

## CHALLENGE

- Internal audit team wanted to use data analytics to review State UI Payments for fraud and errors.
- Federally-funded Grant from Dept. of Labor required fast turnaround to demonstrate value.
- New to Tableau but wanted to keep expertise in-house instead of relying primarily on outside help.

## SOLUTION

- Mix of classroom training and on-the-job training to develop 10 dashboards specific to unique risks of improper UI payments.
- Cross-comparison among disparate data sources, including address, IP location, employee and claimant data files
- On-the-Job training and examples were provided to accelerate learning and streamline any future maintenance.

## BENEFIT

- Knowledge and examples were developed and provided at the point that they were most needed.
- Complex audit tasks accomplished using limited consulting dollars.
- Reusable templates have been built and can be used to extend the capabilities of these existing dashboards.

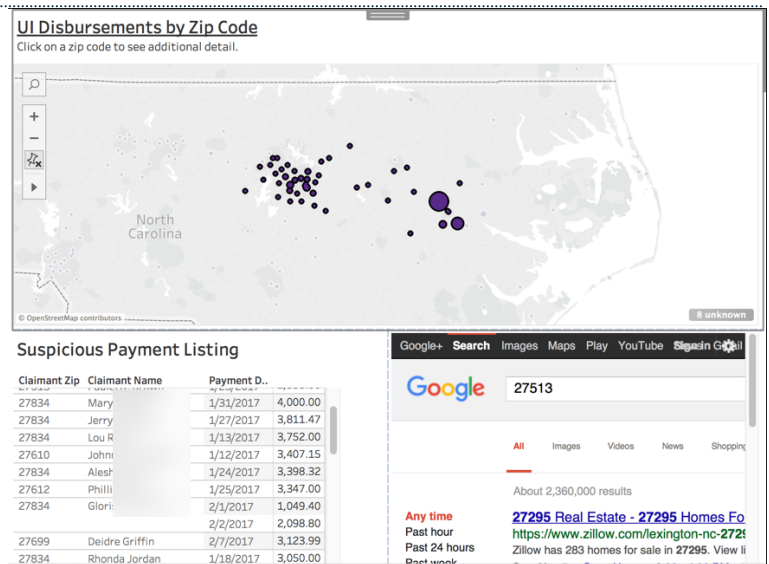
**Q: How can an internal audit team get up the learning curve quickly and demonstrate value of using Tableau for audit data analytics?**

**A: By working with experienced Tableau partners who know anti-fraud data analytics and payment risks common in the public sector.**

**Situation:** Our client, the internal audit team for North Carolina’s Department of Commerce had been awarded a grant from the US Department of Labor to develop innovative data analytics specific for identifying improper payments among unemployment insurance (UI) claims. Developing a repeatable, data-driven approach was key to the grant’s success factors.

Other software tools had been previously identified for use, but when the audit executive saw what Visual Risk IQ had done for her peer in Higher Education, she quickly revised her team’s plans and approach to build using Tableau’s self-service data analytics platform.

**Project:** Visual Risk IQ, a Tableau alliance partner, worked with the Department of Commerce team to prioritize the dashboards to be developed and to confirm the design could be accomplished using source data and Tableau software. Each auditor on the team was responsible for developing some of the 10 dashboards with their coach, so the project could be successful in terms of both results and individual learning.

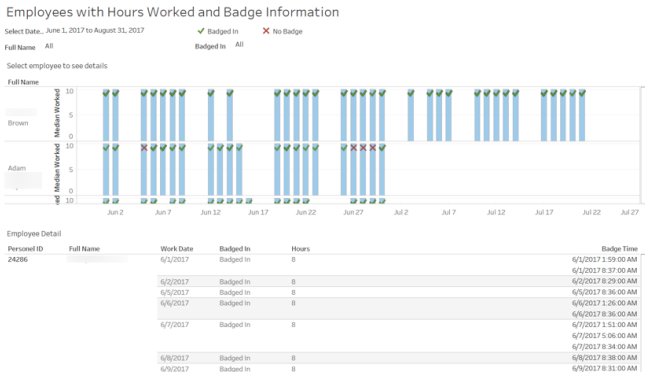


*“Tableau allows us to see and understand our data visually and relate information from one file to another in an interactive way. By relating data from different files, we’re able to pinpoint risks that might have gone unnoticed using another, more traditional approach.”*

# Case Study: Visual analytics helps auditors see hidden relationships in data

**Outcome:** Internal and external data sources were combined from sources as diverse as HR, time and attendance records, physical badge data, and UI claimant data to sort and prioritize UI payments that are likely indicative of errors or even fraud.

Internal audit team members are now able to repeat the data acquisition steps and modify the UI dashboards for subsequent use.



**Discussion:** *It has been said that the best source of knowledge is experience. The approach and methodology used on this project are based on our firm's collective experience in guiding client staff through internal audit and data analytics projects across a variety of business processes, technologies, and audit software tools.*

## Body of Knowledge Framework:

Central to our work are the following seven learning domains from our body of knowledge for anti-fraud and audit data analytics.

- Project Management
- Data acquisition and manipulation
- Statistical techniques
- Visual Reporting Techniques
- Communication skills
- Audit and Compliance Domain Expertise
- Strategic Risk and Change Management

We build on the capabilities that our clients have in each of these key areas, and supplement any skills or experience gaps that need to be filled.

“This initial project was a success because we accomplished two things. First, we have developed each of the ten dashboards so that our audit efforts are prioritized by the alerts and results produced from our visual analytic dashboards.

Equally important, my team has become more familiar with Tableau because of classroom training together with on-the-job training. We see how we will continue to expand this approach for visual analytics on upcoming projects and even control monitoring work in concert with other units in our agency.

- Chief Audit Executive



**About the Firm:** Visual Risk IQ was formed in 2006 to help large, complex organizations take advantage of new technologies for continuous auditing and monitoring, visual reporting and risk-focused data analysis. We are alliance partners and implementation specialists for Tableau and other audit software tools and deliver tailored solutions for our clients both directly and in concert with our other partners.



Joe Oringel  
CPA, CIA  
Partner



Kim Jones  
Partner

