STATEMENT OF CASE FOR DESIGN & DEVELOPMENT OF COMPREHENSIVE SOFTWARE APPLICATION FOR AUTOMATION OF EST PROCEDURES OF EME

1.	Unit/Directorate/Office Initiating the SOC	:	Dte Gen of EME
2.	Name of the item (s)/services being procured. (Category – Ex- ordnance, Medical, IT, Engineering, MT, Electrical, Electronic, Clothing, Aviation, General, FOL, Machinery, Spares, Communications, Navigational, Provisions, Weapons, Armament, Ammunition, Repairs, Services and other categories (to be specified)	:	Comprehensive SW application for automation of est procedures of Dte Gen of EME.
3.	Justification for procurement		
	(a) Authority	:	IT- PPP 2024-25
	(b) If it is scaled item	:	No
	(c) If it is a non-scaled item, the fwg information be provided:-		
	(i) Which item was serving the purpose till date?	:	Data maint separately by respective secs dealing with org, posting and policy related to manpower, tpt, wpns & amn. Printout of data taken in large volumes for mov of cases in physical files for decision making by competent auth.
	(ii) How the present proposal will serve the purpose?	:	Central database of auth of all EME est, CT-I (Non Basic) & CT-II and auth of manpower, tpt, wpns & amn and details of various att, grouping manpower, avn trained tech, paratroopers, sportsperson, LMC and specific tdn with query based automation available with all stakeholders will enable expedited analysis & efficient decision making by Competent Auth.
	(iii) Whether scaling action has been initiated? If yes, reference number to be given. If not, reasons for not doing so to be given.	:	NA
	(d) Broad purpose of item being procured.	:	The existing data mgt & procedure of review of all est of EME is presently paper based & manual. This leads to challenges in retrieving, calculation & review of data, whenever reqd. There is reqmt for digitization of data, compilation in a central database & automation of various queries related to Manpower, Tpt, Wpns & Amn to enable informed efficient decisions by Competent Auth. Hence, customized SW is reqd to be developed.
	(e) Detailed Justification from user:-	:	
	(i) Category of proposal- • Fresh purchase • Up-gradation • Replacement • Maintenance • Repair • Any other (to be specified)	: : : : : :	Yes No NA NA NA NA

	(ii) If it is a fresh purchase, the fwg information to be provided :- • How was the purpose being served till date? • Why it can't be served with up-gradation of the existing items?	:	Presently, all data pertaining to WE/PE incl all types of manpower, Tpt, Wpns & Amn are maintained manually. The data is recorded in the form of paper based documents & being stored in physical files & binders. Reporting & analysis of data is carried out manually by transferring the data to MS Excel which is time consuming & error prone due to opr oversights. No such automation sys exists which can serve this purpose.
	(iii) If it is a case of up-gradation, the fwg information to be provided:- • Details of original purchase viz, year, cost, quantity, residual life left, residual life after up-gradation, etc. • Confirmationthat issues of standardization and compatibility have been taken care of.	:	NA
	(iv) If is a case of replacement, the fwg information to be provided:- • What will be done with the items being replaced? • Details of proposal for disposal of existing items (BER certificate, etc to be enclosed). • Possibility of buy-back or otherwise, along with reasons.	:	NA
4.	Quantity	:	
	(a) Basis for working out the quantity against each item- (formula, methodology etc)	:	One integrated proj is required to be proc via GeM portal as per availability of funds. The same shall be utilised within Dte Gen of EME.
	(b) Details like authorized holdings existing holdings, Dues-in, Dues-out, etc	:	NA
	(c) Calculation sheets/PR documents to be enclosed with the SOC (Net Quality to be shown in Annexure A)	:	NA
	(d) Proposed distribution of items being bought with justification.	:	The software will be hosted on ADN and utilised by stake holders at Dte Gen of EME.
5.	Estimated cost of proposal –various elements of cost, such as the basic cost, training cost, AMC, etc should be shown separately and the grand total should also be indicated).	:	The approximate cost of project for initial procurement will be Rs12,05,000/-(Twelve Lakhs Five Thousand Only). Calculation sheet for estimated cost of the project is attached as **Appx 'A'.**

6.	Basis for working out the estimated cost of proposal to be indicated as follows:- (a) Last purchase price, year, escalation factor, source, quantity to be mentioned.	:	NA being first time proposed.
	(b) Budgetary quotes, source, period etc to be mentioned alongwith copy of budgetary quotes.	:	Budgetary quotes att. Source- IT software fund (Code Head 433/02)
	(c) Market Intelligence – Source, period etc to be mentioned along with copy of budgetary quotes.	:	NA
	(d) Rates obtained from other Organizations – Source, period etc to be mentioned along with copy of budgetary quotes.	:	NA, being customized reqmt of IA.
	(e) Professional Officer's Evaluation – Detailed reasoning and puts used to be enclosed.	:	NA
	(f) Any other method adopted (to be specified and explained along with the reasons)	:	NA
7.	Details of the Last Purchase:-	:	
	(a) The Quantity and dates on which similar items were procured in last one year	:	NA
	(b) If it is a recurring item, the total period for which the items are being procured.	:	NA
	(c) The mode of tendering in respect last purchase.	:	NA
	(d) The source of last purchase	:	NA
	(e) Any other relevant information	:	NA
8.	Availability of Funds	:	
	(a) Is it included in the PPP (if applicable)?	:	Yes, IT PPP 2024-25
	(b) If yes , relevant serial number or PPP to be quoted	:	Ser No N/2024-25/J/498
	(c) Major Head, Minor Head, Sub Head and Detailed Head under which expenditure in respect of the instant proposal is to be booked	:	Major Head - 2076 Minor Head- 110(H)
	(d) Code Head, as mentioned in Classification Hand Book	:	Code Head-433/02
	(e) Fund Availability certificate as per format given in Appx B	:	Fund will be provided by Dte Gen of EME
	(f) Name of the paying agency	:	PCDA, 'A' block Africa Avenue, New Delhi
9.	Competent Financial Authority	:	DG IS
	Mode of Tendering	:	It is proposed to undertake the project through online bidding on GeM portal.

CHECKLIST: PRE APVL STG

1.   Ref Appx C of DDG IT letter No B/04001/Policy/Whitelisting SOP/DDG IT (T &P) dt 28 May 24.

2.   Details of proposed SW as per provided checklist are as follows:-

Ser	Mandatory Details	Remarks
(a)	Name of Proj (incl ver).	Design & devp of a comprehensive SW application for automation of est procedures of EME.
(b)	Name of Sponsor	Dte Gen of EME
(c)	Type of SW (Bespoke/COTS/Customized)	Bespoke
(d)	Brief justification/ endorsement on reqmt for devp of SW appl.	Maintaining the data using physical forms & paper based documentation, leads to data in accuracies, delayed reporting & lack of analysis.The SW will be designed to automate the auth & held state of EME manpower incl those supervised directly by the Dte to incl details of various att manpower, grouping manpower, avn trained tech, paratroopers, sportsperson, LMC and specific tdn, tpt, wpns & amns besides storing the imp data for prompt & reliable inputs to EME for Engg Sp plg & decision making for auth of EME units.
(e)	Aim, Scope and Purpose incl utility, beneficiaries and tgt users.	To devp a web based appl for automation of the est procedures of EME. The web appl shall be hosted on ADN and shall be exploited by stake holders in Dte Gen of EME. The Software will include digitisation of PE/WE of EME ests incl ERE units as well as details of various att manpower, grouping manpower, avn trained tech, paratroopers, sportsperson, LMC and specific tdn. The software will assist in review of PE/WE, generation of reports based on various filters & criterias.
(f)	To be hosted on internet/ADN with brief justification.	Army Data Network (ADN), as the software will be used to collect data of all auth of EME and utilised by various stakeholders in Dte.
(g)	Being devp in house or through IT funds.	Being devp through IT funds (SW) ex trade.
(h)	Usability of proposed appts by other arms/services/org/est	This SW is intended to be used by the offrs of EME, auth to view the important data on auth of EME units.
(j)	Hw and IT infrastructure reqd in the form of Virtual Machines at Data Centre (incl memory, storage and processing capb).	Existing IT infra to be utilised.
(k)	Brief details of content of the proposed Sw appl.	The appl will incorporate all the auth manpower, tpt, wpns & amn of corps of EME. The appl will store the data in a database for further analysis. It will assist in revision of PE/WE of units as well as decision making on auth of grouping manpower, avn trained tech, paratroopers, sportsperson, LMC and specific tdn to all units & est of EME.
(l)	Endorsement by Head of Br/Svc/Fmn.	Approved for whitelisting by DGEME.
(m)	Details of user base.	User base includes clks and officers for maint of WE/PE and generating reports alongwith officers required to utilize the data.

Ser	Mandatory Details	Remarks
(n)	Envisaged cost of entire Proj incl license, fees and maint.	The approximate cost of project for initial procurement will be Rs12,05,000/- (Twelve lakhs five thousand only).
(o)	Projected dt of completion Incl maj timelines.	(a) **Sw Devp Pd**. Appx three months (b) **Testing and Trials**. Appx two months
(p)	Brief details of Sw platform and tech stack proposed for devp of appl incl op sys dependencies (if any).	The details of Tech Stack is below:- (a) **OS**. Ubuntu (b) **Server**. Apache (c) **Language**. PHP8.1 (d) **Database**. PostgreSQL (e) **Software Tool**. XAMPP
(q)	Brief details of proposed network and bandwidth reqmts.	Appl is devp to be light to wk on existing avbl ADN resources, min 1 Mbps
(r)	Brief details of OS & Sys software reqmts.	The software will be hosted on a server running on Ubuntu OS as utilised by ADN. However, the client can access the sw using any OS presently in use with the Indian Army.
(s)	Brief details of proposed data security measure incl backup of data.	SSL (Secure Sockets Layer) and TLS (Transport Layer Security) for Data Security and also Column Encryption at Database side will be done. Data will be backed up on a daily basis. In addition to the inherent security of the appln, the proposed sw will also have secure accessibility linked with user login ID and password as per existing cyber policy of IA. Security and backup of Data will be maint by AHCC.
(t)	Brief Details of Proposed Database Engine to be used in the Appl.	PostgreSQL is an ACID compliant Object Relational Database Management System. It runs on nearly any OS incl Linux, Unix, and Windows. It is high performance and highly scalable.
(u)	Details of Sw Architecture and COTS Sw proposed to be utilized.	(a) Software Tool: XAMPP (b) Frontend Tool: PHP, HTML, CSS, JavaScript (c) Web-hosting Tool: Apache (d) Supporting Browsers: Firefox, Edge, Chrome
(v)	Details of proposed architecture-Centralised/Federated/Hybrid.	Centralized
(w)	Brief details of proposed utilization of Public Key Infra (PKI) and Iden and Access Mgt (IAM).	Appl is proposed to be integ with IAM for SAML parsing.
(x)	Technology dependencies (if any).	NA
(y)	Database reqmts.	PostgreSQL
(z)	Enhancement/ Upgradation (incl patch mgt/ Sw updt procedure and mechanism.	It will be part of the arrangement with the developers.
(aa)	Details of the licensing (if any).	NA

Ser	Pre Devp-Stage-To be submitted for grant of IPA	Response of Stakeholder
Sigs-7		
(a)	**Hardware Reqmt**. To be rationalized by developer with supported load calculation.	
(b)	**Bandwidth Reqmt**. No of concurrent users access the appl on AND to be highlighted, Common user bandwidth to be utilized no dedicated bandwidth to be provided.	
(c)	**Encryption**. IACA SSL cert to be incorporated for secure HTTPS connection (TLS 1.3 should be impl).	
(d)	**IAM**. Appl developer to be design and devp the appls for integ with IAM (SAML 2.0 needs to be followed).	
(e)	**Ports**. 443 port to be used for hosting, any addl port reqd should be justified.	
(f)	**Software**. Sponsor Dte to provn for licensed OS and other reqd sofwares for the appl.	
ACG		
(a)	Advisory on Appl Security: Evolving (URD) User Requirement Document (Hosted at ACG Website – Web/Appl Devp – Test & Eval Advisories).	
(b)	Impl of Secure Coding Prac in IA: HCL AppScan VS CodeSweep (ACG letter No B/51106/ArCyGp/T-3/T&E dt 04 Aug 23.	
(c)	Advisory on Cyber Security Parameters for Websites hosted within AND (Hosted at ACG Website – Web/Appl Devp – Devp – Test & Eval Advisories).	
(d)	Guidelines for Indian Govt Websites (GIGW 3.0).	
ASDC		
(a)	Platform to be used – check and render advice on Long Term Sp incl the End of Life.	
(b)	Database to be used – check and reder advice on Long Term Sp incl the End of Life.	
(c)	Software architecture and COTS Sw dependencies - native/webbased/centralized/decentralized, offline/online mode, Selection criteria of COTS Sw etc.	
(d)	Integration reqmt with other Sw (online/offline) – recommend appls alongwith the requisite formats of exch.	
(e)	Usability of Sw by other arms/services/fmns/orgs – advise sponsor fm scalability pt of view.	

Ser	Post Devp Stage-To be submitted for vetting of Sw appl	Response of Stakeholder
Sigs-7		
(a)	**OS & Software.** (i)　　OS and softwares used in appl should be activated (licensed) if applicable. (ii)　　The OS and the softwares used should not be outdated. (iii)　　The appl should not use vulnerable scripts and libraries.	
(b)	**Hardware Resources.** (i)　　The hardware resource used by the appl should be justified by the sponsor Dte with valid calculations. (ii)　　Stress testing of the appl is done with the anticipated concurrent users to check the hardware utilization of the appl. (iii)　　A website with up to 1000 concurrent users should not consume more than 8 CPU cores and 16 GB RAM. (iv)　　A relational database server (Mysql/MSsq/Postgres) with 1000 concurrent users should not consume more than 24 CPU and 48 GB RAM. (v)　　A web appl server with 1000 concurrent users should not consume more than 16 CPU and 32 GB RAM. (vi)　　A Geospatial server (GIS) with 1000 concurrent users should not consume more than 32 CPU and 64 GB RAM.	
(c)	**Compliance.** (i)　　Websites should follow GISW present. (ii)　　All the downloadable data (PDF) should be watermarked. (iii)　　**Links**. 　　(aa)　　No broken links to be present. 　　(ab)　　All the websites /appl linked in the page should be vetted. 　　(ac)　　Only whitelisted SW (as per ACG guidelines) links to be provided for download. (iv)　　Metatags should be enabled. (v)　　No direct streaming of Video/Audio.	

Ser	Post Devp Stage-To be submitted for vetting of Sw appl	Response of Stakeholder
(d)	**IAM.** (i) IAM integ to be completed (SAML 2.0). (ii) Encrypted login and logout to be implemented. (iii) User list (usernames in domain) to be on-boarded should be shared with AHCC. (iv) Two factor authentications if reqd should be impl with IACA DSC token.	
(e)	**Deployment Arch.** (i) Sponsor Dte to give a pstn explaining the entire workflow on the sw appl along with its detailed dply architecture. (ii) Sponsor Dte /developer to explain all the intended functionalities and features of the appl. (iii) Clarify any ambiguities or discrepancies with the devp team before commencing the vetting process. (iv) Strict version control to be adhered during the iterative process of vetting. (v) The appls requiring PKI services, must have inbuilt OCSP and CRL protocols for certificate validation.	
(f)	**Performance/Stability Testing.** (i) Appl /Website initial loading on the browser should not be more that 4 MB (screenshot att at Appx A) (ii) The max response time for the appl /website should not be more that 5 seconds. (iii) The appl should not crash when load tested with anticipated concurrent user.	
(g)	**Functional Testing.** (i) Perform testing of each indl function and feature of the web appl. (ii) Validate input fields, forms, button navigate and interactive elements. (iii) Verify proper data validation, error msgs and expected outcomes.	

Ser	Post Devp Stage-To be submitted for vetting of Sw appl	Response of Stakeholder
(h)	**Compatibility Testing**. (i) Should be compatible with older supported versions of browsers (chrome/ edge/firefox). (ii) Should be compatible with different versions of third-party plugins of framework. (iii) Regression Testing – Retest previously identified issues after fixes have been implemented. (iv) Ensure that fixes have not introduced new problems or unintended side effects.	
(j)	**Encryption**. IACA SSL cert to be incorporated for secure HTTPS connection (TLS 1.3 or latest should be impl).	
(k)	**Forms Reqd**. GIGW cert, DNS regn form, DGMI (MI-11) content vetting form, watermarking cert, SSL regn and SRDP regn form are reqd to be submitted to DG Sigs for hosting on AND.	
ACG		
(a)	Advisory on Single Window Clearance Initiative (AGC letter ref B/51106/ArCyGp/T-3/T&E/Adv1 dt 24 Aug 2023).	
(b)	Advisory on Tech Vetting for Whitelisting of Sw for AND Dply (DG Sigs letter ref B/46850/IT/Sigs 7(a) dt 03 Mar 2022).	
(c)	User Friendly Guidelines for Expediting Vetting if Websites/Web Appl (Hosted at ACG Website-Web/Appl Devp – Test & Eval Advisories).	
(d)	CERT Advisories No 08/2023 on conduct of Vulnerability Analysis of Sw of IA by CERT-IN Empanelled Firms (Hosted at ACG Website – Web/Appl Devp – Test & Eval Advisories).	
(e)	Advisory No 12-2016 on Hardening of Web Server, How to make VDI for Web Testing, Web Testing Tool, Patch Mgt and OS (Hosted at ACG Website-Web/Appl Devp-Test & Eval Advisories).	
(f)	Further, for the better transparency and user awareness, real-time appl vetting status is hosted on ACG Website (ACG Website – Web/Appl Devp – Web/Appl Vetting Status).	
(g)	CERT Advisory No 13/2023 on API Security.	
DDGIT		
(a)	Fwd VDI of final Sw appl.	
(b)	Fwd data dictionary of data and meta data.	
(c)	Obtain Whitelisting Cert.	

CALCULATION SHEET

Ser	Description	Cost
1.	Design &devp of a comprehensive SW application for automation of est procedures of EME.	12,05,000.00
Total		**12,05,000.00**

FORMAT FOR CERTIFICATE REGARDING AVAILABILITY OF FUNDS

1. Code Head under which the expenditure is proposed : 433/02

2. Total Allocation under the Code Head : Rs 12.05 lacs

3. Cash outgo during the current FY on account of committed Liability carried forward from the previous year : -

4. Balance available for fresh commitments in current financial year (2 - 3) : Rs12.05lacs

5. Cash outgo on account of the commitments already made during the current financial year based on schedule of delivery and payment terms in the supply orders/contact. : -

6. Net balance available for further occurrence (4-5) : Rs 12.05 lacs

Station: New Delhi

Dated : 2024

WHITELISTING OF SOFTWARE APPLICATION: CMS

REMARKS OF HEAD OF DEPT

"Design & devp of a comprehensive SW application for automation of est procedures of EME" is an inescapable reqmt for the Corps of EME. The proj is recom to be developed and hosted on ADN to be used by authorized pers in Dte Gen of EME.

Station: C/o 56 APO   (Mohit Beriwal)
                                                              Col
Date   :   Oct 2024   Col EME (Org)

RECOMMENDATION OF BRIG EME (C)

Recommended/ Not Recommended

Station: C/o 56 APO

Date   :   Oct 2024

RECOMMENDATION OF ADG EME (C)

Recommended/ Not Recommended

Station: C/o 56 APO

Date   :   Oct 2024