



INNOVATIVE BLOCKCHAIN TRACEABILITY TECHNOLOGY AND STAKEHOLDERS' ENGAGEMENT STRATEGY FOR BOOSTING SUSTAINABLE SEAFOOD VISIBILITY, SOCIAL ACCEPTANCE AND CONSUMPTION IN EUROPE

DELIVERABLE D2.2 – SEA2SEE ADAPTED CONSUMER FEEDBACK COLLECTION TOOL

Lead Partner Organization	Tilkal
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Review History

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Document Approval

Name	Role	Action	Date
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Nature of the deliverable

R	Document, report (excluding the periodic and final reports)	<input type="checkbox"/>
DEM	Demonstrator, pilot, prototype, plan designs	<input type="checkbox"/>
DEC	Websites, patents filing, press & media actions, videos, etc.	<input type="checkbox"/>
DATA	Data sets, microdata, etc.	<input type="checkbox"/>
DMP	Data management plan	<input type="checkbox"/>
Ethics	Deliverables related to ethics issues.	<input type="checkbox"/>
SECURITY	Deliverables related to security issues	<input type="checkbox"/>
Other	Software, technical diagram, algorithms, models, etc.	<input checked="" type="checkbox"/>

Dissemination level

PU	Public — fully open (automatically posted online on the Project Results platforms)	<input checked="" type="checkbox"/>
SEN	Sensitive — limited under the conditions of the Grant Agreement	<input type="checkbox"/>

ACKNOWLEDGEMENT

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Current seafood traceability tools and services have the potential to take advantage of novel blockchain technologies to obtain a wide range of data making sustainable seafood practices more visible to consumers. Sea2See project will fill in existing seafood traceability gaps through development and demonstration of an innovative end-to-end blockchain traceability model throughout the seafood value chain and professional and consumer applications to increase trust and social acceptance of sustainably fished and farmed seafood.

The project will provide technological solutions to answer the need of a valuable source of data collected throughout the whole seafood value chain, verified, and covering inputs from diverse stakeholders. For that purpose, a specific focus will be put on active commitment of stakeholders and real empowerment of consumers through the implementation of societal and sectoral strategies for co-creation, communication and awareness raising.

The project runs from July 2022 to June 2026. It involves 14 partners from 6 EU countries, and is coordinated by SMARTWATER PLANET SL, Spain.

More information about the project can be found at: <http://www.sea2see.eu/>

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EXECUTIVE SUMMARY

The Sea2See project aims to enhance transparency and traceability in the seafood supply chain, empowering consumers to make informed, sustainable purchasing decisions. As part of this mission, a feedback feature in the Consumer App was conceived and developed to collect and analyze consumer insights on their interactions with the Sea2See web app.

This deliverable introduces two key components:

The Feedback Page in the Consumer App:

- This feature allows users to rate their experience, assess the app's usefulness, and share suggestions for improvement through a simple, user-friendly interface.
- It was designed collaboratively with project stakeholders to ensure relevance, usability, and alignment with the project's goals.

The Feedback Analysis Dashboard:

- Integrated into the Sea2See traceability platform, this dashboard provides real-time access to consumer feedback data.
- It offers detailed reports on app usage, consumer ratings, and responses to targeted questions, supporting continuous improvement efforts.

By collecting and analyzing consumer feedback, this feature supports two critical objectives:

- **Improving User Engagement:** Insights gathered help refine the app and better address consumer needs.
- **Promoting Sustainable Practices:** The feedback assesses whether the app influences purchasing habits and encourages more responsible choices.

Developed using a modern technical stack (Ionic Framework, Stencil Framework) and adhering to GDPR standards, this feature ensures scalability, reliability, and compliance with data privacy regulations.

The feedback feature is a cornerstone of Sea2See's vision to create a consumer-centered, transparent seafood supply chain, driving sustainability and trust across the industry.

ACRONYMS AND ABBREVIATIONS

ACRONYM	DEFINITION
GDPR	General Data Protection Regulation
GTIN	Global Trade Item Number

PROJECT PARTNERS

#	Partners full name	Short	Country	Website
1	SMARTWATER PLANET SL	SmartWater	ES	www.smartwaterplanet.com
2	TILKAL	Tilkal	FR	www.tilkal.com
3	PAGE UP	PAGE UP	FR	www.pageup.fr
4	SUBMON	SUBMON	ES	www.submon.org
5	CENTRO DE CIENCIAS DO MAR DO ALGARVE	CCMAR	PT	www.ccmар.ualg.pt
6	ASOCIACION NACIONAL DE FABRICANTES DE CONSERVAS DE PESCADOS Y MARISCOS-CENTRO TECNICO NACIONAL DE CONSERVACION DE PRODUCTOS DE LA PESCA	ANFACO	ES	www.anfaco.es
7	IOANNA N.ARGYROU SIMBOULOI EPICHEIR ISIAKIS ANAPTYXIS ETAIREIA PERIORISMENIS EYTHYNIS	NAYS	EL	www.nays.gr
8	SEAENTIA-FOOD, LDA	SEAentia	PT	www.seaentia.com
9	LANDLNG AQUACULTURE BV	LA	NL	www.landingaquaculture.com
10	UNIVERSIDADE DE AVEIRO	UAVR	PT	www.ua.pt
11	VITAGORA POLE	VITAGORA	FR	www.vitagora.com
12	ETHIC OCEAN	Ethic Ocean	FR	www.ethic-ocean.org
13	EVROPROJECT OOD	EP	BG	www.euoproject.bg
14	ANP - ASSOCIACAO NATUREZA PORTUGAL	ANP	PT	www.natureza-portugal.org

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1. INTRODUCTION

1.1. CONTEXT OF THE PROJECT

Sea2See aims to enhance traceability and transparency in the seafood supply chain. A key part of this effort is providing consumers with actionable information and empowering them to make informed, sustainable purchasing and consumption choices.

As part of this mission, we developed a feedback feature integrated into the consumer app. This enables users to rate their experiences, provide insights, and suggest improvements.

1.2. PURPOSE OF THIS DOCUMENTATION

This document outlines the development process and functionality of the feedback feature, including:

- The feedback page in the consumer app.
- The reporting and analysis dashboard.
- The technologies used and our compliance with GDPR.

2. FEEDBACK PAGE IN THE CONSUMER APP

2.1. OVERVIEW OF THE FEEDBACK FEATURE

The feedback page is a newly integrated component of the consumer-facing app "Spotlight." It allows users to share their experiences and opinions on the app's usability, the usefulness of its content, and its impact on their purchasing decisions

The feedback collected will serve two primary purposes:

- **Improvement of the app:** By analyzing user responses, we can address pain points and implement suggested enhancements.
- **Evaluation of impact:** Responses will help us understand how the app influences consumer habits and whether it promotes sustainable purchasing decisions.

2.2. DESIGN AND CUSTOMIZATION PROCESS

The design of the feedback page in "Spotlight" was the result of a structured and collaborative process involving extensive consultations with project partners and stakeholders, including app developers,

domain experts, user representatives, and institutional partners. To ensure the page met user needs and project objectives, we organized multiple focus groups with representative users, conducted stakeholder interviews, and facilitated co-design workshops. These sessions allowed us to identify critical evaluation dimensions such as app usability, content relevance, and its impact on purchasing decisions. These insights guided the creation of targeted questions that align with the goals of the project.

2.3. KEY FEEDBACK QUESTIONS

The finalized feedback page includes the following questions:

1. How would you rate your experience on this web app? (*Response format : Rating on a 5-point scale*)
2. Do you find the delivered information useful? (*Response format : Yes/No*)
3. Does the app help you make more responsible or sustainable purchasing decisions? (*Response format : Yes/No*)
4. What additional features or information would you like to see to enhance your experience with the app? (*Response format : Open text field*)

These questions aim to evaluate the app's impact, identify areas for improvement, and gather actionable feedback. Below is an example of the feedback page interface:

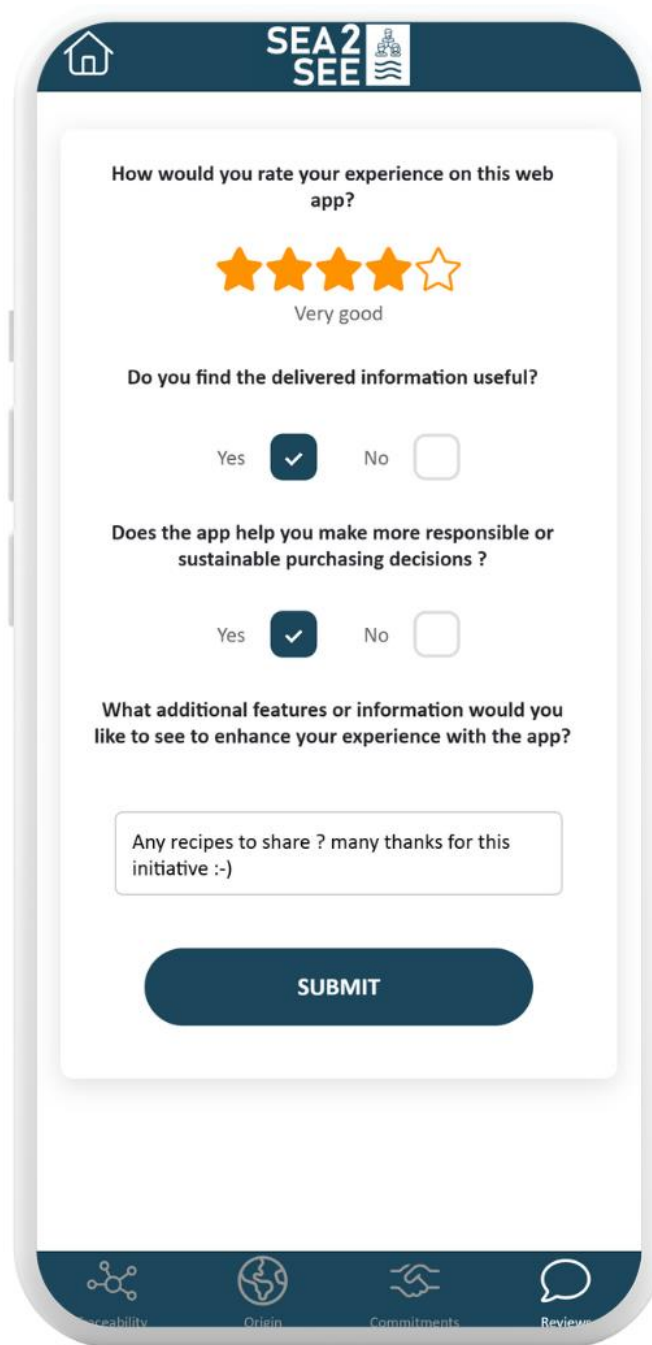


Figure 1 : Screenshot of the review tab within Spotlight

3. DASHBOARD FOR FEEDBACK ANALYSIS

3.1. OVERVIEW OF THE DASHBOARD

To manage and analyze feedback, we developed a **dashboard** within our traceability platform. It consolidates data from the consumer app, including:

- Number of scans performed on QR codes.
- Consumer ratings and reviews.
- Responses to specific feedback questions.

3.2. CORE FUNCTIONALITIES AND FEATURES

The core functionalities of the dashboard include:

- **Real-time reporting:** A live overview of all interactions, including scans and reviews.
- **Filter and search tools:** Easily locate feedback linked to specific products or dates.
- **Summary statistics:** Aggregated data on consumer ratings and responses.
- **Data export:** A clickable button allows users to download all scan and review data in .CSV or Excel format. This feature facilitates offline analysis, reporting, and integration with other systems or workflows.

3.3. EXAMPLE OF CONSUMER INTERACTION AND DATA COLLECTION

Here is a visual representation of how consumer interactions are tracked and analyzed:

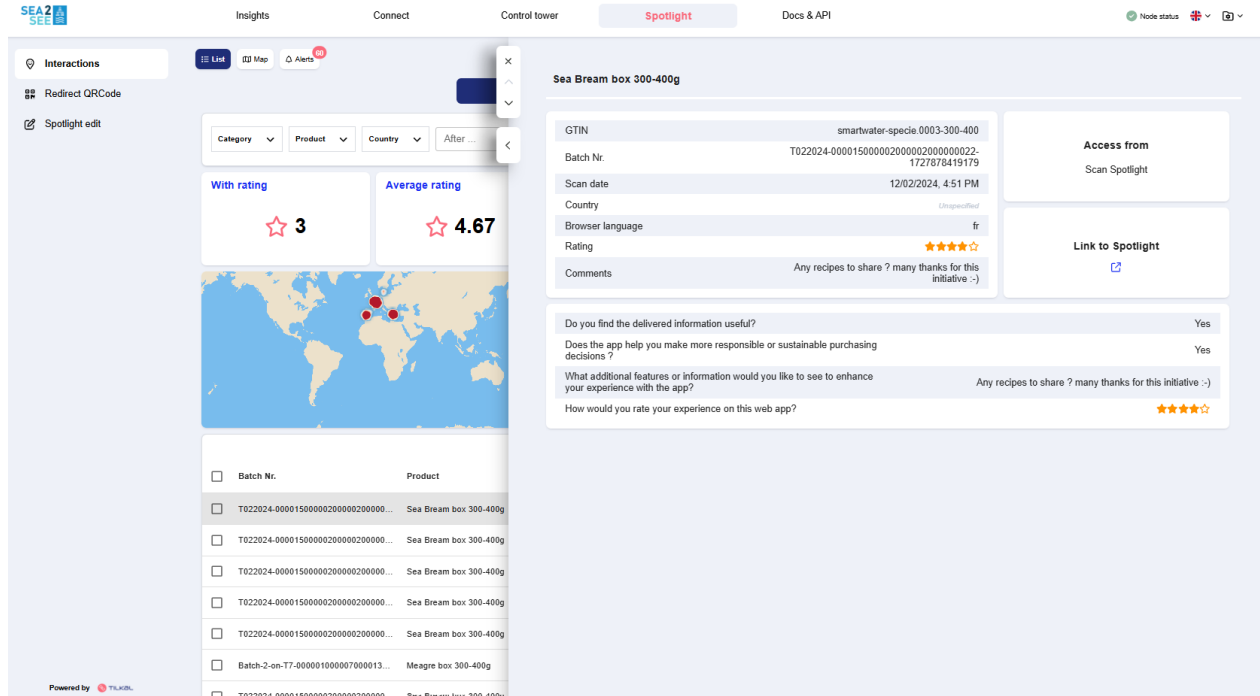


Figure 2 : Dashboard Interactions within the Sea2See traceability platform

4. TECHNOLOGIES AND DATA PRIVACY

4.1. TECHNICAL STACK USED

The development of the feedback feature and dashboard leveraged the following technologies: Ionic Framework and Stencil Framework, language TypeScript.

Ionic Framework, Stencil Framework, and TypeScript were chosen for their synergy in building modern, cross-platform, and scalable applications. Ionic provides a robust foundation for creating responsive and user-friendly interfaces across web and mobile platforms, while Stencil enables the development of reusable, lightweight, and high-performance web components that integrate seamlessly with various frameworks. Both leverage TypeScript, which ensures code reliability, scalability, and maintainability through strong typing and better developer tooling. Together, these technologies streamline the development process, delivering efficient, consistent, and future-proof solutions.

4.2. COMPLIANCE WITH GDPR

Sea2See places a high priority on data privacy and security. In compliance with the **General Data Protection Regulation (GDPR)**:

- All consumer data is anonymized before analysis.
- Users must provide explicit consent before submitting their location.
- Data collection is strictly limited to the scope defined by the app's privacy policy: no IP addresses are collected, and approximate geographic location (city-level) is retained only if the user agrees upon their very first access to the web app.
- Additionally, all collected data is stored securely and is not shared with third parties.

5. CONCLUSION

The feedback feature represents a significant step forward in Sea2See's mission to improve seafood traceability and promote sustainable practices. By enabling consumers to share their insights, we gain valuable input to refine the app and assess its real-world impact.

Moving forward, our longer-term goals include:

- Expanding the range of questions to capture more nuanced feedback.
- Continuing to align with the evolving needs of consumers and stakeholders.

This feature is a cornerstone of our broader vision to create a transparent, consumer-centered seafood supply chain.