement of total SoCs. The payment shall be processed upon submission of Utilization certificate of previous payment including advances if any. Recovery of upto 30% advance paid or actual against unfulfilled quantity.</p>
IV	Deployment of next 25% cumulative to 100% of the designated quantity of SoCs	T <sub>0</sub> +36 to T <sub>0</sub> +42	T <sub>0</sub> +42 to T <sub>0</sub> +48		<p>*15% of the total DLI amount. <b>OR</b> Recovery of upto 30% advance paid or actual against unfulfilled quantity. The payment shall be processed upon submission of Utilization certificate of previous payment including advances if any. For final tranche, the last payment of 10% of the total DLI amount will be withheld</p>

					till completion of physical deployment & exploitation of the final/end products.
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**Notes: -**

**\* If DLI advance is not taken, either as a whole or for any one or more stages (stage-II to V of Phase-1), the payment for each Tranche at Stage-I to III of Phase-2 will be enhanced to 25% of the DLI advance not taken.**

**Phase 3: Warranty & Life Cycle Support**

I	Implementation of warranty & establishment of life cycle support system to facilitate end users.	T <sub>0</sub> +42 to T <sub>0</sub> +66	T <sub>0</sub> +48 to T <sub>0</sub> +72	Successful implementation of warranty & cycle support system like establishing of help desk and maintenance of auditable record to ascertain failure rate.	10% of the total DLI amount after approval MeitY Committee(s). If the failure exceeds 10%, the DLI amount will be deducted @1% for corresponding 1% failure of SoCs. If replacement not provided for SoCs, DLI amount for corresponding number of SoCs will be deducted. If the failure exceeds 20 % PWBG will be forfeited.
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**INDIGENOUS CONTENT (IC) PROFORMA**

Name of the Project / Contract Details							
Ser No.	Description	(In USD)	(In EURO)	(In GBP)	(...)	Total ( )	Remarks
1.	<b><u>Foreign Content (FC) including Custom Duties</u></b>						All the fields in the appendix may not be relevant. However, the SoCs to include mandatory components, IPs and processes as mentioned at Par 9 page (23-24) of RFP. The Bidder is to certify the same as per certificate placed at Annexure to this Appendix.
	- Systems on Chip BSC-1 & BSC-2 includes mandatory components, IPs and Processes as mentioned at Para 9 (page 23-24) of the RFP (by Prime Vendor and Tiers Vendors, as applicable).						
	- Other Expenses like Freight / Transportation & Insurance (if paid by supplier)						
	Any other item (may be included , as necessary)						
	<b>Sub Total (A)</b>						
2.	<b><u>Import of Services</u></b>						
	- Royalty Fee for Ips						
	- Licence Fee if any						
	- Technical know-how fee						
	- Consultation fees						
	- Other fees/payment						
	<b>Sub Total (B)</b>						
	<b>FC = (A+B)</b>						
<b><u>Computation of Indigenous Content</u></b>							
3.	Base Exchange Rate (D)						
4.	FC in INR E=(FC x D)						
5.	Base Contract Price (F)						
6.	Indigenous Content G = (F – E)						
	Indigenous Content (%) G x100 / F						

**Note: -**

- (a) Base Exchange Rate will be Selling Rate of Parliament Street Branch of State Bank of India, New Delhi as on the last date of submission of bid.
- (b) Consolidated IC Performa/ Certificate of Prime Vendor and applicable Tiers vendors will be maintained by Prime Vendor and made available on demand for verification by MeitY.
- (c) IC Performa / Certificate are to be submitted along with or before the final invoice of the contract. At all prior stages the Prime Vendor shall submit an undertaking of compliance.

**FORMAT FOR CERTIFICATION OF INDIGENOUS CONTENT**  
**VENDOR'S CERTIFICATE**

This is to certify that we, \_\_\_\_\_ (Name of Prime Vendor/Tier Vendor) have achieved/are offering the following IC in the accompanying delivery under contract/SoCs being offered for Verification/validation/deployment, as defined under the Defence Acquisition Procedure and as required under the RFP/Contract No. \_\_\_\_\_ dated \_\_\_\_\_.

(a) The core of the SoCs is based on Processors designed and owned by Indian entities, and based on 'Open Source' ISA. The details of the Processor and the ISA are annexed.

The major design IPs ie, Processor, Secure Boot and Security IPs of such processors are owned by Indian entities. The details of the same are annexed for reference

(b) The software/firmware (Linux OS, Board support packages, Boot loader, Development tools, etc) required for the SoCs should either be Open Source or owned by Indian entity or combination of both.

(c) The arrangement for Packaging & AMT of these SoCs is collaborated/ outsourced to the India entity only, the details of which are annexed.

**Note: For the above declaration we have enclosed the details of the shareholders, board of directors, FDI, Joint Venture, Partner Ship deep, Subsidiary Firm, Sister Concern etc. as applicable in support of Indian Entities as mandated in the RFP.**

**Signed by:**

'Responsible Designated Official'  
----- (Name of Vendor)

Seal of Vendor  
Date:

**AUDITOR'S CERTIFICATE**

We (legal name of Verification Firm) \_\_\_\_\_, established in \_\_\_\_\_ (Full address) represented for signature of this Verification Certificate by (Name and designation of Authorised Representative), hereby certify that: -

The above mentioned Indigenous Content (IC) proforma has been examined and all checks of the supporting documentation and accounting records deemed necessary were carried out in order to obtain reasonable assurance that, in our opinion, based on our Verification, the Indigenous Content percentage \_\_\_\_\_ % (in numbers and words) reflected in the above mentioned performa has been achieved by \_\_\_\_\_ (Name of Vendor) during the manufacture of \_\_\_\_\_ (Name of Equipment).

**Certified by:**

Statutory Auditor/ Cost Auditor/Certified or  
Licensed Cost Accountant / Chartered Accountant  
(as applicable)  
(Name /Name of Firm) Membership Number / Registration Number  
UDID No:

Seal of Verification Firm  
Date:



**MINIMUM INDICATED BROAD SPECIFICATIONS FOR BSC-1& BSC-2 SoCs**

**1. MINIMUM INDICATED BROAD SPECIFICATIONS FOR BSC-1 SoC.**

Ser No	Category	Features	Specifications
1.	<b>CPU Core Complex</b>	Processor	64-Bit Indian Owned processor based on Open Source ISA
		Number of CPU Cores	One
		L1 Cache	≥ 16 KB (I,D)
		L2 Cache / TCM	≥ 128 KB TCM
		Bus Interface	64 Bit AXI
		Pipelines	≥ 5/6 Stage Single Issue
		Memory Management unit	Available
2.	<b>CPU Extensions</b>	Floating Point Operators	Available
3.	<b>Security</b>	Supported Algorithms	<b>AES-256 or better.</b> <b>SHA3 256 or better.</b> <b>RSA2048 or better.</b> <b>ECDSA 160 or better</b>
		Trusted Boot	High Assurance Boot Available
		True Random Number Gen	Available
		eFuse Memory	Available
		Tamper Detection	Available
		Secure Memory	Available
4.	<b>System</b>	DMA controller	Available
		GPIO	32
		Temp Monitor	Available
		PWM Controller	≥ 8
		Timers	≥ [4 x WDR] + [4 x General Purpose]
		PLL & Oscillator	Available
5	<b>High Speed Interface</b>	PCI e Gen 3	≥ 1 x 2 Lanes
		Ethernet 10/100/1000 MAC	≥ 1

		MAC	
		USB 3.x	≥ 1
6.	<b>Low Speed Interface</b>	I2C / I3C	Minimum 4
		UART	Minimum 4
		SPI	Minimum 1
		1553B	Minimum 2
		CAN	Minimum 2
		QSPI	Minimum 3
7.		<b>Memory</b>	DDR
	SD Card interface		≥ 1
	eMMC Interface		≥ 1
	e-fuse		Available
8.	<b>Debug</b>	Debug Interface	JTAG & I – TRACE
9.	<b>ADC</b>	No of Channels	≥ 8
		No of Bits	≥ 12
10.	<b>DAC</b>	No of Channels	≥ 2
		No of Bits	≥16
11.	<b>Frequency</b>	Frequency of operation	≥ (300 to 800) MHz
12.	<b>Package</b>	Package Type	BGA
13.	<b>Power</b>	External Power Supply Requirements	As per application.( By Bidder)
15.	<b>Software</b>	Linux OS	Or better than this.
		Zephyr	Or better than this.
16.	<b>ASIC Implementation</b>	Suggested CMOS Technology node	Better than or equal to 28/22 nm

2. MINIMUM INDICATED BROAD SPECIFICATIONS OF BSC-2 SoC.

Ser No	Category	Features	Amendments Proposed by TEC
1.	<b>CPU Core Complex</b>	Processor	64-Bit Indian Owned processor based on Open Source ISA
		Number of CPU cores	4
		L1 Cache	≥ 16KB or 32KB I and D
		L2 Cache	≥ 256 KB
		Bus Interface	64 Bit AXI
		Pipelines	≥ 6 Stage Dual Issue
		DP FPU + Bit Manipulation + SIMD Extensions	Available
		Memory Management unit	Available
2.	<b>Multi-Media</b>	Graphics Processing Unit	≥1
		Video Processing Unit	H.265 & Av1 Video Encoding for 108p 60 fps, Video Decoding 4k
		Display	MIPI DSI and HDMI with support for 4kp60fps
		Camera Interface	≥ 1 Camera Interfaces (minimum coverage 20-30 MP)
3.	<b>DSP</b>	Dedicated PSIMD functional unit per core	Operating Frequency of > 800 MHz – 4000 MMACS total
4.	<b>Security</b>	Supported Algorithms	<b>AES-256 or better.</b> <b>SHA3 256 or better.</b> <b>RSA2048 or better.</b> <b>ECDSA 160 or better</b>
		Trusted Boot	High Assurance Boot Available
		True Random Number Gen	Available.
		eFuse Memory	Available.
		Tamper Detection	Available.
		Secure Memory	Available.

5.	<b>System</b>	DMA controller	Available
		GPIO	Available
		Temp Monitor	Available
		PWM Controller	$\geq 8$
		Timers	$\geq [4 \times \text{WDR}] + [4 \times \text{General Purpose}]$
		PLL & Oscillator	Available
6.	<b>High Speed Interface</b>	PCI e Gen 3	Minimum 1 with 4 Lanes
		Ethernet 10/100/1000	Minimum 1
		USB 3.x	Minimum 2 x USB 3.2
7.	<b>Low Speed Interface</b>	I2C/ I3C	Minimum 4
		CAN	Minimum 2
		1553B	Minimum 2
		UART	Minimum 4
		SPI	Minimum 1
		QSPI	Minimum 3
8.	<b>Memory</b>	DDR	$\geq$ One Channel DDR3/DDR4 – minimum 4 GB Addressable
		Onchip NVM/ FLASH	If application requires, Bidder may add the same.
		SD Card Interface with eMMC	Minimum 1 each (SD card, eMMC)
		e-fuse	Available
9.	<b>Debug and GPIPOs</b>	Debug Interface	JTAG & I-TRACE
		GPIO	$\geq 32$ (4 Bank of 8)
10.	<b>ADC</b>	No of Channels	$\geq 8$
		No of Bits	12
11.	<b>DAC</b>	No of Channels	$\geq 4$
		No of Bits	$\geq 16$
12.	<b>Frequency</b>	Frequency of operation	Minimum 1.0 to 1.2 GHz or more
13.	<b>Package</b>	Package Type	TBD

14.	<b>Power</b>	External Power Requirements	To be decided by Bidder as per application.
15.	<b>Pins</b>	Pin Count	TBD
16.	<b>Software</b>	Linux OS	Or better than this.
		Zephyr	Or better than this.
17.	<b>ASIC Implementation</b>	Suggested CMOS Technology node	Lesser than or equal to 14nm/22/28 nm

**PRE-BID QUERIES: REQUEST FOR CLARIFICATIONS**

Bidders requiring specific points of clarification may communicate with MeitY during the specified period using the following format:

**Bidder's Request for Clarification**

Name of the Organization			
Representative Name			
Position / Designation			
Email Address			
Contact Details	Mob:	Email Id:	
<b>Clarifications Requested</b>			
S. No.	RFP Page No – Section – Sub- section	Content of the RFP	Points of Clarification
1			
2			
3			

Yours faithfully,

Designated Contact Person  
Company name

Designation

Company Seal

**Bid Securing Declaration Form**

<Letterhead of the bidder>

<Date>

To (insert complete name and address of the purchaser)

Sir,

**Sub: Bid Securing Declaration Letter- RFP Ref. No:MeitY/SoC/DLI/01/2022-2023- RFP for Design, Development, Manufacture, Validation and Deployment of BSC-1 & BSC-2 SoCs-Reg**

I/We. The undersigned, declare that:

I/We understand that bids must be supported by a Bid Securing Declaration. I/We accept that I/We may be disqualified from bidding for any contract with you/ MeitY for a period of two years from the date of notification if I am /We are in a breach of any obligation under the bid conditions,

because I/We

a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity or its extended period, if any; or

b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or reuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Bank Guarantee, in accordance with the Instructions to Bidders.

c) If the bidder is found indulging in any corrupt, fraudulent or other malpractice in respect of the bid; or

d) If there is a discrepancy between words and figures quoted by the bidder and the bidder does not accept that the amount in words prevails over amount in figure.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days

after the expiration of the validity of my/our Bid.

Signed: (insert signature of person whose name and capacity are shown)

in the capacity of (insert legal capacity of person signing the Bid Securing Declaration)

Name: (insert complete name of person signing the Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of (insert complete name of Bidder)

Dated on \_\_\_\_\_ day of \_\_\_\_\_ (insert date of signing)

Corporate Seal (where appropriate)

**(Note: In case of a consortium, the Bid Securing Declaration must be in the name of all partners to the consortium that submits the bid)**

**PRE-CONTRACT INTEGRITY PACT**

**General**

1. Whereas the PRESIDENT OF INDIA, represented by Group Coordinator (R&D in Electronics), Ministry of Electronics and Information Technology, Government of India, hereinafter referred to as the Buyer and the first party, proposes to “ DESIGN, DEVELOPMENT, MANUFACTURE, VALIDATION AND DEPLOYMENT OF TWO VARIANTS OF SECURE SYSTEMS ON CHIPS (SoCs) USING INDIAN OWNED PROCESSOR BASED ON OPEN SOURCE ISA”, hereinafter referred to as Project Outcome and M/s \_\_\_\_\_ represented by, \_\_\_\_\_ Chief Executive Officer (which term, unless expressly indicated by the contract, shall be deemed to include its successors and its assignees), hereinafter referred to as the Bidder/Seller and the second party, is willing to offer/has offered the said SoCs.
2. Whereas the Bidder is a private company/ public company/ partnership/ registered export agency, constituted in accordance with the relevant law in the matter and the Buyer is a Ministry of the Government of India performing its functions on behalf of the President of India.

**Objectives**

4. Now, therefore, the Buyer and the Bidder agree to enter into this pre-contract agreement, here in after referred to as Integrity Pact, to avoid all forms of corruption by following a system that is fair, transparent and free from any influence/ unprejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to: -
  - 3.1 Enabling the Buyer to obtain the desired Project Outcomes at a competitive price in conformity with the defined specifications of the MeitY/ MeitY Committee(s) by avoiding the high cost and the distortionary impact of corruption on public procurement.
  - 3.2 Enabling Bidders to abstain from bribing or any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also refrain from bribing and other corrupt practices and the Buyer will commit to prevent corruption, in any form, by their officials by following transparent procedures.

**Commitments of the Buyer**

4. The Buyer commits itself to the following: -
  - 4.1 The Buyer undertakes that, no official of the Buyer, connected directly or indirectly with the contract will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the Bidder, either for themselves or for any person, organisation or third party



related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the Contract.

4.2 The Buyer will, during the pre-contract stage, treat all Bidders alike and will provide to all Bidders the same information and will not provide any such information to any particular Bidder which could afford an advantage to that particular Bidder in comparison to other Bidders.

4.3 All the officials of the Buyer will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

5. In case of any such preceding misconduct on the part of such official(s) is reported by the Bidder to the Buyer with full and verifiable facts and the same is prima facie found to be correct by the Buyer, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the Buyer and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the Buyer the proceedings under the contract would not be stalled.

### **Commitments of Bidder**

6. The Bidder commits himself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of his bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commits himself to the following:

6.1 The Bidder will not to offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Buyer, connected directly or indirectly with the bidding process, or to any person, organisation or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the Contract.

6.2 The Bidder further undertakes that he has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Buyer or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the Contract or any other Contract with the Government for showing or for bearing to show favour or disfavour to any person in relation to the Contract or any other Contract with the Government.

6.3 The Bidder will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.

6.4 The Bidder will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

6.5 The Bidder further confirms and declares to the Buyer that the Bidder is the original manufacturer/ integrator/ authorised government sponsored export entity of the Defence stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the Buyer or any of its functionaries, whether officially or unofficially to the award of the contract to the Bidder, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company or Agent in respect of any such intercession, facilitation or recommendation.

6.6 The Bidder would not enter into conditional contract with any Agents, brokers or any other intermediaries wherein payment is made or penalty is levied, directly or indirectly, on success or failure of the award of the contract. The bidder while presenting the bid, shall disclose any payments he has made during the 12 months prior to tender submission or is committed to or intends to make to officials of the buyer or their family members, Agents, brokers or any other intermediaries in connection with the contract and the details of such services agreed upon for such payments. Within the validity of PCIP, bidder shall disclose to MeitY any payments made or has the intention to pay any amount, gift, reward, fees, commission or consideration to such person, party, firm or institution as an annual report during the procurement process.

6.7 The Bidder shall not use improperly, for purposes of competition or personal gain or pass on to others, any information provided by the Buyer as part of the business relationship regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The Bidder also undertakes to exercise due and adequate care lest any such information is divulged.

6.8 The Bidder commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts. Complaint will be processed as per **Guidelines for Handling of Complaints** in vogue. In case the complaint is found to be vexatious, frivolous or malicious in nature, it would be construed as a violation of Integrity Pact.

6.9 The Bidder shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

## 7. **Previous Transgression**

7.1 The Bidder declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India.

7.2 If the Bidder makes incorrect statement on this subject, Bidder can be disqualified from the tender process or the contract and if already awarded, can be terminated for such reason.

## 8. **Company Code of Conduct**

8.1 Bidder is also advised to have a company code of conduct (clearly rejecting the use of bribes and other unethical behaviour and a compliance program for the implementation of the code of conduct throughout the company.

## 9. Sanctions for Violation

9.1 Any breach of the aforesaid provisions by the Bidder or any one employed by him or acting on his behalf (whether with or without the knowledge of the Bidder) or the commission of any offence by the Bidder or any one employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act 1988 or any other act enacted for the prevention of corruption shall entitle the Buyer to take all or any one of the following actions, wherever required:

- (i) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the Bidder. However, the proceedings with the other Bidder(s) would continue.
- (ii) The EMD/Performance-cum-Warranty Bond shall stand forfeited either fully or partially, as decided by the Buyer and the Buyer shall not be required to assign any reason therefore.
- (iii) To immediately cancel the contract, if already signed, without any compensation to the Bidder.
- (iv) To recover all sums already paid by the Buyer, in case of an Indian Bidder with interest there on at 2% higher than the prevailing Base Rate of SBI and in case of a Bidder from a country other than India with interest there on at 2% higher than the LIBOR. If any outstanding payment is due to the Bidder from the Buyer in connection with any other contract for any other defence stores, such outstanding payment could also be utilised to recover the aforesaid sum and interest.
- (v) To encash the advance bank guarantee and Performance-cum-Warranty Bond if furnished by the Bidder, in order to recover the payments, already made by the Buyer, along with interest.
- (vi) To cancel all or any other Contracts with the Bidder.
- (vii) To Put on Hold or Suspend or Debar the bidder as per the extant policy.
- (viii) To recover all sums paid in violation of this Pact by Bidder(s) to any Agent or broker with a view to securing the contract.
- (ix) If the Bidder or any employee of the Bidder or any person acting on behalf of the Bidder, either directly or indirectly, is closely related to any of the officers of the Buyer, or alternatively, if any close relative of an officer of the Buyer has financial interest/stake in the Bidder's firm, the same shall be disclosed by the Bidder at the time of filing of tender. Any failure to disclose the interest involved shall entitle the Buyer to debar the Bidder from the bid process or rescind the contract without payment of any compensation to the Bidder. The term '**close relative**' for this purpose would mean spouse whether residing with the Government servant or not, but not include a spouse separated from the Government servant by a decree or order of a competent court; son or daughter or step son or step daughter and

wholly dependent upon Government servant, but does not include a child or step child who is no longer in any way dependent upon the Government servant or of whose custody the Government servant has been deprived of by or under any law; any other person related, whether by blood or marriage, to the Government servant or to the Government servant's wife or husband and wholly dependent upon Government servant.

(x) The Bidder shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the Buyer and if he does so, the Buyer shall be titled forth with to rescind the contract and all other contracts with the Bidder. The Bidder shall be liable to pay compensation for any loss or damage to the Buyer resulting from such rescission and the Buyer shall be titled to deduct the amount so payable from the money(s) due to the Bidder.

(xi) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the Buyer with the Bidder, the same shall not be opened.

9.2 The decision of the Buyer to the effect that a breach of the provisions of this Integrity Pact has been committed by the Bidder shall be final and binding on the Bidder, however, the Bidder can approach the Independent Monitor(s) appointed for the purposes of this Pact.

#### 10. **Fall Clause**

10.1 The Bidder undertakes that he has not supplied/ is not supplying the similar products, systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/ Department of the Government of India and if it is found at any stage that the similar system or sub-system was supplied by the Bidder to any other Ministry/ Department of the Government of India at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the Bidder to the Buyer, even if the contract has already been concluded.

10.2 The Bidder shall strive to accord the most favoured customer treatment to the Buyer in respect of all matters pertaining to the present case.

#### 11. **Independent Monitors**

11.1 The Buyer has appointed Independent Monitors for this Pact in consultation with the Central Vigilance Commission. The names and addresses of nominated Independent Monitors (at the time of issue of RFP) are as follows (however the vendor must refer to the MeitY website at [www.meity.gov.in](http://www.meity.gov.in) to check for changes to these details): -  
(Names & addresses of Independent Monitors holding office on date of issue of RFP to be included)

11.2 All communications to Independent Monitors will be copied to Director (Vigilance). The Designation and Contact details of Director (Vigilance) are as follows: -  
(Designation and Address of the Director (Vigilance) to be included)

11.3 After the Integrity Pact is signed, the Buyer shall provide a copy thereof, along with a brief background of the case to the Independent Monitors, if required by them.

11.4 The Bidder(s), if they deem it necessary, may furnish any information as relevant to their bid to the Independent Monitors.

11.5 If any complaint with regard to violation of the IP is received by the buyer in a procurement case, the buyer shall refer the complaint to the Independent Monitors for their comments/enquiry.

11.6 If the Independent Monitors need to peruse the relevant records of the Buyer in connection with the complaint sent to them by the Buyer, the Buyer shall make arrangement for such perusal of records by the Independent Monitors.

11.7 The report of enquiry, if any, made by the Independent Monitors shall be submitted to the PRSG, Ministry of Electronics and Information Technology, Government of India for a final and appropriate decision in the matter keeping in view the provision of this Pact.

12. **Examination of Books of Accounts**

In case of any allegation of violation of any provisions of this Integrity Pact or payment of commission, the Buyer or its agencies shall be titled to examine the Books of Accounts of the Bidder and the Bidder shall provide necessary information of the relevant financial documents in English and shall extend all possible help for the purpose of such examination.

13. **Law and Place of Jurisdiction**

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the Buyer i.e. New Delhi.

14. **Other Legal Actions**

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

15. **Validity**

15.1 The validity of this Integrity Pact shall be from date of its signing and extend upto 5 years or the complete execution of the contract to the satisfaction of both the Buyer and the Bidder/Seller, whichever is later.

15.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

16. The Parties here by sign this Integrity Pact at \_\_\_\_ on \_\_\_\_\_

BUYER

\_\_\_\_\_  
MINISTRY OF ELECTRONICS AND  
INFORMATION TECHNOLOGY,  
GOVERNMENT OF INDIA

Witness

1. \_\_\_\_\_
2. \_\_\_\_\_

BIDDER

\_\_\_\_\_  
CHIEF EXECUTIVE OFFICER

Witness

1. \_\_\_\_\_
2. \_\_\_\_\_

**PRELIMINARY PROJECT REPORT (PPR)**

1. This PPR would broadly cover the following aspects: -
  - (a) Project overview.
  - (b) Method for validation of Indian Processor, details of the probable processor candidates.
  - (c) Proposed areas of deployment and plans of execution of the same.
  - (d) Details of the collaborations/ outsource partners and proposed work-share arrangements.
  - (e) Definitions of key milestones based on indicative list of milestones and broad range of timelines specified at Para 3 to 6 of RFP.
  - (f) Broad plan for execution of the Project as per delivery schedule indicated at Para 3 to 6 of RFP.
  - (g) Plan for meeting the Indigenous Content (IC) stipulated in the RFP.
  - (h) Lifetime product support plan.
  - (j) Following additional aspects also to be included: -
    - (i) Suggested approach to meet Technical specifications and operational requirements of SoCs.
    - (ii) Details on the proposed security protocols & design aspects to be implemented to make these as secure SoCs.
    - (iii) Methodology to be adopted to ensure architectural security of SoC and the design & development process at various stages of the project.
    - (iv) Envisaged arrangements/ collaboration with Fabrication and ANTP entities to ensure meeting of timelines & security during tapeout, fabrication, assembly and packaging stages.
    - (v) An overview on the Standards, protocols and testing procedures to be adopted for testing and validation of SoCs at various stages.
    - (vi) Proposed areas of deployment of the SoCs and broad outlines of the plan including business plans for board & interface development, marketing plan & outreach to manufacturers/ users.
    - (vii) Mapping future defence and commercial requirements.

- (viii) Arrangement with Fab and Packaging industry.
- (ix) Arrangement for testing and validation of SoCs at various stages.
- (x) Comments on proposed DLI.
- (xi) Plans for deployment of 10% SoCs for military applications.
- (xii) Additional and valid information pertaining to the subject, if not covered in the above sub-paragraphs may also be included suitably.

2. **Project Overview.** The ‘Project Overview’ should define, organise and interlink the various project elements which are required to be established/ setup by the Bidder in order to manufacture and deliver the contracted Project Outcomes within the RFP specified timeframes.

3. **Definition of Key Milestones.** This Annexure should define the key milestones in the project implementation phase and the criterion for declaring accomplishment of these milestones. The key milestones would include creating necessary infrastructure and setting up of plant and machinery required to be set up at the Production Agency facilities for license manufacture of \_\_\_\_\_ in India along with training of the Indian Production Agency personnel required for the purpose. These facilities need to be set up during the period commencing from To to To + .... month to ensure delivery of the Indian made \_\_\_ from To + \_\_\_ month onwards.

4. **Program Schedule.** The ‘Program Schedule’ should give **estimated start and end dates** for each event with respect to the award of contract (T<sub>0</sub>) thereby creating a **calendar based schedule.**

5. **Methodology for setting up of Manufacture Infrastructure.** The Methodology for setting up of Manufacture Infrastructure at the location of his Indian Production Agency should be brought out in this section covering the infrastructure and facilities required to be created, tooling, manufacturing/ test support equipment, configuration management, production review plan, material procurement chain, training and technical assistance etc. An indicative cost for plant and machinery required for the license manufacture with the requisite value addition also needs to be brought out in this section. The processes to achieve milestones are to be clearly brought out discretely in this section: -

- (a)
- (b)

6. **Standard of Preparation (SoP).** Standard of Preparation (SoP) of the platform/ equipment/ system being offered must be defined in the PPR. This must include details of operational role-oriented equipment.

7. **Life Time Product Support Plan.** This document should bring out the Bidder’s plan to provide product support throughout the lifecycle of the SoCs including obsolescence management plan, mechanism to incorporate various Support Contracts in future for series/ version upgradation, mechanism to work out cost etc. for all future procurements by applying pre-defined escalation methodologies etc.



8. **Project Organisation Structure.** This section should highlight the Bidder's organisation structure for the project implementation and define the specific organisational elements within this structure that would interfere with the GoI, MeitY and other Indian Production Agency during the program execution.

9. **Any Other Issue That the Bidder Finds Relevant.** This section would include any issues that the Bidder finds relevant for the implementation of the 'Make' portion of the program.

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**EVALUATION CRITERIA & PRICE BID FORMAT**

1. **Evaluation Criteria.** The guidelines for evaluation of Bids will be as follows: -

1.1. Only those Bids will be evaluated, which are found to be eligible as per pre-qualification criteria and fulfilling & qualifying the Technical evaluation criteria of the RFP. The bidder with the lowest quoted DLI price for a quantity of five lakh SoCs irrespective of the proposed proportion of deployment of BSC-1 & BSC-2 SoCs as long as complying with the conditions laid down in RFP will be declared as L-1 bidder.

1.2 The quoted DLI of the SoCs will inter-alia include all the taxes and duties.

2. **Price Bid Format.** The Price Bid Format is given below and Bidders are required to fill this correctly with full details. If any column is not applicable and intentionally left blank, the reason for the same has to be clearly indicated in the remarks column.

**PRICE BID FORMAT**

SI No.	Items	Information to be furnished by bidder	Remarks if any
(i)	(ii)	(iii)	(iv)
(a)	<b>DEPLOYMENT LINKED INCENTIVE (DLI)</b> sought for Design, Development, Manufacture, Validation & Deployment of <b>5 lakh numbers of BSC-1 &amp; BSC-2 SoCs</b> (using 64-bit Indian Owned Processor based on Open Source ISA) with <b>one of the SoC constituting at least 30% of the total designated quantity</b> and at least 10% of the total designated quantity to be deployed in defence & aerospace equipment/ systems (as per conditions laid down in RFP).		State the amount in Rupees (INR). The quoted amount should include all taxes and duties.
(b)	Indicate the Proposed Proportion of deployment of each SoCs i.e. BSC-1 & BSC-2 in ratio or in quantity so as to have one of them <b>minimum 30% of total designated quantity</b> , as specified at (a), above.		Bidders may attach additional sheet to furnish the information sought. The rational furnished is only indicative and actual deployment may be finalised subsequently.

(c)	Indicate probable/ decided areas of deployment of each SoCs i.e., BSC-1 & BSC-2 meeting the <b>criteria for deployment on commercial and defence equipment/systems</b> , as specified at (a), above.		Bidders may attach additional sheet to furnish the information sought. The details furnished are only indicative and actual deployment plan may be finalised subsequently.
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**Note:-**

1. The information mentioned at rows (b) & (c) is only indicative / informative and will not have any impact on determination of the Lowest Bidder (L1).
2. The amount for deployment of total 5 lakh of SoCs (BSC-1 & BSC-2) indicated at SI (a) above will be considered for determination of the lowest bidder (L1) irrespective of the following: -
  - (a) Proposed proportion of deployment of BSC-1 & BSC-2 SoCs, as long as one of them constitutes a minimum of 30% of the total quantity.
  - (b) Proposed level/ capability of BSC-1 & BSC-2, as long as BSC-1 & BSC-2 offered by Bidders meet the minimum indicated broad specifications of BSC-1 & BSC-2 indicated at Para 11 of RFP.

**PROJECT REPORT**

{To be submitted by the Selected Bidder}

Post contract, the Selected Bidder will submit a PR covering the key aspects highlighted in the PPR and detailed project implementation plan for SoCs with the proposed Consortium partner if any by dates indicated at Delivery Schedule and Stages of Payment apart from the following additional aspects:-

- (a) Broad plan of action for design, development, Validation and deployment of SoCs.
- (b) Broad plan of action for testing & validation of SoCs.
- (c) Proposed areas of deployment of the SoCs both in commercial & defence applications.
- (d) The proposed proportions of the SoCs to be deployed for each variant i.e., BSC-1 & BSC-2.
- (e) The plan of action on achieving the mandatory indigenous components, IPs and Processes for qualifying the SoCs for required minimum contents of IC = 50%.

**CERTIFICATE: MALICIOUS CODE**  
(To be rendered on the Company Letter head)

1. This is to certify that the Hardware and the Software being offered, as part of the Contract, does not contain embedded malicious code that would activate procedures to:-

- (a) Inhibit the desired and designed function of the equipment.
- (b) Cause physical damage to the user or equipment during the exploitation.
- (c) Tap information resident or transient in the equipment/ networks.

2. The firm will be considered to be in breach of the procurement contract, in case physical damage, loss of information or infringements related to copyright and Intellectual Property Rights (IPRs) are caused due to activation of any such malicious code in embedded software.

(Signed)

Designation/Name/Address of firm

Date:

Place:

**PROGRESS CUM MILESTONES ACHIEVEMENT FORMAT**

Sl No.	Phase	Stage	Activity Description	Timeline (To+ months)	Present Status	Remarks

**FORMAT FOR FEEDBACK ON SOC's DEPLOYMENT**

<b><u>Bidder's Information</u></b>	
Bidder Company PAN	
Bidder Company GSTN Number	
Address	
Point of Contact Name	
Point of Contact Phone	
Point of Contact Email	

**Buyer's Information**

<b><u>Name of Buyer:1</u></b>			GSTN Number		
Buyer Contact Person					
Name		Email ID		Phone No.	
Date of the Sale (DD/MM/YYYY)	Invoice Number	Chip ID	Lot ID	Selling Price (INR) - Excluding Tax	Tax (INR)
<b><u>Name of Buyer:2</u></b>			GSTN Number		
Buyer Contact Person					
Name		Email ID		Phone No.	
Date of the Sale (DD/MM/YYYY)	Invoice Number	Chip ID	Lot ID	Selling Price (INR) - Excluding Tax	Tax (INR)

**BANK GUARANTEE FORMAT FOR ADVANCE**

To

The \_\_\_\_\_  
Ministry of \_\_\_\_\_  
Government of India

\_\_\_\_\_ (complete postal address of the beneficiary)

1. “Whereas President of India represented by the \_\_\_\_\_ Ministry of \_\_\_\_\_ Government of India (hereinafter referred to as MeitY) have entered into a Contract No. \_\_\_\_\_ (No. of Contract), dated \_\_\_\_\_ (Date of Contract) with M/s \_\_\_\_\_ (Name of BIDDER) (referred to as Selected Bidder) and whereas according to the said Contract the BUYER has undertaken to make an advance payment of Rs. \_\_\_\_\_ being payment of \_\_\_\_\_% of the total value of Rs \_\_\_\_\_ of the said Contract, against issuance of an advance guarantee by a bank.”

2. We \_\_\_\_\_ (indicate the name of the bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the BUYER intimating that the Selected Bidder is in breach of the Contractual obligations stipulated in the said Contract. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our total liability under this guarantee shall be restricted to an amount not exceeding Rs \_\_\_\_\_.

3. We undertake to pay to the MeitY any money so demanded notwithstanding any dispute or disputes raised by the Selected Bidder in any suit or proceedings pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be valid discharge of our liability for payment there under and the Selected Bidder shall have no claim against us for making such payment.

4. We, further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the MeitY under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged or till \_\_\_\_\_ Ministry of Electronics and Information Technology certifies that the terms and conditions of the said Contract have been fully and properly carried out by the said Selected Bidder and accordingly discharges this guarantee.

5. I / We, further agree with the MeitY that the MeitY shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Selected Bidder (S) from time to time or to postpone for any time or from time to time any of the powers exercisable by the MeitY against the said Selected Bidder and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation.

6. The amount of this guarantee will be progressively reduced by (percentage of advance) \_\_\_\_\_ of total value of each part shipment/services against the stage payment released by the MeitY for that shipment/services made by the Selected Bidder and presentation to us of the payment documents.

7. This guarantee will not be discharged due to the change in the constitution of the bank or the MeitY/ Selected Bidder

8. We, undertake not to revoke this guarantee during the currency except with the previous consent of the BUYER in writing.

9. Notwithstanding anything contained herein above: -

(a) Our liability under this Guarantee shall not exceed Rs \_\_\_\_\_ (in words)  
\_\_\_\_\_

(b) This Bank Guarantee shall remain valid until three years from the date of its issuance i.e \_\_\_\_\_ (hereinafter the expiry date of this guarantee) the Bank Guarantee will cease to be valid after \_\_\_\_\_ irrespective whether the Original Guarantee is returned to us or not.

(c) We are liable to pay guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written demand or a claim in writing on or before \_\_\_\_\_ (Expiry Date).

Dated the \_\_\_\_\_ day of \_\_\_\_\_ (month and year)

Place:

Signed and delivered by \_\_\_\_\_ (Name of the bank)

Through its authorised signatory

(Signature with seal)



**BANK GUARANTEE FORMAT FOR PERFORMANCE-CUM-WARRANTY**

To

The \_\_\_\_\_  
Ministry of \_\_\_\_\_  
Government of India  
\_\_\_\_\_ (complete postal address of the beneficiary)

Dear Sir,

1. Whereas President of India represented by the \_\_\_\_\_ Ministry of \_\_\_\_\_, Government of India (hereinafter referred to as MeitY) have entered into a Contract No. \_\_\_\_\_ dated \_\_\_\_\_ (hereinafter referred to as the said Contract) with M/s. \_\_\_\_\_ {hereinafter referred to as the Selected Bidder} for Design, Development, Manufacturing, Validation & Deployment of BSC-1 & BSC-2 SoCs as per Contract and whereas the Selected Bidder has undertaken to produce a bank guarantee amounting to Rs \_\_\_\_\_ which is 3% of the Total Contract Price (including taxes and duties) to cover 3% of Total Contract Price (including taxes and duties) each for Performance and Warranty in sequence, to secure its obligations towards Performance-cum-Warranty to the MeitY.

2. We, the \_\_\_\_\_ bank hereby expressly, irrevocably and unreservedly undertake the guarantee as principal obligors on behalf the Selected Bidder that, in the event that the BUYER declares to us that the amount claimed is due by way of non-performance and failure of SoCs by reason of breach/failure to perform by the said Selected Bidder of any of the terms and conditions in the Contract related to Performance and Warranty clauses, we will pay you, on demand and without demur, all and any sum up to {3% of Total Contract Price (including taxes and duties) } \_\_\_\_\_ Rupees only at any instance under this Guarantee. Your written demand shall be conclusive evidence to us that such repayment is due under the terms of the said Contract. We shall not be entitled to ask you to establish your claim or claims under this guarantee but will pay the same forthwith without any protest or demur. We undertake to effect payment upon receipt of such written demand.

3. We shall not be discharged or released from the undertaking and guarantee by any arrangements, variations made between you and the Selected Bidder, indulgence to the Selected Bidder by you, or by any alterations in the obligations of the Selected Bidder) or by any forbearance whether as to payment, time performance or otherwise.

4. We further agree that any such demand made by the MeitY on the Bank shall be conclusive, binding, absolute and unequivocal notwithstanding any difference or dispute or controversy that may exist or arise between you and the Selected Bidder or any other person.

5. In no case shall the amount of this guarantee be increased.

6. This Performance-cum-Warranty guarantee shall remain valid for a period until six years from the date of its issuance as specified in the Contract i.e. up to \_\_\_\_\_.

7. Subject to the terms of this Bank Guarantee, the issuing bank hereby irrevocably authorizes the beneficiary to draw the amount of up to Rs \_\_\_\_\_ {3% of Total Contract Price (including taxes and duties) for breach/failure to perform by the Selected Bidder of any of the terms and conditions of the Contract related to performance and warranty clause. Partial drawings and multiple drawings under this Bank Guarantee are allowed within the above stated cumulative amount subject to each such drawing not exceeding 5% of the Total Contract Price (including taxes and duties) (Rs \_\_\_\_\_ only) (Mention BG amount).

8. This guarantee shall be continuing guarantee and shall not be discharged by any change in the constitution of the Bank or in the constitution of M/s \_\_\_\_\_. We undertake not to revoke this guarantee during the currency except with previous consent of BUYER in writing.

9. Notwithstanding anything contained herein above:

(a) Our liability under this Guarantee shall not exceed Rs \_\_\_\_\_ (Rupees \_\_\_\_\_ only (in words).

(b) This Bank Guarantee shall remain valid until six years from the date of its issuance, i.e., up to \_\_\_\_\_ (mention the date) and the BG shall cease to be valid after \_\_\_\_\_ irrespective whether the Original Guarantee is returned to us or not.

(c) We are liable to pay guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written demand or a claim in writing on or before \_\_\_\_\_ (Expiry Date).

Dated the \_\_\_\_\_ day of \_\_\_\_\_ (month and year)

Place:

Signed and delivered by \_\_\_\_\_ (name of the bank)

Through its authorised signatory  
(Signature with seal)

**LITIGATION IMPACT STATEMENT**

<Company letter head>

<Date>

<Address>

**Ref: RFP for Design, Development, Manufacture, Validation and Deployment of BSC-1 & BSC-2 SoCs.**

Dear Sir,

We have read and understood the contents of the Request for Proposal and pursuant to this hereby confirm that we continue to satisfy the eligibility criteria laid out at the time of short-listing us to participate in the bidding process to design, development, validation & deployment of BSC-1 & BSC-2 SoCs.

There are no pending litigations in any court of law, which are likely to have a materially adverse impact on our ability to deliver under this project, or to pay our debts as they fall due or on our ability to enter into any of the transactions contained in or contemplated in respect of the design, development, validation & deployment of BSC-1 & BSC-2 SoCs.

<Signature><Designation>

Duly authorized to sign the RFP Response for and on behalf of:

Sincerely,

Company Seal

Name

Designation

Signature

Date

<Name and Address of Company> Seal/Stamp of the Company

**CONFLICT OF INTEREST**

<Company letter head>

<Date>

<Address>

Sir,

**Sub: Undertaking on Conflict of Interest iro RFP for Design, Development, Manufacture, Validation and Deployment of BSC-1 & BSC-2 SoCs.**

I/ We do hereby undertake that there is absence of, actual or potential conflict of interest on the part of the bidder or any prospective subcontractor due to prior, current, or proposed contracts, engagements, or affiliations with MeitY.

I/ We also confirm that there are no potential elements (time-frame for service delivery, resource, financial or other) that would adversely impact our ability to complete the requirements as given in the RFP.

We undertake and agree to indemnify and hold MeitY harmless against all claims, losses, damages, costs, expenses, proceeding fees of legal advisors (on a reimbursement basis) and fees of other professionals incurred (in the case of legal fees and fees of professionals, reasonably) by MeitY and/or its representatives, if due to any such conflict any loss or damage is suffered by MeitY.

<Signature><Designation>

Duly authorized to sign the RFP Response for and on behalf of:

Sincerely,

Company Seal

Name

Designation

Signature

Date

<Name and Address of Company>

Seal/Stamp of the Company

**BID COVER LETTER**

<Company letter head>

<Date>

<Address>

Dear Sir,

**Ref: RFP for Design, Development, Manufacture, Validation and Deployment of BSC-1 & BSC-2 SoCs- RFP Ref. No: MeitY/SoC/DLI/01/2022-2023**

1. Having examined the RFP, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide the professional services as required and outlined in the RFP for Design, Development, Manufacture, Validation and Deployment of BSC-1 & BSC-2 SoCs.

2. We attach hereto the response as required by the RFP, which constitutes our proposal. We confirm that the information contained in this response or any part thereof, including its exhibits, and other documents and instruments delivered or to be delivered to MeitY is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead the corporation in its short-listing process.

3. We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the short listing process, we are liable to be dismissed from the selection process or termination of the agreement during the project, if selected to do so.

4. We agree for unconditional acceptance of all the terms and conditions set out in the RFP document and also agree to abide by this tender response from the date fixed for bid opening.

5. We hereby declare that in case the agreement is awarded to us, we shall submit the performance bank guarantee in the form prescribed format in the RFP. We agree that MeitY is not bound to accept any tender response that they may receive. We also agree that MeitY reserves the right in absolute sense to reject all or any of the products/ services specified in the tender response.

6. It is hereby confirmed that I/We are entitled to act on behalf of our company/ corporation/ firm/ organization and empowered to sign this document as well as such other documents, which may be required in this connection.

7. The following persons will be the authorized representatives of the company for all the future correspondence till the completion of the bidding process, between MeitY and our organization.

<b>Details</b>	<b>Primary Contact</b>	<b>Secondary Contact</b>
Name		
Designation		
Address		
Landline No.		
Mobile No.		
Fax No.		
Email Address		

Company Seal

Name

Designation

Signature

Date

<Name and Address of Company> Seal/Stamp of the Company

**CHECK LIST FOR PRE-QUALIFICATION CRITERIA**

<b>Sl No.</b>	<b>Document Heading</b>	<b>Appendix/ Annexure</b>	<b>Confirmation</b>	<b>Remarks</b>
1.	Bid Cover Letter	Appendix-S		
2.	Pre-Qualification Criteria Information (including all four Annexures)	Appendix -A (Annex-I to IV)		
3.	Earnest Money Deposit (EMD)	Appendix -G		
4.	Integrity Pact	Appendix -H		
5.	Litigation Impact Statement	Appendix -Q		
6.	Conflict of Interest	Appendix -R		
7.	Signed copy of RFP	Main Doc		

**TECHNICAL PROPOSAL COVER LETTER**

<Letterhead of the bidder>

<Date>

<Address>

**Ref: RFP for Design, Development, Manufacture, Validation and Deployment of BSC-1 & BSC-2 SoCs.**

Dear Sir,

1. Having examined the bid document, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide the services RFP for Design, Development, Manufacture, Validation and Deployment of BSC-1 & BSC-2 SoCs as required and outlined in the RFP.
2. We attach hereto the bid Technical response as required by the bid document, which constitutes our proposal.
3. We undertake, if our proposal is accepted, to provide all the services put forward in this RFP or such features as may subsequently be mutually agreed between us and MeitY or its appointed representatives.
4. We agree for unconditional acceptance of all the terms and conditions in the bid document and also agree to abide by this bid response till the expiry of the Bid Validity Period. Until a formal contract is prepared and executed, this bid response (along with any changes agreed by us), together with your written acceptance thereof in your notification of award, shall constitute a binding contract between us and MeitY.
5. We confirm that the information contained in this proposal or any part thereof, including its exhibits, schedules, and other documents and instruments delivered or to be delivered to MeitY is true, accurate, and complete. This proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead MeitY as to any material fact.
6. We agree that you are not bound to accept the lowest or any bid response you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products/ service specified in the bid response without assigning any reason whatsoever.
7. It is hereby confirmed that I/We are entitled to act on behalf of our corporation/company/ firm/organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this ..... Day of ..... **2022.**

(Signature) (In the capacity of)  
Duly authorized to sign the Bid Response for and on behalf of:  
(Name and Address of Company) Seal/Stamp of bidder

**CERTIFICATE AS TO AUTHORISED SIGNATORIES**

I, certify that I am .....<designation>..... of the .....<Company Name>....., and that .....<Name of the Respondent>..... who signed the above response is authorized to bind the corporation by authority of its governing body.

Date

(Seal here)

**CHECK LIST FOR TECHNICAL BID**

<b>Sl No.</b>	<b>Document Heading</b>	<b>Appendix/ Annexure</b>	<b>Confirmation</b>	<b>Remarks</b>
1.	Technical Proposal Cover Letter	Appendix-S		
2.	Details of Bidder Organization	Appendix-A		
3.	Bidder's Experience Or Certificate in case of MSE, MSMEs & Start-Ups.	Annexure-III to Appendix-A		
4.	Technical Proposal (with all relevant documents)	Appendix-B		
5.	Willingness for Proposal presentation	Appendix-B		
6.	Indigenous Contents Certificate	Appendix-D		
7.	PPR	Appendix-J		
8.	Malicious Code Certificate	Appendix-M		



**COMMERCIAL BID COVER LETTER AND BID FORMAT**

<Letterhead of the bidder>

<Date>

<Address>

**Ref: RFP for Design, Development, Manufacture, Validation and Deployment of BSC-1 & BSC-2 SoCs.**

Dear Sir,

1. Having examined the Bid Document, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide the services for RFP for Design, Development, Manufacture, Validation and Deployment of BSC-1 & BSC-2 SoCs to meet such requirements and to provide services as set out in the bid document our quotation summarizing our Commercial proposal is annexed as duly completed **Appendix-N** to RFP.

2. It is hereby confirmed that I/We are entitled to act on behalf of our corporation/company/firm/organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this ..... Day of ..... 2022.

(Signature) (In the capacity of)

Duly authorized to sign the Bid Response for and on behalf of:

(Name and Address of Company) Seal/Stamp of bidder

**CERTIFICATE AS TO AUTHORISED SIGNATORIES**

I, certify that I am .....<designation>..... of the .....<Company Name>....., and that .....<Name of the Respondent>..... who signed the above response is authorized to bind the corporation by authority of its governing body.

Date

(Seal here)

**CHECK LIST FOR COMMERCIAL BID**

<b>Sl No.</b>	<b>Document Heading</b>	<b>Appendix/ Annexure</b>	<b>Confirmation</b>	<b>Remarks</b>
1.	Commercial Bid Cover Letter	Appendix-S		
2.	Performance Cum Warranty Bank Guarantee	Appendix-P		
3.	Evaluation Criteria & Commercial Bid format	Appendix-K		
4.	Signed Copy of RFP	Main Doc		