REDUCING FRAUD, WASTE, AND ABUSE
AT THE UNITED STATES POSTAL SERVICE

Elder Research partnered with the U.S. Postal Service Office of Inspector General to develop and deploy a custom solution to identify and prioritize questionable contracts and healthcare claims for investigation. Leads generated were 74% actionable, resulting in over $11 million in recoveries, restitutions, and cost avoidance in the first year.

INDUSTRY

» Government

BUSINESS NEED

» Provide the USPS OIG with a more efficient and actionable way to target questionable contracts and healthcare claims in order to eliminate fraud, waste, and abuse

SOLUTION

» Created and deployed RADR, a custom tool that combined sophisticated predictive analytics with an intuitive, user-friendly interface to help USPS OIG auditors and investigators identify high-risk cases
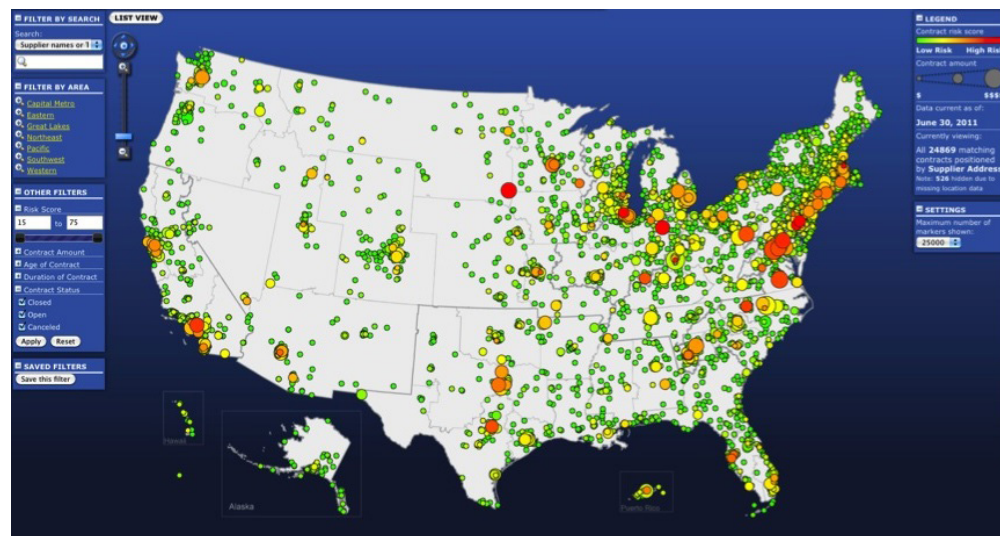
BENEFIT

» Decreased hours worked per case by 30%

» Increased dollars saved per case by 35%

» Resulted in over $11 million in recoveries, restitutions, and cost avoidance

The Challenge

At the time, the U.S. Postal Service delivered mail to 146 million delivery points, operated 37,000 postal facilities, and managed more than $33 billion in postal contracts. The USPS OIG initiated investigations based mainly on tips they received. To be more proactive, the agency sought to create a systematic process to provide investigative analysts with data-driven leads based on known fraud, waste, and abuse schemes. The USPS OIG needed a custom solution to prioritize questionable Postal contracts. Furthermore, the existing investigative process to validate leads was time-intensive, the availability of solicitation and financial data was scattered, and the data was inconsistent and incomplete.

The Solution

Elder Research partnered with the USPS OIG to customize a solution to help the agency generate leads based on risk indicators and anomaly detection. As with most fraud detection projects, the client could only provide a few known cases of fraud to guide the analytics process. Elder Research created predictive models

The RADR user interface map view depicting contract location, dollar amount (dot size), and risk (dot color)

ELDER RESEARCH
— DATA SCIENCE · AI · MACHINE LEARNING —

Office Locations

Charlottesville, VA
Washington, DC
Baltimore, MD
Raleigh, NC
London, UK

using more than 30 custom fraud indicators to zero in on suspicious Postal contracts. The models each produced an output that scored and ranked the contracts based on weighted combinations of the risk indicators. The model's results were delivered in an easy-to-use visualization tool called RADR (Risk Assessment Data Repository). The tool enabled analysts and investigators to access and visualize data on high-risk contracts. RADR was also employed to amplify the effectiveness of a healthcare model which was previously under-utilized.

> "[Using RADR], we are able to assign risk scores to whatever it is we are measuring. We are able to model every single contract or every single transaction or every single whatever it is that's being investigated. In the past, you'd have to do a statistical sample or you may have to wait until someone calls to look for something. It puts a lot of information in front of the investigator."
>
> Director, Federal Agency

Results

Contract Fraud Model

Forensic examiners evaluated each metric to determine its usefulness and contribution to the overall model. The browser-based RADR interface provided intuitive drill-down into the data allowing investigators to understand the drivers behind each risk score and build actionable cases. Leads generated by the contract fraud model proved to be 74% actionable; 23 out of 31 highest scored contracts showed evidence of fraud, waste, and abuse.

Healthcare Fraud Model

RADR strategically made the existing healthcare model results more visual and interactive, which led to the opening of 113 investigations and aided in over $11 million in recoveries, restitutions, and cost avoidance in the first year. The RADR tool amplified the productivity of USPS OIG investigators by reducing the number of hours spent on a case by 30% and increasing the dollars returned per case by 35%.

Customer Information

The USPS OIG maintains the integrity and accountability of the U.S. Postal Service. The agency's core mission is to find fraud, waste, and abuse. The USPS OIG partnered with Elder Research to optimize the agency's efforts using data mining and predictive analytics.

30% decrease in the hours worked per case

35% increase in the dollars saved per case

As a result of implementing RADR, hours worked per case decreased 30% and dollars saved increased 35%.
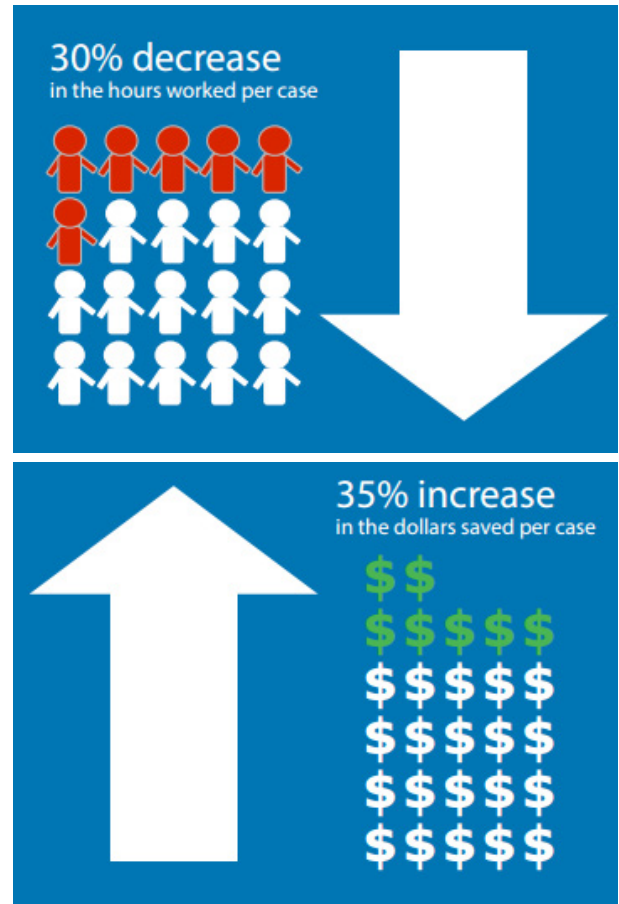
About Elder Research

Elder Research is a recognized leader in the science, practice, and technology of advanced analytics. We have helped government agencies and Fortune Global 500® companies solve real-world problems across diverse industries. Our areas of expertise include data science, text mining, data visualization, scientific software engineering, and technical teaching. With experience in diverse projects and algorithms, advanced validation techniques, and innovative model combination methods (ensembles), Elder Research can maximize project success to ensure a continued return on analytics investment.