

# ENHANCING FISHERIES MANAGEMENT WITH AI-POWERED SOLUTIONS

## Overcoming Challenges in the Fisheries Industry

The fisheries industry is characterized by its complex and multifaceted data landscape. Data fluctuates with seasonal and regional variations and must be meticulously managed to ensure sustainability and regulatory adherence. Balancing ecological impact with economic viability requires mechanisms that enable real-time monitoring and control, demanding precise data collection and analysis. This industry involves a wide array of stakeholders, including administrators, regulators, fishermen, and sales personnel, each with distinct informational needs and operational workflows, many of whom are not inherently familiar with electronic solutions due to their primary operation in maritime environments.

A significant challenge lies in developing a cohesive system capable of integrating and managing this complex data. The solution must be intuitive and user-friendly, catering to a diverse, often technologically inexperienced user base, while ensuring efficient, real-time access and decision-making.

## Innovative Solution: IBM Cloud Pak® for Business Automation

To address these challenges, iKnowHow upgraded and expanded the existing Hellenic Fisheries Integrated System. This comprehensive project involved the design, implementation, commissioning, deployment, and maintenance of a fully integrated solution for monitoring, control, recording, and reporting of fishing activities and registries.

### Key Features of the Solution:

- 1 Process Mining and Modeling:** Applied to core business processes to gain an accurate understanding of the current state. This helps pinpoint inefficiencies and identify key areas for automation.
- 2 RPA and Digital Employees:** Adopted a hybrid workforce to increase productivity. RPA automates tasks, offloading repetitive activities so employees can focus on higher-value work and innovation.
- 3 Operational Intelligence:** AI-powered dashboards alert to problems and recommend next steps for quick resolution and continuous improvement, alleviating skills gaps by creating applications with AI and deep technical expertise.
- 4 Core Automation:** The solution combines multiparty content services, intelligent information extraction, business process management, and AI-powered decisions to achieve more straight-through processing.

The solution is hosted on the government cloud (Microsoft Azure Cloud) and utilizes a single database implementation to ensure full integration across all sub-components, as well as API integration from third-party systems. Modules include the Fleet Registry application, Users/Organizations app, Fishery Application (ERS for recording trip e-logbooks and landings), Sales Application (E-Commerce for sales and take-over declarations), Inspections Application, and a Recreational Fisheries Platform.

*Our commitment to innovation and sustainability in the fisheries sector is demonstrated through this project. By leveraging AI-powered automation, we are not only enhancing operational efficiency but also contributing to the ecological balance and economic viability of the industry.*

Xenia Bania Executive Vice Chairman, BoD IKH Group

## Leveraging IBM's Suite of Tools

Designing and implementing such a sophisticated system required the seamless integration of multiple tools. IBM's suite, including WebSphere Application Server (WAS), DB2, FileNet, and Cognos Analytics, provided the robust infrastructure necessary for a comprehensive solution. Each tool played a critical role in ensuring the platform was efficient, scalable, secure, and user-friendly:

- **IBM WebSphere Application Server (WAS)** provided a reliable and scalable environment for deploying and managing the various applications.
- **DB2**, IBM's database management system, handled the vast amounts of data generated by the platform, managing diverse data sets from catch records to sales transactions efficiently.
- **IBM Cloud Pak for Business Automation and FileNet** enabled efficient document and records management across all systems, crucial for regulatory compliance and administrative tasks.
- **Cognos Analytics** offered advanced data analytics and reporting capabilities, providing stakeholders with valuable insights from the collected data.

*Integrating IBM's suite of tools has been pivotal in developing a robust and scalable system. Our user-centric approach ensures that even those with minimal technological experience can effectively utilize the platform, making real-time data access and decision-making a reality for all stakeholders.*

Xenia Bania Executive Vice Chairman, BoD IKH Group

By integrating these advanced tools and providing extensive training and support services, iKnowHow ensured that users could effectively leverage the platform's capabilities to enhance their operations.

This project exemplifies how modern technology can transform traditional industries, promoting sustainability and efficiency.



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