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Expression of Interest (EOI) for Design and Technology Vendors

Project Reference Number: 2025/07/BNHS

Issue Date: 08-Aug-2025

Submission Deadline: 25-Aug-2025

1. Introduction

The Bombay Natural History Society (BNHS), established in 1883, is a premier wildlife research organization in India dedicated to the conservation of nature and biodiversity. As part of our commitment to modernizing our digital presence and enhancing user engagement, BNHS is undertaking a comprehensive revamp of its primary website, bnhs.org.

The current website serves as a vital platform for sharing information about BNHS's activities, research, and educational programs. To align with modern web standards, enhance user engagement, promote transparency, and prepare for future mobile app development, we seek to transform our website into a contemporary, user-friendly, secure, and cost-effective platform.

We are seeking Expressions of Interest (EOI) from experienced **design and technology vendors** who can provide comprehensive services covering both the creative design aspects and technical implementation of this website revamp project.

2. Objective of this EOI

The purpose of this EOI is to invite qualified vendors with proven expertise in web design, user experience (UX), content management systems, payment gateway integration, security implementation, and API-driven backend development to express their interest in collaborating with BNHS.

Selected vendors will be invited to participate in a subsequent Request for Proposal (RFP) process, where detailed project specifications, technical requirements, and design guidelines will be shared. This EOI covers both Design and Technical Implementation. Vendors can submit proposals for either one or both activities depending on their core competencies.

3. Project Scope Overview

The revamped website will retain and enhance existing modules while introducing new features to improve user engagement, fundraising, and transparency. Key components include:

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Existing Modules to Enhance: (See detailed spec for each item in Section 2.1)

- News listings and publications archive
- Activities listing and annual reports
- Research papers repository and careers page
- Team members profiles and projects page
- JBNHS journal subsection
- BNHS Online store - which will now be rebranded to BNHS Haat

New Features to Implement: (See detailed spec for each item in Section 2.2)

- **Members' Page:** Secure sign-up/login system with personalized dashboards
- **Wiki-like Contribution Platform:** Collaborative content creation system
- **Online Donation System:** Multi-currency, multi-payment gateway integration
- **Tenders Page:** Transparent procurement and bidding platform
- **Subdomain Integration:** Seamless integration with blog, shop (Shopify migration), and JBNHS journal

Technical Priorities: (See detailed spec for each item in Section 2.4)

- Open-source software preference for cost-effectiveness
- API-driven backend architecture for future mobile app development
- Robust security measures and compliance
- Google Analytics integration
- Responsive, accessible design

4. Eligibility Criteria

Interested vendors should demonstrate the following qualifications:

Design Expertise:

- Proven experience in designing modern, responsive websites for NGOs or similar organizations
- Strong portfolio demonstrating UX/UI design capabilities
- Experience with accessibility standards (WCAG compliance) preferred
- Understanding of nonprofit sector design best practices

The design process should include detailed user research of all stakeholders (Publication, Marketing, Membership, Collections departments) in order to synthesize a uniform experience.

Technical Expertise:

- Competence in open-source CMS platforms (WordPress, Drupal, etc)



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- Experience with member management systems (preferably CiviCRM or similar platform)
- Payment gateway integration experience (Razorpay, PayPal, multi-currency support)
- API development and backend architecture design
- Security implementation and compliance knowledge

Project Experience:

- Track record of delivering comprehensive web projects involving both design and development
- Experience with content migration and data transfer
- Knowledge of e-commerce platform integration (Shopify preferred)
- Familiarity with wiki platforms and collaborative content systems

Project Management:

- Ability to deliver projects using Agile methodologies
- Experience managing projects with multiple stakeholders
- Strong communication and documentation capabilities

5. Submission Requirements

Interested vendors should provide:

1. **Company Profile:** Overview of your organization, team composition, and relevant experience
2. **Portfolio:** Examples of similar projects, particularly for NGOs or research organizations
3. **Technical Approach:** Brief outline of your proposed technical stack and methodology
4. **Design Philosophy:** Your approach to creating user-friendly, accessible designs for nonprofit organizations
5. **Team Composition:** Key personnel who would be involved in this project
6. **References:** Contact details of at least 3 recent clients for similar projects
7. **Preliminary Timeline:** High-level project timeline estimate
8. **Open-Source Experience:** Specific experience with open-source platforms and tools

6. Submission Process

Deadline: Submissions must be received by 20-Aug-2025

Submission Format: Responses should be submitted electronically in PDF format to bnhsit@bnhs.org

Subject Line: Please include "EOI Submission – Website Revamp – Design & Technology – [Your Company Name]" in the subject line

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Questions & Clarifications: Any queries related to this EOI can be directed to bnhsit@bnhs.org by 18-Aug-2025

Page Limit: EOI responses should not exceed 20 pages (excluding portfolio samples)

7. Evaluation Criteria

Submissions will be assessed based on:

- **Alignment with BNHS Vision:** Understanding of our mission and project objectives
- **Design and Technical Capabilities:** Demonstrated expertise in both design and technology implementation
- **Open-Source Experience:** Proven track record with open-source platforms and cost-effective solutions
- **Security and Compliance Knowledge:** Understanding of NGO-specific security and regulatory requirements
- **Project Approach:** Proposed methodology and timeline for comprehensive website revamp
- **References and Case Studies:** Quality and relevance of past successful projects
- **Team Expertise:** Qualifications and experience of proposed project team
- **Innovation and Future-Readiness:** Approach to API-driven backend and mobile app preparation

8. Next Steps

Shortlisted vendors will be invited to participate in the RFP process, which will include:

- Detailed project requirements and technical specifications
- Design brief and brand guidelines
- Comprehensive scope of work document
- Opportunity for vendor presentations and clarifications

9. Confidentiality

All information provided as part of the EOI response will be treated as confidential. Vendors are also expected to maintain confidentiality regarding this process and any further communications with BNHS.

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10. Disclaimers

- This EOI does not constitute a commitment to proceed with any specific vendor
- BNHS reserves the right to modify, suspend, or cancel this process at any stage
- Costs incurred in the preparation of this EOI response are the responsibility of the vendor
- BNHS reserves the right to negotiate terms and conditions with selected vendors
- The final contract will be subject to BNHS's standard terms and conditions



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Detailed Specifications

The revamped website will retain and enhance existing modules while introducing new features to improve user engagement, fundraising, and transparency. The project prioritizes open-source software for cost-effectiveness and flexibility, with a backend architecture that supports future Android and iOS app development without significant rework. Security is critical for the members' page, wiki-like platform, donation system, and tenders page to protect user data and maintain content integrity. The project also involves integrating or linking subdomains for the blog and shop, with the latter transitioning to Shopify. Integration with Google Analytics will enable comprehensive usage tracking.

2.1 Existing Modules to Retain

The website will maintain and improve the following modules. Note that updates to these resources require developer intervention. In the new website a CMS architecture should allow BNHS admins to be able to update content to these sections.

2.1.1 News Listings:

A section for news and updates about BNHS, including press releases, event announcements, and conservation initiatives, ensuring timely and engaging content delivery.

2.1.2 Publications Archive:

An archive of BNHS's newsletters and quarterly magazine, *Hornbill*, allowing users to access past issues easily. This should cover the following resources; *Hornbill*, BUCEROS, Reports, and M.Sc/Ph.D thesis reports.

2.1.3 Activities Listing:

Detailed information about BNHS activities, such as nature camps, walks, and educational programs, to promote public participation.

2.1.4 Annual Reports:

Access to BNHS's annual reports, providing insights into the organization's activities and achievements.

2.1.5 Research Papers:

A repository of research papers published by BNHS, showcasing its scientific contributions.

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2.1.6 Careers Page:

Information on job openings and internship opportunities, supporting BNHS's recruitment efforts.

2.1.7 PhD Program Page:

Information on BNHS's PhD program and related links and forms.

2.1.8 Team Members:

Profiles of BNHS team members, highlighting their expertise and contributions to foster trust and transparency.

2.1.9 Projects Page:

List of BNHS's active and completed projects and their latest statuses.

2.1.10 Staff Publications Page:

Detailed information on Staff Publications.

2.1.11 JBNHS Subsection:

Module that manages our Journal publishing workflows.

2.1.12 BNHS Haat:

Currently BNHS Shop handles our merchandise sales. We intend to rebrand this as BNHS Haat and enable a CMS experience so that listing, inventory management and fulfilment can all be handled by the CMD (BNHS Marketing team).

2.2 New Features

The revamped website will introduce the following functionalities to enhance user engagement, fundraising, and transparency:

2.2.1. Members' Page

- **Sign-Up and Login:** Enable users to register and log in to access premium content, such as exclusive articles, research findings, event invitations, and member-only forums. Provide the ability to print QR-enabled cards (without needing the physical card to be delivered).
- **Personalized Dashboards:** Provide members with tailored dashboards to view benefits, update personal information, and access exclusive content. Ability for members to

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update their profile information (addresses, etc). Addresses should be in structured format.

- **Renewal:** Simplify the renewal process, with support for automatic renewals.
- **Member Management:** Utilize open-source software like CiviCRM to manage member data, subscriptions, and communications efficiently from the backend, which includes WhatsApp and email broadcasts, but also targeted user-level communication (such as birthday wishes, or targeted offers). Flexible reporting infrastructure, preferably with Metabase integration.
- **Security:** Implement secure user authentication with compliance with data protection regulations to safeguard user data. Members support mail and phone based OTP logins. For internal users and admins enable gmail based authentication.
- **Administration:** Implement a dashboard at the backend that enables Membership team and admins to monitor membership activity, engagement and retention.
- **Referrals:** Enable members to refer other members.
- **Group membership:** Support group membership types such as student membership or Corporate membership where payment happens in bulk.

2.2.2. Wiki-like Contribution Platform

- **Collaborative Content Creation:** Allow selected members to contribute curated content, such as articles, observations, and research notes, in a Wikipedia-like format.
- **BNHS Guides as collaborative editions:** Host popular BNHS guides as collaborative editions with crowd-sourced content that includes rich text, audio-visual content (such as bird calls, pictures, videos) sourced from BNHS members and contributors. This section includes the following books
 - Book of Indian Birds
 - Book of Indian Mammals
 - Book of Indian Reptiles
 - Book of Indian Trees
 - BNHS Handbook series
 - BNHS Encyclopedia
- **Features:**
 - User-friendly interface for editing and contributing content.
 - Real-time collaboration for multiple users.
 - Version control to track changes and maintain content integrity.
 - Search functionality for quick access to information.
 - Categorization and tagging for organized content.
 - Moderation tools to ensure quality and accuracy.
 - Access control to restrict contributions to approved members.

2.2.3. Online Donation System

To sustain BNHS's conservation work, a seamless online donation system is essential for both Indian and international supporters.



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Key Components:

- **Diverse Payment Options:** Accept donations via credit/debit cards, UPI, net banking, mobile wallets, and international payment methods like PayPal.
- **Multi-Currency Support:** Facilitate donations in various currencies, with automatic conversion to Indian Rupees (INR).
- **Security and Compliance:** Employ a PCI DSS Level 1 compliant payment gateway to safeguard donor data. Ensure compliance with Indian tax laws by automatically generating 80G receipts for eligible donations and adhering to the Foreign Contribution Regulation Act (FCRA) for foreign donations, if applicable.
- **Intuitive Interface:** Design a user-friendly, mobile-responsive donation page to encourage higher conversion rates.
- **Transparency and Engagement:** Provide donors with clear information on how contributions are utilized, possibly through impact reports or donation tracking features.
- **Recurring Donations:** Allow donors to set up regular contributions for ongoing support.
- **Prominent Placement:** Integrate "Donate Now" buttons across the website to maximize visibility.

Recommended Payment Gateway: Razorpay is proposed for its support for NGOs, offering diverse payment methods, international transactions in nearly 100 currencies, and automated 80G receipt generation (Razorpay for NGOs).

2.2.4. Tenders Page

To promote transparency in BNHS's project procurement, a dedicated tenders page will allow the organization to invite bids for projects openly.

Key Components:

- **Tender Listings:** Display detailed tender notices, including project descriptions, eligibility criteria, submission deadlines, and required documents.
- **CMS Integration:** Manage tender postings through the website's CMS, allowing BNHS staff to create, update, and archive tenders easily.
- **Transparency:** Ensure all tender-related information is publicly accessible to encourage fair and competitive bidding.
- **Search and Filter:** Enable users to search and filter tenders by category, status, or date for ease of access.
- **Notifications:** Provide options for users to subscribe to tender alerts via email or RSS feeds.
- **Document Upload:** Allow vendors to submit bids or supporting documents securely through the website, with encryption for sensitive files.
- **Open-Source CMS Support:** Use an open-source CMS (e.g., WordPress or Drupal) with plugins or custom modules to manage tender listings and submissions efficiently.

2.2.5. Other Miscellaneous Pages

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- A link to our Dun & Bradstreet certificate
- A clear sitemap
- Partners page

2.3 Subdomains

BNHS currently maintains the following subdomains:

1. **Blog:** A WordPress-based blog for sharing articles, stories, and updates related to natural history and conservation. Options include integrating blog content into the main website or maintaining it as a separate entity with seamless navigation and consistent branding.
2. **Shop:** An e-commerce platform for selling BNHS merchandise, planned to migrate to Shopify. The vendor will assist in transitioning product listings, customer data (with consent), and order history to Shopify, ensuring consistent branding and secure integration with the main site.
3. **JBNHS:** Currently JBNS is sitting on a different domain (<https://www.bnhsjournal.in/>). As part of this revamp we'll bring it into the bnhs.org domain, and also aim to bring it into a common design system.
4. **Collections:** BNHS Virtual Museum (tentatively titled collections.bnhs.org) is currently under development and will be included as a subdomain under the main site, with seamless integration with the member login.

2.4 Technical Requirements

The revamped website will leverage modern web technologies to ensure responsiveness, accessibility, scalability, and future-proofing for mobile app development. Key requirements include:

- **Content Management System (CMS):** An open-source CMS (e.g., WordPress, Drupal) for easy content and tender management by BNHS staff.
- **E-commerce and Donation Integration:** Support integration with a payment gateway like Razorpay for secure donations and Shopify for e-commerce.
- **Responsive Design:** Fully responsive design for optimal viewing across devices, from desktops to mobile phones.
- **Search Functionality:** A powerful search engine to facilitate quick access to information, particularly in archives, research, and tenders sections.
- **Multimedia Support:** Support for embedding videos, audio, and interactive maps to enhance educational and research content.
- **Analytics and Reporting:** Integrate Google Analytics for comprehensive usage tracking, including page views, user behavior, donation conversions, and tender page interactions, to monitor and optimize site performance.

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- **Subdomain Integration:** Cohesive linking of the main website with subdomains, ensuring consistent branding and secure navigation.
- **API-Driven Backend for App Development:** Design a modular, API-driven backend (e.g., REST or GraphQL APIs) to enable seamless integration with future Android and iOS apps. The backend should expose endpoints for key functionalities (e.g., member management, donations, tenders, wiki content) to minimize rework for app development.

2.5 Security Requirements

To ensure the security and integrity of the BNHS website, particularly for the members' page, wiki-like platform, donation system, and tenders page, the following measures must be implemented:

Security Measure	Description
Secure Hosting and Infrastructure	Host the website on a secure server with regular updates and patches to mitigate vulnerabilities. Use a reputable web hosting service with a proven security track record.
Data Encryption	Encrypt all data transmissions using HTTPS, especially for login credentials, member information, donation transactions, and tender submissions. Encrypt sensitive data stored in databases at rest.
User Authentication and Authorization	Implement strong password policies (minimum length, complexity requirements) and secure password hashing (e.g., bcrypt, Argon2). Provide MFA for user accounts. Enforce account lockout after multiple failed login attempts (e.g., 5 within 10 minutes). Use secure session management with timeouts (e.g., 15 minutes idle, 2 hours absolute) and session regeneration after login.
Access Control	Restrict access to premium content and the members' page to authenticated users only. Implement role-based access control for the wiki and tenders page to ensure only authorized users can contribute or submit bids. Use moderation tools to review and approve wiki contributions and tender submissions.

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Protection Against Web Vulnerabilities	Prevent common web attacks such as SQL injection (using parameterized queries), Cross-Site Scripting (XSS) (via input sanitization and Content Security Policy), and Cross-Site Request Forgery (CSRF) (using CSRF tokens). Set security headers like HTTP Strict Transport Security (HSTS) and X-Frame-Options to prevent clickjacking.
Payment Gateway Security	Use a PCI DSS Level 1 compliant payment gateway to ensure secure handling of donation transactions. Implement fraud detection mechanisms to protect against unauthorized transactions.
Data Privacy and Compliance	Comply with relevant data protection regulations, such as the Indian Personal Data Protection framework and FCRA for foreign donations. Clearly communicate data privacy policies and terms of service to users, ensuring transparency.
Monitoring and Incident Response	Implement logging and monitoring to detect suspicious activities (e.g., failed login attempts, unusual traffic patterns). Have an incident response plan for prompt handling of security breaches, including containment, eradication, recovery, and post-incident analysis.
Regular Security Audits	Conduct regular security audits and vulnerability assessments to identify and mitigate risks. Ensure regular backups and a disaster recovery plan to restore services in case of data loss or system failure.
Wiki and Tenders Security	Use a secure platform for the wiki and tenders page with built-in user permissions and content moderation. Implement version control for wiki content and secure file upload mechanisms for tender submissions. Use CAPTCHA or approval mechanisms to prevent spam and unauthorized submissions.
Subdomain Integration Security	Ensure secure integration between the main website and subdomains (blog and shop). If single sign-on (SSO) is implemented, configure it securely to prevent unauthorized access.

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2.6 Execution Guidelines

To align with BNHS's commitment to accessibility, cost-effectiveness, and community-driven technology, the project will prioritize open-source software and a future-proof backend architecture. The following guidelines outline the approach:

- **Open-Source Software Preference:** Use open-source tools to reduce licensing costs and ensure flexibility for future customization. Examples include:
 - **CiviCRM for Member Management:** Utilize CiviCRM, an open-source CRM designed for nonprofits, to manage member data, subscriptions, communications, and engagement tracking. CiviCRM integrates well with open-source CMS platforms like WordPress or Drupal and supports donation processing (CiviCRM).
 - **WordPress or Drupal for CMS:** Use an open-source CMS to manage content, tenders, and other dynamic features. WordPress is recommended for its ease of use and extensive plugin ecosystem, while Drupal offers robust customization for complex needs.
 - **MediaWiki or DokuWiki for Wiki Platform:** Implement an open-source wiki platform like MediaWiki (used by Wikipedia) or DokuWiki for the collaborative content creation feature, ensuring ease of use and robust moderation capabilities.
 - **Open-Source Analytics:** Use Matomo as an open-source alternative or complement to Google Analytics for privacy-focused web analytics, ensuring compliance with data protection regulations.
- **API-Driven Backend for App Development:** Design the backend with a modular, API-driven architecture (e.g., REST or GraphQL) to support future Android and iOS app development. Key considerations include:
 - Expose secure, well-documented APIs for functionalities like member management, donations, tenders, and wiki content.
 - Use open-source frameworks like Laravel (PHP) or Django (Python) to build scalable APIs.
 - Ensure APIs are versioned to maintain compatibility with future app updates.
 - Implement rate limiting and authentication (e.g., OAuth 2.0) to secure API endpoints.
 - Structure the backend to minimize rework by reusing existing database schemas and business logic for app integration.
- **Google Analytics Integration:** Integrate Google Analytics to track user engagement, including page views, session duration, donation conversions, tender page interactions, and member activities. Provide BNHS staff with dashboards and reports to analyze usage data and optimize site performance.
- **Custom Development:** Where open-source solutions are insufficient, custom development should be based on open-source frameworks to maintain transparency and community support.

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- **Community Standards:** Ensure all open-source tools comply with industry standards for security, accessibility, and performance. Regularly update software to address vulnerabilities.
- **Documentation and Training:** Provide comprehensive documentation for all open-source tools and APIs used, and train BNHS staff on managing the CMS, CiviCRM, wiki platform, and Google Analytics to ensure self-sufficiency.
- **Vendor Expertise:** Vendors must demonstrate experience with open-source platforms (e.g., CiviCRM, WordPress, Drupal, MediaWiki) and API-driven architectures, providing references for similar projects with nonprofits.

By prioritizing open-source software and a future-proof backend, BNHS can reduce costs, leverage community-driven updates, and ensure seamless integration with future mobile apps while maintaining long-term maintainability.

2.7 Best Practices for NGO Websites

To align with industry standards, the website should incorporate the following best practices:

- **Clear Storytelling:** Communicate BNHS's mission, vision, and impact through compelling narratives and visuals.
- **User-Friendly Design:** Intuitive navigation, clear calls-to-action, and easy access to key information.
- **Engagement Tools:** Social media integration, event calendars, and volunteer opportunities to engage the audience.
- **Donation and Membership Portals:** Secure, user-friendly interfaces for donations and membership sign-ups.
- **Transparency:** The tenders page will enhance trust by showcasing BNHS's commitment to fair and open procurement processes.
- **Accessibility:** Compliance with web accessibility standards (e.g., WCAG) to ensure usability for people with disabilities.

2.8 Best Practices for Wiki-like Platforms

The wiki-like contribution platform should follow best practices for collaborative content creation:

- **Intuitive Interface:** Simplify content creation and editing for non-technical users.
- **Collaboration Features:** Enable real-time editing, @mentions, and threaded discussions.
- **Content Organization:** Use channels, tags, and document hierarchies for structured content.
- **Security and Moderation:** Implement access controls and moderation tools to maintain content quality.

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2.9 Migration and Data Transfer

The vendor will handle:

- **Content Migration:** Transfer existing content from the current website to the new platform, ensuring accuracy and proper formatting.
- **Shop Migration:** Assist in migrating e-commerce data to Shopify, including product listings, customer information (with consent), and order history, ensuring secure data transfer.
- **Member Data Migration:** Use CiviCRM to import existing member data securely, ensuring compliance with data protection regulations.

2.10 Timeline and Milestones

The project should follow a clear timeline with milestones (and if required phases of launch). The suggested format is mentioned below:

1. **Planning and Design:** 4-6 weeks for requirements gathering, wireframing, and design approval.
2. **Development:** 8-12 weeks for building the website, including new features, API development, and subdomain integration.
3. **Testing and Quality Assurance:** 2-4 weeks for testing functionality, responsiveness, security, and API performance.
4. **Launch and Training:** 2 weeks for site launch and staff training on CMS, CiviCRM, wiki platform, Google Analytics, and API documentation.

2.11 Budget

Vendors should provide a detailed cost breakdown, including:

- Development and design (emphasizing open-source solutions and API-driven backend)
- Content and data migration
- Shopify integration
- Ongoing maintenance and support, including security updates, open-source software updates, and API maintenance

2.12 Conclusion

The revamped BNHS website will serve as a modern, user-friendly, secure, and transparent platform to communicate BNHS's mission, research, and educational initiatives to a global audience. By retaining existing modules, introducing new features like the members' page, wiki, online donation system, and tenders page, prioritizing open-source software like CiviCRM, ensuring robust security measures, integrating Google Analytics, designing an API-driven



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backend for future app development, and seamlessly integrating subdomains, the website will enhance BNHS's online presence and support its conservation efforts. Vendors are invited to submit proposals detailing their technical approach, experience with open-source platforms and API development, timeline, and cost estimates, with a strong emphasis on meeting the outlined security, donation, tender, and app-readiness requirements.