Saving Tomorrow's Agriculture Resources (STAR)
Phase II Progressive Web Application Design & Development
Request for Proposals

STAR is requesting proposals from qualified vendors to provide the technical services needed to enhance the design and expand development of STAR's progressive web application (PWA) to meet the needs of a national scale program.

RFP Issued: August 31, 2023
Responses Due: September 29, 2023

Send proposals and any questions to Amanda Raster (amanda@STARconservation.org).

About STAR

STAR is a simple and straightforward tool to increase voluntary conservation practice implementation on agricultural lands. Developed by farmers and ranchers, the STAR rating of 1 to 5 evaluates conservation practices and processes on individual fields based on locally identified natural resource concerns and relevant scientific research distilled into a simple field form and scoring methodology developed by a local group of respected scientists and agronomic experts. Farmers and ranchers receive a STAR score along with a clear conservation improvement roadmap that guides them toward minimizing environmental impacts, a field sign with their STAR rating, and direct connections to locally tailored, free, unbiased technical support. STAR publicly recognizes farmers and ranchers for conservation progress and creates a market signal for supply chain partners to connect producers to conservation incentives.

STAR is currently available through 77 local SWCDs across Illinois (www.starfreetool.com), four counties in IN, has been adopted by conservation district Affiliates in IA and MO, and is part of an enhanced soil health program in Colorado and a state soil health initiative in Washington. An expansion is underway for a variety of cropland and grazing production systems in the West (Wyoming, Idaho, Montana, Utah, and New Mexico) and additional states in the Midwest over the next three years.

Background on Purpose and Current Web App

The goal of this project is to develop an integrated platform that meets the needs of STAR program participants at scale, including farmers and ranchers, landowners, licensees, conservation and supply chain partners, project admins, and STAR staff. The current Progressive Web App (PWA) provides farmers and ranchers with a simple interface to enter field-level management information to generate a STAR score, practice recommendations, and next steps based on the data entered. An admin portal allows STAR staff, licensees, and designated affiliate representatives to manage field and producer data,

generate reports, select fields for verification, and view program statistics and estimated environmental outcomes. Collectively, these features were designed for the IL STAR program and can be used as a template for Phase II of the STAR PWA development, which will cover the aforementioned Western and Midwestern expansion.

Objectives

The objectives of the STAR PWA are to provide farmers and ranchers with a simple, intuitive way to enter and score STAR field data; provide real-time practice recommendations to help producers improve their STAR rating; easily connect producers to resources and incentive programs; reduce the workload for STAR licensees; and manage data for program evaluation and improvement planning. To this end, we are seeking to expand on our existing PWA to develop an integrated tool with the following minimum features:

- Completely cloud/web-based and functions seamlessly on both large and small screen devices
- Accommodates multiple data collection forms (i.e., STAR field forms) and scoring systems (i.e., STAR scoring sheets) across regions and production systems and provides results at a field level
- Is user friendly, adaptive, and streamlined to minimize producer effort, and to the extent possible, preloads FSA field boundaries and other publicly available data layers (i.e., CDL).
- Generates a STAR score and Conservation Improvement Plan based on user input and identifies/initiates next steps, including a notification to STAR Affiliate/licensee representatives
- Tracks fields by geographical location, production system type, enrollment year, specific project participation, and other possible metrics
- Provides data analysis and summaries via admin/licensee dashboard and reports, including sorting by production system, specific practice implementation, project participation, etc.
- Provides multiple levels of user access to data, e.g., producer, super admin, advisor, project manager, etc.
- Enables admins and project managers to communicate with farmers and ranchers through the platform
- Allows for API integration to streamline data entry and export
- Includes strong data security and producer privacy protections

Features of Current Web App

Key features of the current Web App include, but are not limited to, the following:

Farmer/Rancher Functionality[1]

- Account set up
- Field boundary selection based on zip code
- Auto-generated four-year crop rotation history on selected field
- Field form data entry
- Automatic field form scoring and generation of field-specific STAR rating
- Generation of customized Conservation Improvement Plan identifying practices the producer could implement to improve their STAR rating
- Links to educational and technical support resources
- In-app request for field signs upon receiving STAR score
- In-app contacts for STAR staff and licensee representative
- Downloadable report showing current practices, respective point values, and field-level score

Licensee Functionality

- Account set up
- Data entry on behalf of producers in their assigned county/region
- Paper/pdf field form upload
- Ability to edit submitted and scored fields enrolled in licensee's assigned county/region
- Alphabetized, searchable list of all fields and producers enrolled in licensee's assigned county/region
- Access to field-level Conservation Improvement Plans
- Access to Web App Dashboard with summary stats for licensee's assigned county/region, including number of growers and fields, acres, average STAR rating, top conservation practices implemented, etc.
- Ability to compare summary stats across years
- County-level and aggregate environmental outcomes estimations
- Verification: In-app selection of producers, request for supporting information/documentation, certification of documentation provided, and storage of verification materials

Admin Functionality

- Ability to add/remove licensees

[1] A walkthrough of the Web App producer interface is available here: STAR August 2023 Web App User Instructions.pptx

- Ability to unlock and edit submitted and scored fields
- Access to Web App Dashboard with summary stats, including number of growers and fields, acres, year-over-year repeat fields with practices completed, distribution of STAR scoring across enrolled fields, top conservation practices implemented, improvement plans generated; searchable user, producer and field lists; verification documentation; etc.
- End-of-year summary with user statistics
- Data export at county, state, regional, and watershed scales

Data Management

- Central, searchable database of practices reported in field forms
- Unique field identifier to track data entry and changes over time
- Differential data access based on user type

Phase II Scope of Work

The goal of Phase II Web App Design and Development is to improve the functionality of the existing Web App while also leveraging the current structure to support field form data collection, scoring, and Conservation Improvement Plan generation for additional states as the STAR program expands nationally.[2] The proposed Phase II scope of work will build upon the IL STAR app to include, at minimum, the following:

- Structural Requirements
    - Integrated national tool with multiple state and production system modules
    - Adaptive field forms and scoring systems
    - Version control and archive functions for field forms and scoring systems
- User Interface
    - Simple identification of field location and boundaries (e.g., via coordinates, section/township/range, etc.)
    - Similarities in data entry display/interface across browsers, including for mobile users
    - Easily accessible supplementary information for each data field, where needed (e.g., definitions, units of measure, etc.)
- Data
    - Underlying/clickable base layer of FSA boundaries
    - Historical crop data import
    - Possible API intake from 3rd party platforms or manual data upload (e.g., spreadsheet)

[2] If the current PWA vendor is not selected for Phase II, all efforts will be made to migrate any and all relevant data to the new provider/platform. Coding for the existing PWA can also be made available to the Phase II developer upon request.

- Data retention to allow producers to use and modify field-level data entered for prior years
- Clear language provided to producers regarding data privacy, protection, and data sharing options, including capture of producer acknowledgement of data sharing for specific projects and an opt out feature
- Secure, searchable database of information reported in field forms and corresponding results
- Ability to upload paper forms and Excel-based scoresheets and attach to producer accounts
- Ability to integrate outcomes estimation methodology developed for IL STAR program
- Possible integration with external outcomes prediction tool(s)

- Results
  - Field-level score
  - Conservation Improvement Plan with county-level resource (e.g., financial, technical) recommendations
  - Links to educational, financial, technical assistance, and other resources and programs
  - Connection to STAR Affiliate/Licensee contact for follow-up
  - Permissions function to allow producers to share data with other entities
  - Tracking of participation in external projects and programs
- User Access and Features
  - Admin dashboard for national STAR staff
  - STAR Affiliate/licensee dashboard and assignable user roles for viewing farmers/fields
  - Admin access to all possible user interfaces and features across the app and dashboard
- Data Analysis Tools
  - Program/participation statistics by field, farm, county, and region
  - Downloadable reports (field-level, county-/conservation district-level, state-level, and regional summaries; Conservation Improvement Plans; program statistics, etc.)
  - Improved data visualization and analytics
- User Experience
  - Speed and ease of data entry, results generation, interpreting next steps
  - Ability to edit submitted and scored fields
  - Ability to retroactively create Conservation Improvement Plans
  - Convenient access to STAR affiliates/licensees
  - Ability to order field signs within the platform

Work will cover project management, collaboration with STAR staff, design, development, integration and testing, implementation, operations and maintenance, user support and hosting. Proposals from

companies that are willing to engage in a long-term partnership with STAR for ongoing PWA development, operations, and maintenance as our program expands will be prioritized.

Timeline and Milestones

- Work to begin: Approx. Oct 9, 2023
- Year 1 (Oct 2023-Sept 2024): Develop a minimum viable product to collect the information needed to generate field-level STAR ratings for Illinois and Colorado
    - Beta version available for testing: Apr 2024
    - Beta version available for producer enrollment: June 2024
    - Refine features of MVP and launch PWA 2.0: Sept 2024
- Year 2 (Oct 2024-Sept 2025): Complete build out of field forms and scoring systems for four additional states
    - Beta version available for testing: Apr 2025
    - Beta version available for producer enrollment: June 2025
    - Refine features for new states and launch PWA 2.1: Sept 2025
- Year 3 (Oct 2025-Sept 2026): Complete build out of field forms and scoring sheets for remaining expansion states in West and Midwest regions
    - Beta version available for testing: Apr 2026
    - Beta version available for producer enrollment: June 2026
    - Refine features for new states and launch PWA 2.2: Sept 2026
- Additional states will be added in subsequent years pending available funding

Budget

Approximately $500,000-750,000 for the first three years

Proposal Requirements

Please include the following in your proposal submission:

- Overview or your company, organizational capacity, team qualifications, references, and recent design and development examples
- Overview of how you will meet our objectives, to include:
    - Explanation of your proposed platform
    - Outline of your PWA design and development strategy and how you will meet our objectives
    - Your strategy for mitigating, reducing, and managing risk, adjustments to scope, and changing priorities as the project evolves
    - Your protocol for maintaining data stewardship, quality assurance, and quality control throughout the duration of the project

- Your process for tracking and addressing user support requests, including response and resolution times
- You are welcome to propose additional platform components not listed above for STAR's consideration

- Proposed timeline with activities and deliverables from contract execution to finished design to final build. Please include an estimate of the number of hours your company can devote to this project weekly, from contract execution to final build.
- Pricing with optional elements line-itemed
- Estimate of post-build annual Operations & Management expenses, including any third-party services needed
- Terms & conditions

Proposals should be submitted in electronic format using either Microsoft Word or PDF, with supporting pricing information in Microsoft Excel, to: amanda@STARconservation.org.

RFP & Project Timeline

- RFP posting date: August 31, 2023
- Q&A webinar: September 13, 2023 @ 2:00-3:00 pm eastern. Register at the link below[3] or contact amanda@STARconservation.org to be added to the invite list.
- Proposals due: September 29, 2023 @ 6:00 pm eastern
- Proposal review: Week of October 2, 2023
- Interviews with qualified applicants: Week of October 9, 2023[4]
- Review interview outcomes and select vendor: Week of October 16, 2023
- Notify selected developer: No later than October 23, 2023
- Project Kick-off: No later than October 30, 2023

[3] https://us06web.zoom.us/meeting/register/tZ0udOuvpz4tGtF5TSe2bgoFjiWrkauNXDJQ#/registration

[4] Proposals will be reviewed on a rolling basis upon submission, and interviews may be scheduled prior to the week of October 9.