



# AI-Powered RFQ Automation for Ship Chandlers

*A Product Case Study by Agility*

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## Executive Summary

Ship chandlers operate in one of the most time-sensitive corners of global trade. Every vessel that calls at port sends out requests for quotation for provisions, spares, and stores, and the chandler who replies first, accurately, and at the right price wins the order. Tidal is an AI-native platform built by Agility that reads incoming RFQs, matches items against catalog and pricing data, and generates ready-to-send quotations in minutes instead of days. This document lays out the problem Tidal solves, the approach behind it, the technology it is built on, and the measurable impact it has delivered for chandlers already using it.

## Problem Statement

Ship chandlers receive a high volume of RFQs every day, arriving by email, port agent portals, and phone, often for hundreds of line items per request. Processing each RFQ manually means an operations team has to read the request, look up every item against internal pricing and stock, cross-reference IMPA and ISSA codes, and draft a quotation by hand.

This manual process creates three compounding problems for chandlers:

- Volume outpaces capacity: As RFQ volume grows, chandlers are forced to keep hiring operations staff just to keep up with quoting, rather than growing revenue per employee.
- Slow turnaround costs deals: A typical RFQ takes two to three days to quote manually. In ship handling, the first accurate quote usually wins the order, so slow responses mean lost business to faster competitors.
- Missed and inaccurate RFQs: With high volume and manual entry, some RFQs are never responded to at all, and others go out with pricing or item-matching errors that hurt margins and client trust.

The net effect is a ceiling on growth. A Chandler cannot take on more business without proportionally growing headcount, and even then, response speed and accuracy remain inconsistent.

## **Approach**

Tidal's approach is to put AI at the center of the RFQ-to-quotation workflow, so the system does the reading, matching, and drafting that previously required manual effort, while keeping the Chandler's team in control of final approval and pricing strategy.

### **1. AI-Powered RFQ Reading**

Tidal connects to the Chandler's inbox and automatically reads incoming RFQ emails and attachments, regardless of format. It extracts vessel details, requested items, quantities, and delivery port directly from unstructured text, spreadsheets, or PDFs, removing the need for anyone to manually re-type the request.

### **2. Intelligent Item Matching**

Each extracted item is matched against the Chandler's master catalog using IMPA and ISSA code recognition, so that even loosely worded or abbreviated requests are mapped to the correct product and specification.

### **3. Automated Quotation Generation**

Once items are matched, Tidal applies the Chandler's pricing logic, including client-specific price lists and historical vendor cost data, to generate a complete, ready-to-send quotation. What used to take two to three days of manual work is compressed into minutes.

### **4. End-to-End Order Flow**

Beyond quoting, Tidal carries the workflow forward: confirmed orders convert into purchase orders, vendor invoices feed back into historical pricing data, and profit and inventory reporting update automatically. The result is a single system covering the full RFQ-to-profit cycle, not just the quoting step.

### **5. Continuous Learning Through Reinforcement**

Every action taken inside Tidal, including price adjustments, item corrections, and quote approvals, is captured and fed back into the system through reinforcement learning. This means Tidal does not stay static after deployment: the more a Chandler's team uses it, the better it gets at matching items correctly and pricing quotes the way that team actually prices them. Accuracy and speed compound over time instead of staying fixed at day one.

## Technology Stack

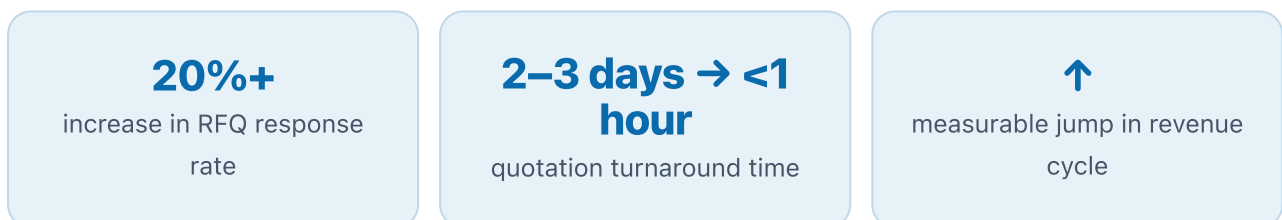
Tidal is built on the MERN stack, giving the platform a modern, scalable, and maintainable foundation suited to a high-throughput, data-heavy workflow.

- MongoDB: Flexible document storage for RFQs, catalog data, price lists, and order history, well suited to the varied and semi-structured nature of RFQ content.
- Express.js: Backend API layer handling business logic for RFQ parsing, item matching, and quotation generation.
- React: A responsive dashboard and smart inbox interface where Chandler teams review, adjust, and approve AI-generated quotations.
- Node.js: Runtime powering the automation layer, including AI-driven parsing, integrations with email systems, and background processing for order and inventory updates.

AI models are integrated into this stack specifically for RFQ text extraction and item matching, forming the intelligence layer on top of a conventional, proven web application architecture.

## Impact

Chandlers using Tidal have seen measurable gains in both responsiveness and revenue, directly tied to the shift from manual to AI-assisted quoting.



By responding to more RFQs, and responding faster, chandlers convert a larger share of inbound demand into confirmed orders rather than losing it to slower competitors. This directly shortens the revenue cycle, since quotations move to confirmed orders and invoicing sooner after the RFQ is received. Because AI handles the repetitive reading and matching work, Chandler teams can absorb higher RFQ volume without proportional headcount growth, improving operational efficiency alongside top-line revenue.

## Conclusion

Tidal turns the RFQ-to-profit cycle for ship chandlers from a manual, capacity-constrained process into an automated, AI-driven one. By reading RFQs automatically, matching items intelligently, and generating quotations in minutes, Tidal allows chandlers to respond to more

RFQs, respond faster, and convert more of that responsiveness into revenue, all on a modern, scalable MERN-based platform built by Agility.