

TERMS OF REFERENCE

Bebbo Technology Consultant (Mobile)

CONTRACT MODALITY Individual Consultancy

DUTY STATION Nairobi, Remote

DURATION OF CONTRACT 13.5 Months

Purpose of Assignment

Recognising the critical role of robust and scalable digital solutions in supporting Early Childhood Development (ECD) and parenting programmes, Centre of Excellence Nairobi (CoE) is seeking a Bebb Technology Consultant (Mobile) to provide full-cycle technical support to the Bebb parenting app and its sister applications. This role combines ongoing responsibility for the maintenance, management, and evolution of the current Bebb platform, while also contributing technically to the design, development and roll-out of Bebb 2.0, the next-generation version of the platform. Bebb is a UNICEF-supported, free, open-source mobile parenting app recognised as a Digital Public Good. It provides parents and caregivers of children aged 0–6 with trusted, evidence-based guidance and interactive tools in local languages, accessible both online and offline. The app is available on Android and iOS and is integrated with a Drupal-based Content Management System (CMS) that supports a multi-site architecture for country-level customisation. Since its launch, Bebb has reached over 1.8 million users across more than 21 countries, with additional rollouts planned in five more countries. As Bebb enters a new phase of strategic development, the consultant will be responsible for ensuring both the day-to-day stability of the platform and its ongoing technical evolution. This includes leading mobile development, supporting multiple UNICEF Country Offices, and contributing to the implementation of Bebb 2.0's expanded architecture and feature set.

Key responsibilities will include:

A. Current Bebb App Maintenance and Management – Ensuring the stability and high performance of the existing app across platforms; managing bug fixes, releases, and updates; and supporting app store submissions and backend integration.

B. Multi-country Deployment Support and Government Handover Support– Providing hands-on technical support to Country Offices for localisation, configuration, testing, and deployment of the app in both new and existing markets, including technical guidance, knowledge transfer, and troubleshooting for government handovers in countries such as Uzbekistan, Pakistan, and other participating countries. Support will cover the setup, configuration, deployment, and maintenance of mobile applications, CMS platforms, backend integrations, and related technical infrastructure within government-managed environments.

C. DevOps, Security, and Quality Assurance – Managing CI/CD pipelines, ensuring adherence to UNICEF's cybersecurity protocols, maintaining up-to-date libraries, and supporting security and performance testing workflows.

D. Vendor Management and Bebb 2.0 Development – Coordinating with the technology vendor and contributing to the planning and phased delivery of Bebb 2.0 features, including technical redesign, gamified elements, personalisation logic, new content formats, and modular architecture enhancements.

E. Technical Coordination, Documentation and Open-Source Stewardship – Maintaining high-quality technical documentation, supporting community contributions to the GitHub repository, and ensuring alignment with UNICEF's commitments to Digital Public Goods principles.

F. Backend Integration, Analytics, Monitoring and Evaluation Support- Maintaining integration with the multi-site Drupal-based CMS backend, ensuring performance and scalability for multi-country deployment, and managing and monitoring BigQuery datasets and Looker Studio dashboards to support programme monitoring, evaluation, usage reporting, and data-driven decision-making.

This consultancy plays a critical role in maintaining UNICEF's commitment to technology-for-good, ensuring the Bebbo platform remains secure, scalable, and responsive to the needs of families and service providers across low- and middle-income countries. The GitHub repository is available here for reference:

<https://github.com/UNICEFECAR/parenting-app-bebbo-mobile/>

The consultant will work closely with the Bebbo Central Team, external developers, UX/UI designers, and programme teams across regions to ensure that Bebbo continues to meet the evolving needs of parents, caregivers, and service providers—while contributing to a global ecosystem of trusted, rights-based digital support for early childhood.

Scope of Work

Under the supervision of the ECD Specialist (Innovations), Early Childhood Development (ECD), UNICEF Centre of Excellence Nairobi (CoE), the consultant will provide end-to-end technical support for the Bebbo parenting app and its sister applications. The consultant will contribute to the ongoing maintenance of the existing platform, lead feature enhancements, support multi-country implementation, and ensure adherence to UNICEF's digital standards for scalability, security, and sustainability.

The work will be carried out across the following focus areas:

A. Current Bebbo App Maintenance and Management

- App Stability and Enhancements: Maintain and improve the performance, usability, and responsiveness of the Bebbo mobile app and sister apps (Foleja, Babuni, Wawamor, Bebbo Pacific, Merhaba Bebek, Rerai Umntwana app).
- Bug Fixing and Diagnostics: Monitor and resolve bugs and also use Firebase Crashlytics and similar tools to ensure issue tracking and resolution are efficient.
- Library and SDK Maintenance: Perform regular upgrades of third-party libraries, SDKs, and OS specific dependencies to maintain technical compatibility and prevent vulnerabilities.
- Feature Implementation: Implement new features and refinements based on evolving product specifications, UI designs, and user feedback.
- App Store Release Management: Prepare, publish, and maintain app versions on Apple App Store and Google Play Store, ensuring compliance with store requirements and UNICEF policies.
- Performance Optimisation: Improve performance across devices, and support offline functionality through robust data synchronisation.

B. Multi-country Deployment Support

- Localisation and Configuration: Support adaptation of the app for new and existing countries, including branding, string updates, locale configuration, and build preparation.
- Onboarding Support: Provide technical guidance to UNICEF Country Offices during deployment, including environment setup, build testing, and readiness for launch.
- App Publishing Assistance: Coordinate publishing of country-specific versions on relevant app stores and maintain ongoing update cycles.
- Government Handover and Technical Support: Provide technical guidance and troubleshooting support

to governments in existing and participating countries, including Uzbekistan, Pakistan, and other countries undertaking the handover of Bebbi and sister applications. Support the transition to government-managed environments, including technical setup, configuration, deployment, and validation of mobile applications, CMS platforms, backend integrations, and related infrastructure. Assist government technical teams in resolving setup and deployment issues, ensure the availability of relevant technical documentation and configuration guidance, and facilitate knowledge transfer to support independent operation and ongoing maintenance of the applications and associated systems.

C. DevOps, Security, and Quality Assurance

- **CI/CD Pipeline Management:** Maintain and optimise continuous integration/deployment workflows for code merging, testing, and automated build processes.
- **Testing and QA Automation:** Implement unit, integration, and regression tests using automated frameworks to ensure app quality across development cycles.
- **Cybersecurity Compliance:** Conduct regular codebase reviews and enforce adherence to UNICEF digital security standards, including CLASSI classification and privacy-by-design principles.
- **Certificate and Credential Management:** Manage certificates, provisioning profiles, and keychains securely for both iOS and Android publishing.
- **Analytics and Monitoring:** Configure Firebase Analytics and performance monitoring tools to track app usage, engagement trends, and issue diagnostics.

D. Vendor Management and new Bebbi feature Development

- **Vendor Coordination:** Serve as the technical coordinator with software vendors, aligning on deliverables, sprints, and quality standards.
- **Feature Development for enhanced Bebbi:** Contribute to Bebbi 2.0 features including new UI/UX structure, personalisation logic, gamification, pregnancy modules, and improved accessibility.
- **Technical Validation:** Review code and conduct QA on vendor submissions; ensure quality and alignment with architectural principles.
- **Sprint Participation:** Participate in sprint planning, reviews, and retrospectives with UNICEF teams and external developers.

E. Technical Coordination, Documentation and Open-Source Stewardship

- **Repository Management:** Maintain and oversee the official GitHub repository for Bebbi mobile and CMS, including README files, issue tracking, and release tagging.
- **Code Review and Community Engagement:** Review and manage pull requests from community contributors and vendors, ensuring code quality and alignment with UNICEF's open-source standards.
- **Documentation and Developer Resources:** Create and maintain technical documentation including environment setup, build guides, API references, and mobile workflows.

F. Backend Integration

- **CMS Coordination:** Ensure frontend–backend integration is seamless through close coordination with the CMS content managers.
- **Drupal CMS Integration:** Maintain and improve integration between the React Native mobile app and the Drupal-based CMS multisite backend.
- **API Development and Usage:** Develop and document RESTful APIs for secure, efficient data exchange between backend and mobile layers.

- Subsite Setup and Maintenance: Support for creation and management Drupal subsites for new country apps, ensuring content delivery and architecture consistency.
- Backend-driven Feature Control: Integrate backend-managed features such as code push, feature toggles, and localisation strings to streamline deployments.
- BigQuery Data and Dashboard Management: Create, maintain, and monitor BigQuery tables, datasets, queries, and scheduled queries required for analytics and reporting, ensuring data accuracy, consistency, and availability to support Looker Studio dashboards and programme monitoring and evaluation.
- Looker Studio and Monitoring and Evaluation Support: Maintain and enhance Looker Studio dashboards, monitor application usage and engagement indicators, and provide technical support for programme monitoring, evaluation, and reporting requirements. The consultant is expected to apply best practices in mobile engineering, DevOps, and open-source governance while ensuring all outputs meet UNICEF's technical and ethical standards. The consultant will need to maintain flexibility and adaptability as the Bebbo platform continues to evolve and expand, balancing multiple priorities while ensuring quality, sustainability, and impact across all areas of responsibility.

Working arrangements

- The assignment is fully remote and covers a maximum of 200 working days between 16 November 2026 and 31 December 2027. The distribution of days may vary by deliverable and operational need.
- Deliverables are complete output packages and are not linked to monthly service periods. A deliverable may be submitted earlier than its final deadline when completed and may be processed for payment following UNICEF's written acceptance, subject to the contract.
- The consultant will use their own equipment and reliable internet connection and will be available for agreed online meetings across time zones.
- All outputs will be produced in English unless otherwise agreed and must comply with UNICEF digital, accessibility, information-security, data-protection, child-safeguarding, editorial and branding standards.
- All content, trackers, manuals, training materials, test records and editable working files produced under the assignment remain the property of UNICEF and must be handed over in an organized form.

Work Assignments Overview	Deliverables/Outputs	Delivery deadline to complete the deliverable
A. Current Bebbo App Maintenance and Management	Deliverable 1 – Maintenance of app stability across all deployments, including monthly performance reviews, bug resolution logs, version release notes, library/SDK updates, and summaries of implemented features and improvements.	31 Dec 2027 (37 Days)
B. Multi-country Deployment Support	Deliverable 2 – Technical deployment packs delivered for 6 countries (e.g. Türkiye, Ecuador, Zimbabwe, Pacific Island, Bangladesh), including localisation, builds, QA and UAT logs.	31 Dec 2027 (27 Days)

	Deliverable 3 – Monthly deployment tracking report with app store submissions, localisation updates, and technical support log	30/06/2026 (9 Days)
	Deliverable 4 – Government handover support for existing countries, including Uzbekistan, Pakistan, and other participating countries, covering technical guidance and troubleshooting for the setup, configuration, testing, and maintenance of mobile applications, CMS platforms, and related integrations within government-managed environments.	31 Dec 2027 (20 Days)
C. DevOps, Security, and Quality Assurance	Deliverable 5 – CI/CD pipeline maintenance, regression testing reports before major feature releases, quarterly app security and compliance reviews, CLASSI conformity, certificate management, and security-related logs.	31 Dec 2027 (15 Days)
D. Vendor Management and Bebbo 2.0 Development	Deliverable 6 – Sprint-based technical contributions and delivery support for Bebbo 2.0 features, including UX enhancements, gamification, pregnancy tracker, and CHW tools, with sprint-end technical summaries.	31 Dec 2027 (27 Days)
	Deliverable 7 – Technical review reports of vendor code submissions and pull requests, including quality assurance and feedback.	31 Dec 2027 (9 Days)
E. Technical Coordination, Documentation and Open Source Stewardship	Deliverable 8 – Update documentation of architecture, build process, and feature release workflows along with GitHub repository structure review and onboarding documentation pack	31 Dec 2027 (18 Days)
F. Backend Integration	Deliverable 9 – Maintenance and bug correction report of existing seven Drupal subsites and setup/validation of backend integrations for at least 2-3 new country subsites	31 Dec 2027 (18 Days)
	Deliverable 10 – Creation, maintenance, and monitoring of BigQuery tables, datasets, queries, and scheduled queries supporting required analytics counts; maintenance and enhancement of Looker Studio dashboards, data validation, and reporting to support programme monitoring and evaluation.	31 Dec 2027 (20 Days)

Payment Schedule:

Payment will be made on submission and acceptance of deliverables. UNICEF reserves the right to withhold payment in case the deliverables submitted are not up to the required standard or in case of delays in submitting the deliverables on the part of the consultant.

Important Notes

- Individuals engaged under a consultancy or individual contract will not be considered “staff members” under the Staff Regulations and Rules of the United Nations and UNICEF’s policies and procedures and will not be entitled to benefits provided therein (such as leave entitlements and medical insurance coverage). Their conditions of service will be governed by their contract and the General Conditions of Contracts for the Services of Consultants and Individual Contractors. Consultants and individual contractors are responsible for determining their tax liabilities and for the payment of any taxes and/or duties, in accordance with local or other applicable laws.
- The selected candidate is solely responsible for ensuring that the health insurance (and visa if applicable) required to perform the duties of the contract are valid for the entire period of the contract. Selected candidates are subject to confirmation of fully-vaccinated status against SARS-CoV-2 (Covid-19) with a World Health Organization (WHO)-endorsed vaccine, which must be met prior to taking up the assignment. It does not apply to consultants who will work remotely and are not expected to work on or visit UNICEF premises, programme delivery locations or directly interact with communities UNICEF works with, nor to travel to perform functions for UNICEF for the duration of their consultancy contracts.
- UNICEF offers reasonable accommodation for consultants with disabilities. This may include, for example, accessible software, travel assistance for missions or personal attendants. We encourage you to disclose your disability during your application in case you need reasonable accommodation during the selection process and afterwards in your assignment.

QUALIFICATIONS / SPECIALIZED KNOWLEDGE / EXPERIENCE/ COMPETENCIES (CORE/TECHNICAL/FUNCTIONAL) / LANGUAGE SKILLS REQUIRED FOR THE ASSIGNMENT

Minimum requirements:

- **Education:** A graduate degree (Bachelor’s or higher) in Computer Science, Software Engineering, Information Technology, or a related field.
- **Work Experience:**

(a) Professional Experience:

A minimum of 7 years of relevant professional experience in the design, development, and maintenance of mobile applications using React Native or equivalent frameworks.

- Experience in deploying and maintaining digital products across multiple countries or languages is required.
- Technical expertise in developing react native mobile apps for both Android and iOS platforms.
- Previous work in open-source environments and with Digital Public Goods is considered an asset.
- Experience in digital development projects related to early childhood development or parenting is a strong advantage.

(b) Technical Expertise: Proven ability to deliver secure, stable and scalable mobile applications, with a focus on offline functionality.

- Familiarity with tools including Git, CI/CD pipelines, Firebase and RESTful APIs. o Knowledge of Node.js and DevOps practices is an asset.
- Familiarity with AI-assisted development tools (e.g., GitHub Copilot) is considered an asset.
- Hands-on experience with Drupal-based content management systems and backend integration is desirable.
- Experience with BigQuery, SQL queries, scheduled queries, and Looker Studio dashboards for analytics and reporting is an asset.

(c) Coordination and Communication Skills:

Demonstrated ability to work collaboratively within multidisciplinary teams of designers, developers, researchers, and country-level partners.

- Strong coordination and task management skills, with the ability to meet deadlines and manage competing priorities in a remote, multicultural work environment.
- Fluency in English is a minimum requirement.
- Knowledge of one or more languages used in Bebbi programme countries is an asset (Russian, Albanian, Belarusian, Bulgarian, Greek, Kyrgyz, Montenegrin, Macedonian, Romanian, Serbian, Slovak, Tajik, Ukrainian, Uzbek, Karakalpak, Turkish, Ndebele, Shona, Spanish, Hindi, Bangla)
- Ability to provide technical guidance, troubleshoot technical issues, and support knowledge transfer among technical teams and partners.

(d) Understanding of UNICEF's Operating Context:

- Previous experience/knowledge of the environment in which UNICEF operates, and understanding the constraints of working in a developing-world environment is desirable.
 - Ability to align technical goals with UNICEF strategic goals — that always will mean UNICEF's mission over any particular technology.
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