

**Business Use Case & User Story Document**

**Project**: UK Hydrographic Office  
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**1. Business Overview**

The UK Hydrographic Office (UKHO) project is a digital platform developed for the UK government to manage maritime data, charting, and navigation products for safe marine travel. The system facilitates global maritime operations by publishing and updating digital and paper charts, nautical publications, and bathymetric datasets.

**2. Objectives**

* Provide a centralized system to manage hydrographic and cartographic data.
* Enable secure data exchange between surveyors, analysts, and publication teams.
* Automate validation and processing of navigational data inputs.
* Improve turnaround time for publishing nautical charts and updates.
* Ensure the system is compliant with international maritime data standards (S-57, S-100).

**3. Actors / User Roles**

* **Data Analyst**: Processes incoming marine data and validates accuracy.
* **Product Owner**: Defines requirements and accepts features post-development.
* **Developer**: Implements features and resolves bugs.
* **QA Engineer**: Tests features based on acceptance criteria.
* **Stakeholders**: Review reports and updates.
* **End User (Captain/Navigator)**: Uses data products for navigation (indirect role).

**4. Use Case: Validate and Publish Nautical Chart**

* **Use Case ID**: UC\_UKHO\_001
* **Title**: Validate and Publish Nautical Chart
* **Actor**: Data Analyst
* **Description**: Analyst reviews hydrographic data and prepares a validated chart ready for publishing.
* **Preconditions**: Hydrographic data is ingested into the system.
* **Postconditions**: Validated chart is ready for release to the distribution system.

**Basic Flow:**

1. Analyst logs in to the secure system.
2. Selects a dataset batch to review.
3. Uses UI to apply validation rules and automated checks.
4. Flags or corrects anomalies.
5. Approves the chart for publishing.

**Alternative Flow:**

* If errors are detected, the batch is sent back for reprocessing or data correction.

**5. User Stories (Agile Format)**

**US\_UKHO\_001 – Validate Hydrographic Data**  
As a data analyst,  
I want to validate incoming hydrographic datasets,  
So that I can ensure accurate maritime charts.

**US\_UKHO\_002 – Publish Approved Chart**  
As a product owner,  
I want to publish approved charts,  
So that mariners receive updated navigation information.

**US\_UKHO\_003 – Automate Data Checks**  
As a developer,  
I want to implement automated data validations,  
So that analysts spend less time on manual checks.

**US\_UKHO\_004 – Review Chart Audit Trail**  
As a QA engineer,  
I want to view chart version history and approvals,  
So that I can verify the compliance of published products.

**6. Assumptions**

* Users are authorized through government-issued credentials.
* Maritime datasets conform to international standards.
* All actions are logged and auditable.

**7. Non-Functional Requirements**

* High availability and disaster recovery setup.
* Support for large geospatial data processing.
* Audit logging and compliance with UK government standards.
* Secure REST API access with JWT tokens.