REACH OUT BOT

Product Requirements Document (PRD)

Last updated on Feb 2, 2026

Product Name

NGO Outreach Automation Platform

Product Version

1.0.0

Overview

The NGO Outreach Automation Platform is a web-based tool designed to streamline and scale partnership outreach for the Environmental Impact Team. It converts unstructured briefs into targeted NGO recommendations and ready-to-send, personalized outreach emails, reducing manual research and coordination time while improving relevance and response rates.

The product is optimized for teams like Dots.eco that regularly engage NGOs across geographies and themes (*e.g.* regenerative agriculture, restoration, climate resilience).

Problem Statement

Impact teams spend significant time:

- Interpreting loosely structured partner briefs
- Manually researching suitable NGOs
- Drafting tailored outreach emails
- Coordinating approvals and sending via email

This process is slow, inconsistent, and difficult to scale, limiting the number and quality of partnerships pursued.

Goals & Success Criteria

Primary Goals

- Reduce NGO research and outreach preparation time by >70%
- Improve relevance and quality of NGO matches
- Standardize outreach quality while maintaining personalization
- Enable informed decision-making by transparently surfacing reputational risks associated with NGOs
- Enable non-technical team members to run outreach independently

Success Metrics

- Time from brief input to email-ready output
- Number of NGOs identified per brief that meet internal quality criteria
- Email open and response rates
- Internal adoption rate (active users per month)

Target Users

Primary Users

- Environmental impact managers

- Partnerships and NGO engagement leads
- Program managers

Secondary Users

- Operations and coordination teams
- Marketing / communications reviewers

User Journey (High-Level)

1. User pastes or uploads a free-text brief
2. System parses intent, geography, theme, and constraints using AI
3. Platform identifies and researches relevant NGOs, including reputational risk signals
4. User reviews NGOs on a dedicated selection screen, including fit rationale, and selects which ones to contact
5. System creates or updates company, contact, and deal records in HubSpot
6. System creates or updates company, contact, and deal records in HubSpot
7. System generates personalized outreach emails based on internal templates
8. Emails are reviewed and sent via Gmail integration

Core Features & Requirements

HubSpot CRM Integration (Pre-Outreach)

Description: Ensures all outreach is tracked in HubSpot by creating or updating the appropriate CRM records before the first email is sent.

Functional Requirements:

- OAuth-based HubSpot connection
- For each selected NGO:

- ○ Create or update Company record (NGO)
- ○ Create or update primary Contact record (if contact data is available)
- ○ Create a Deal associated with the Company and Contact in the Environmental Pipeline
- Populate deal properties including:
    - ○ Deal name (*i.e.* NGO Name)
    - ○ Deal stage (*e.g.* Warm Leads)
    - ○ Impact Type (*e.g.* Planting trees)
    - ○ Impact Countries (*e.g.* United States)
    - ○ Deal type (*e.g.* New Business)
    - ○ Priority (*e.g.* High)
- Prevent duplicate companies, contacts, and deals
- Block email sending if HubSpot record creation fails and warn user of the block

Non-Functional Requirements:

- Idempotent record creation
- Clear error messaging in UI

Hard Constraints & Invariants:

- User Control & Agency
    - ○ The system must never send an email without explicit, per-message user approval.
    - ○ Reputational risk indicators are advisory only and must not block NGO selection or outreach actions.
    - ○ Users must be able to proceed even when elevated reputational risk is flagged.
- Data Integrity & Sources of Truth
    - ○ Existing HubSpot records must never be modified, enriched, or overwritten by the system.
    - ○ HubSpot is the single source of truth for partner status and CRM identifiers.
    - ○ Supabase is the single source of truth for outreach workflow state and system-generated metadata.

- Source data (user input, HubSpot records) must remain immutable once persisted.
- Idempotency & Safety
  - All outbound actions (email sending, HubSpot creation, follow-up scheduling) must be idempotent.
  - Re-execution of any workflow step must not result in duplicate emails, contacts, or deals.
  - Follow-up messages must never be sent more than once per scheduled interval.
- AI Output Contracts
  - All AI-generated outputs must conform to a validated JSON schema before use.
  - Schema validation failures must block downstream actions and surface a user-visible error.
  - AI outputs must be explainable via stored rationale or confidence signals.
- Failure Handling
  - Partial failures must not advance workflow state.
  - If a downstream integration fails (HubSpot, Gmail), the system must remain in a recoverable state.
  - No automated retries may result in user-visible side effects without confirmation.
- Privacy & Compliance
  - Only publicly available information may be used for NGO research and reputational summaries.
  - The system must not scrape or infer private, gated, or personal data.
  - Stored data must be limited to workflow-critical information only.

---

0. Partner Status Check (Dots.eco Environmental Partner)

Description: Determines whether an identified NGO is already an environmental partner of Dots.eco and adjusts the process accordingly.

If the NGO is an existing environmental partner, the platform skips HubSpot company/contact/deal creation, retrieves the relevant contact details from the existing record, and performs outreach using a partner-specific email template.

Functional Requirements:

- Cross-check NGO against existing deal cards in the Environmental Pipeline in HubSpot.
- Classify NGOs into one of three states:
    - Existing environmental partner
        - Deal stage is one of: Closed Won, Projects Added to Allocation(s), First Activity, Ongoing Activity, At Risk
    - Listed non-partner NGO
        - Deal exists in the Environmental Pipeline but is in any other stage
    - Non-listed non-partner NGO
        - No deal found in the Environmental Pipeline

Workflow by Status:

- For existing environmental partners:
    - Skip HubSpot company, contact, and deal creation
    - Retrieve contact email from existing HubSpot records
    - Apply partner-specific outreach email template
- For listed non-partner NGOs:
    - Skip HubSpot company, contact, and deal creation
    - Retrieve contact email from existing HubSpot records
    - Apply non-partner (warm) outreach email template
- For non-listed non-partner NGOs:
    - Proceed with standard HubSpot workflow:
    - Create or update Company
    - Create or update Contact
    - Create a new Deal in the Environmental Pipeline
    - Apply new-partner introduction email template

Non-Functional Requirements:

- Fast lookup with minimal HubSpot API calls
- Clear partner-status labeling in the NGO selection UI
- Deterministic, mutually exclusive classification (no ambiguous states)

---

1. Intelligent Brief Parsing (Google Gemini AI)

Description: Transforms unstructured, free-text briefs into structured, machine-readable parameters that guide NGO discovery, CRM logic, and outreach messaging.

Functional Requirements:

- Accept free-text input (copy-paste or typed)
- Extract and normalize key entities, including:
  - Location (*e.g.* country, region when available)
  - Ecosystem theme (*e.g.* rainforests, marine ecosystems, grasslands)
  - Relevant Dots.eco impact categories (*e.g.* planting trees, protecting wildlife habitat, restoring coral reefs)
  - Associated iconic species (if explicitly mentioned)
  - Narrative themes (*e.g.* drought resilience, biodiversity protection, community livelihoods)
  - Target beneficiaries (if present)
  - Budget indicators (if present or implied)
  - Constraints (*e.g.* geography limits, NGO type, partnership exclusions)
- Output a structured JSON object suitable for downstream steps, including:
  - NGO identification and ranking
  - HubSpot deal creation (when applicable)
  - Email personalization logic
- Use of Parsed Brief Data in HubSpot

- Parsed brief data must be used only when creating a new HubSpot deal for an NGO that does not already have an existing deal in the Environmental Pipeline.
- If a HubSpot deal already exists for the NGO (in any stage):
  - The platform must not modify, overwrite, or enrich existing deal, company, or contact properties
  - Existing records are treated as read-only
- Output structured JSON for downstream steps

Non-Functional Requirements:

- High tolerance for incomplete or informal text
- Fast response time (<5s)

---

2. Automated NGO Identification & Research

Description: Identifies NGOs aligned with parsed brief criteria, enriches them with key context, and determines their current relationship status with Dots.eco via HubSpot.

Functional Requirements:

- Query NGO datasets and trusted public sources
- Rank NGOs by relevance to the parsed brief
- For each NGO, check HubSpot Environmental Pipeline to determine relationship status
- Classify each NGO as one of:
  - Existing environmental partner
  - Listed non-partner NGO
  - Non-listed non-partner NGO
- Partner status classification follows the rules defined in Section 0 (Partner Status Check).
- Generate short research summaries including:
  - Mission alignment
  - Geographic presence

- ○ Program relevance
- ○ Credibility signals (*e.g.* established NGO, past impact)
- Generate a concise "Why this NGO fits the brief" summary

Non-Functional Requirements:

- Transparent reasoning for NGO selection
- Avoid duplicate or low-quality organizations
- Deterministic status classification based on HubSpot data

2a. Reputational Risk Screening

As part of the NGO research process, the platform evaluates whether candidate NGOs are associated with public scandals or controversies that may pose reputational risk.

Functional Requirements:

- Query trusted public sources (e.g. reputable news outlets, NGO watchdogs, regulatory disclosures)
- Identify and summarize substantiated scandals or controversies, if present
- Assign an indicative Reputational Risk Score and Risk Level:
  - ○ Low risk
  - ○ Medium risk
  - ○ High risk
- Provide concise, neutral summaries with direct links to sources
- Behavioral Requirements:
  - ○ No NGO is automatically excluded or blocked based on risk level
  - ○ Risk information is advisory and intended to support human judgment

Non-Functional Requirements:

- Conservative and explainable scoring logic
- Source transparency
- Clear separation between factual reporting and interpretation

2b. NGO Review & Selection Screen

Description: Dedicated interface for reviewing identified NGOs and selecting which organizations will receive outreach.

Functional Requirements:

- List view of identified NGOs
- For each NGO, display:
    - NGO name
    - Geography
    - Environmental focus
    - Short fit rationale ("Why this NGO fits the brief")
    - Partner status (existing partner, listed non-partner, or non-listed non-partner)
    - Reputational risk summary, including:
        - Risk level (low / medium / high)
        - Short neutral summary of identified scandals or controversies (if any)
        - Links to independent sources
- Selection checkboxes to include or exclude NGOs from outreach
- NGOs with medium or high risk must display a visible risk flag
- High-risk NGOs must include an explicit "Reputational Risk" notice
- Users can still select and proceed with any NGO regardless of risk level
- Default selection logic (*e.g.* top-ranked NGOs pre-selected)
- Ability to deselect all or select multiple NGOs

Non-Functional Requirements:

- Clear, scannable layout
- Fast load time
- No outreach actions triggered until user confirmation

3. Personalized Email Drafting

Description: Generates tailored outreach emails per NGO using pre-approved templates stored on Google Drive.

Functional Requirements:

- Retrieve outreach email templates from a designated Google Drive folder
- Support multiple templates, including:
    - Existing environmental partner outreach
    - Listed non-partner (warm) outreach
    - New NGO introduction
- Automatically select the appropriate template based on NGO status (as defined in Section 0)
- Populate templates with NGO-specific context and brief-derived information
- Maintain configurable tone (default: concise, professional, friendly)
- Insert placeholders where human confirmation may be required
- Support regeneration and inline editing

Constraints:

- Templates must be editable in Google Drive without code changes
- Emails must remain editable before sending

---

4. Email Review Window

Description: Dedicated interface for reviewing, editing, and approving outreach emails before sending.

Functional Requirements:

- Side-by-side view of NGO context and email draft
- Inline editing
- Clear call-to-action to send or save as draft

5. Gmail Integration & Sending

Description: Enables human-reviewed outreach emails to be sent via Gmail while ensuring all communications are logged in HubSpot for visibility and tracking.

Functional Requirements:

- Integrate with Gmail (via Gmail API) to:
    - Display drafted emails in an email review window
    - Allow final human edits before sending
- Send emails from the user's Gmail account
- Automatically BCC the appropriate HubSpot logging address on every sent email (each Hubspot user has a unique BCC Hubspot address for logging).
- Associate logged emails with the correct existing deal and contact in HubSpot
- Apply Gmail labels on send:
    - Create (if not existing) a label under "Prospect Environmental Partners / {{NGO Name}}"
    - Apply the label to the sent email and all subsequent replies
- Support sending:
    - Initial outreach email

Non-Functional Requirements:

- Compliance with Google API usage policies
- Secure token storage

6. Inbox Response Tracking

Description: Monitors inbox for replies from contacted organizations.

Functional Requirements:

- Detect replies tied to outreach threads
- Update outreach status (Replied / No response / Follow-up sent)
- Display response summaries in the UI

Non-Functional Requirements:

- Read-only inbox access beyond tracked threads

---

7. Follow-Up Reminder & Confirmation

Description: Supports a controlled, human-in-the-loop follow-up process by reminding the user to confirm whether a response has been received and preparing a second outreach email only upon explicit confirmation.

Functional Requirements:

- First follow-up cycle:
  - Wait 3 business days after the initial outreach email is sent
  - Check for absence of replies in the tracked Gmail thread
  - If no reply is detected, send a reminder email to the sender's own email address (same account used to send outreach)
  - Reminder email must:
    - Reference the NGO name and original outreach date
    - Ask the user to confirm whether a reply has been received outside the tracked thread
    - Provide clear actions (e.g. "Yes, reply received" / "No, send follow-up")
  - If the user confirms no reply received:
    - Retrieve Reach Out Template 2 from the designated Google Drive folder
    - Populate the template using NGO context and previous outreach information
    - Generate a follow-up draft for user review
    - Require explicit user approval before sending

- - - If the user confirms a reply was received:
      - Mark the outreach as replied
      - Do not generate or send a follow-up email
- Second follow-up cycle:
  - Wait 3 additional business days after Reach Out 2 is sent
  - Check again for absence of replies in the tracked Gmail thread
  - If no reply is detected, send a second reminder email to the sender
  - If the user confirms no reply received:
    - Retrieve Reach Out Template 3 from the designated Google Drive folder
    - Populate the template using NGO context and prior outreach history
    - Generate a second follow-up draft for user review
    - Require explicit user approval before sending

Constraints:

- Weekends excluded from all countdowns
- No follow-up email may be sent without explicit user confirmation
- Follow-up templates must be editable in Google Drive without code changes

---

8. Web Interface

Description: Simple, intuitive interface for end-to-end workflow.

Key Screens:

- Brief input screen
- Parsed brief review
- NGO list & summaries
- Email draft review

Non-Functional Requirements:

- Minimal training required
- Responsive design

---

9. Cloud Execution Architecture (Google Cloud Functions)

Description: The platform runs as a set of Google Cloud Functions to support reliable time-based workflows (*e.g.* follow-up reminders), background execution, and inbox monitoring without requiring a user's local machine to remain online.

Technical Requirements:

- Google Cloud Functions (2nd gen) for backend execution
- Event-driven and scheduled execution (Cloud Scheduler) for:
  - Follow-up timing logic
  - Reminder emails
  - Inbox response checks
- Secure integration with:
  - Gmail API (OAuth)
  - HubSpot API (OAuth / private app)
  - Google Drive API (template retrieval)
- Environment-based configuration (GCP Secret Manager)
- Stateless function design with external workflow state stored in Supabase (PostgreSQL).
  - Supabase is used to persist outreach state, timestamps, and AI-derived structured outputs required for reliable follow-up workflows.
- Clear deployment and environment setup instructions in repository README

Data Persistence Strategy

The platform uses Supabase (PostgreSQL) as its primary persistence layer. Structured relational tables and JSON-based fields are used to store parsed briefs, NGO evaluations, outreach records, and follow-up state.

This approach ensures strong consistency, reliable state transitions, and safe execution of scheduled workflows, while preserving flexibility for AI-generated and semi-structured data.

Out of Scope (v1)

Multi-step follow-up sequences beyond second email Advanced CRM automation (workflows, pipelines customization) NGO onboarding or contracting workflows Impact reporting.

Risks & Mitigations

Risk	Mitigation
Low-quality NGO matches	Human review + ranking transparency
Over-generic emails	NGO-specific grounding + regeneration
Data privacy concerns	Minimal data retention + GCP security best practices

Users overlook reputational issues	Prominent flags and concise summaries
False positives or nuance loss	Source links + neutral language
Perceived endorsement of risky NGOs	Explicit advisory framing

---

Assumptions

- Users have Gmail accounts
- Users prefer human-in-the-loop sending
- NGO research can rely on public and trusted datasets

Future Enhancements

- Multi-language outreach
- Follow-up sequencing
- Advanced HubSpot automation (deal stage updates, workflows)
- Learning loop based on response outcomes

Definition of Done (v1)

- User can go from raw brief to Gmail draft without manual research
- NGO list is relevant and defensible
- Emails require minimal editing before sending
- System runs reliably within GCP usage limits

Appendix A — Reputational Risk Scoring (Illustrative Model)

Scoring dimensions (0–2 each):

Dimension	0	1	2
Severity	Minor criticism	Operational failures	LegalEthical violations
Recency	> 10 years ago	3-10 years	< 3 years
Frequency	Isolated	Repeated	Systemic
Resolution	Fully addressed	Partially addressed	Unresolved

Total Score → Risk Level

0–2: Low risk

3–5: Medium risk

6–8: High risk

Note: Scoring is indicative and supports qualitative review.