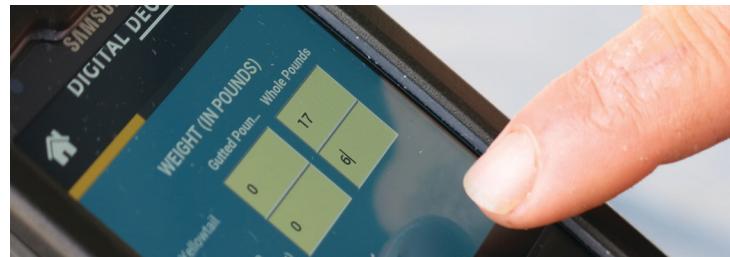




Digital Deck U.S. Virgin Islands and Puerto Rico

The Problem

Fishermen and fisheries managers in the U.S. Virgin Islands (USVI) have expressed a need for a complete and real-time approach to accessing fishery harvest information. Proactive collaborative fisheries resource management to deliver long-term economic and biodiversity health requires near-to-real time data.



Working closely with fishermen and fisheries in the US Virgin Islands, Point 97 designed the Digital Deck platform, a data collection and reporting tool designed to transition legacy, manual and error prone data practices into reliable fishery harvest data. Digital Deck delivers a simple, easy-to-use interface via cell phone, tablet or computer technology, enabling fishermen to digitally collect their harvest data and easily transmit the data to fisheries managers.

Tracking fish harvest in near-to-real time ensures that USVI fisheries managers can assess harvests in relation to established Annual Catch Limits, and that fishermen can monitor their catch totals against catch quotas. USVI fishermen have the added benefit of accessing their historical trip data, informing future business planning. Over time, Point 97's Digital Deck platform promotes collaborative fishing efforts among fishermen, better tracking and management of fisheries data, and adds market value to seafood, while empowering fishermen to make better harvest decisions.

Rethinking Paper Catch Reports

Most fisheries managers and fishermen would acknowledge paper log reports and manual data entry is time consuming, inefficient, and lacks historical track-back methods for management and fishing business optimization. Translating and digitizing the dense paper catch reports is the first step towards creating resource management efficiencies. In the case of USVI, the Point 97 team analyzed the paper catch report forms currently used across St. Thomas, St. John, St. Croix and Puerto Rico, respectively. Recognizing each paper form supports dense and unique data entry points covering all of the main types of fisheries (hook and line, traps, nets, spear/hand), the Point 97 team broke these forms down into smaller groups of questions, documenting the validation required at each step of the fisherman's input.

Next, the Point 97 team created electronic versions of each trip report using Digital Deck's built-in authoring tool. The easy-to-use authoring interface allows the USVI fisheries manager to build digital trip report forms by adding and editing questions, re-arranging and grouping questions, and defining constraints and validation checks necessary along the way.

Collaborating with fisheries managers, the Point 97 team creates question sets designed to be responsive to fishermen's answers. For example, if a fisherman indicates "lobster harvest" on an initial question, a secondary question is triggered "number of lobster trap hauls" as a follow-up question, including a keypad to fill-in numeric answers. This sets up fast, easy and accurate data entry, contributing to strong fishermen engagement.



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Multiple Access Methods

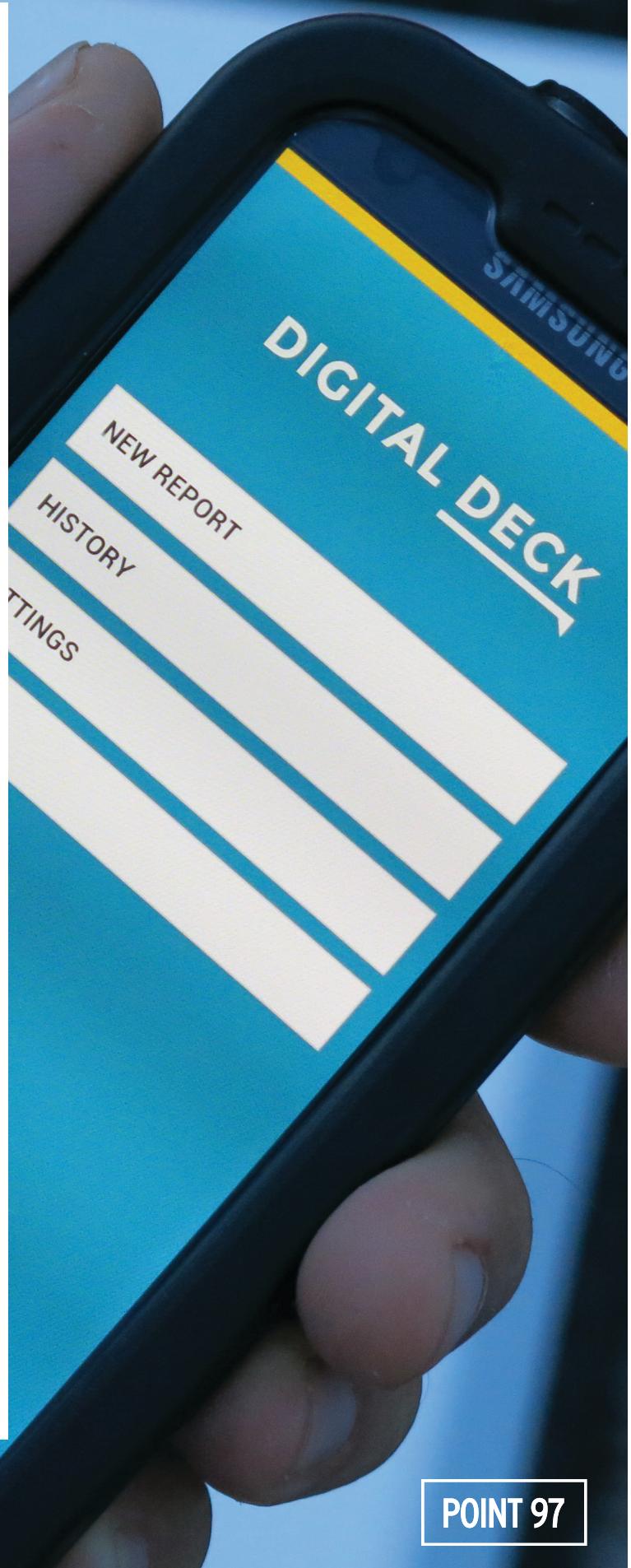
Catch report forms are published using the authoring tool and made available to fishermen via Digital Deck mobile app. Fishermen log their trips using a Digital Deck account through a desktop computer, tablet, or mobile phone. These three access options provide significant flexibility, creating turn-key opportunities accommodating when and how fishermen input their trip reports; they can do it at sea, back at shore, or in their home. Fishermen no longer have to travel to their local regional office to submit paper forms.

Offline Data Collection

The Digital Deck mobile app allows fishermen to collect catch information on their phone at sea without an internet connection. Once an internet connection is re-established, the catch report is securely transmitted to a central database, accessible to both fishermen and fisheries managers

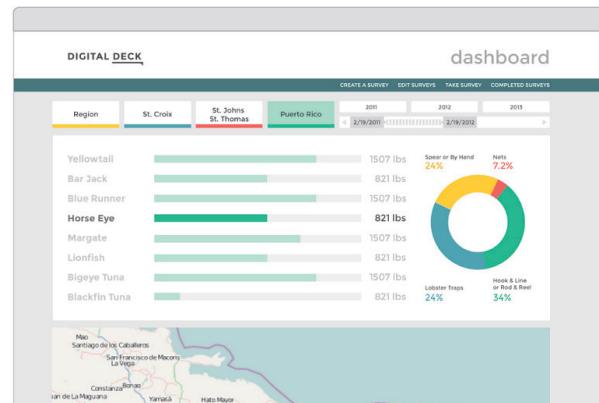
Access to Individual Trip History

Fishermen have traditionally not had access to their own historical catch report information submitted to government managers. Instead, some fishermen maintain their own personal logbooks or track locations in their electronic plotters. Most simply maintain information in their head. Digital Deck gives the fishermen access to all of the catch reports they've submitted. With powerful reporting features, they can quickly visualize their catch over time using charts and maps. This optimizes future trip and long-term business planning.



Planning Dashboard

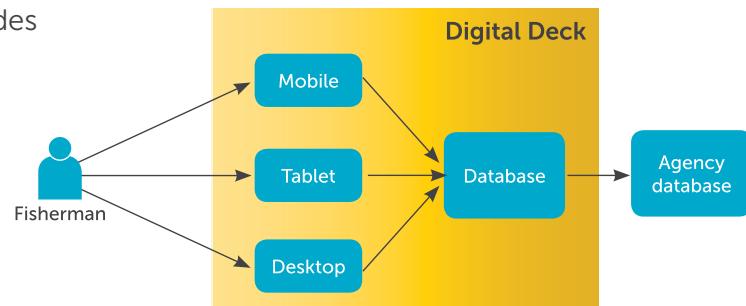
As catch reports come into the system, they are immediately available for real-time reporting. Instead of waiting for paper forms to be processed, agencies can immediately begin acting on the information. Whether it's tracking quota limits for the year or comparing volumes of fish harvested by gear type over the last few months, fisheries managers can make informed decisions toward their resource management goals.



Connection to Agency Databases Creates Equity and Balance

Once catch reports are submitted using Digital Deck, they are transmitted electronically to the official agency database already in place within the NMFS Southeast Fisheries Science Center. Digital Deck provides a secure electronic point of entry to this database. It ensures fishermen can continue to access their unique catch history and agency data, while simultaneously delivering an equitable platform for sharing aggregated information between all parties involved. All of this fulfills Point 97's

mission of using better information sharing to drive more strategic economic development and resource management.



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