Taking a Byte Out of Corruption

A Data Analytic Framework for Cities to Fight Fraud, Cut Costs, and Promote Integrity
Working Group Members

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Interviewees

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To investigate the applicability of data analytics to the problems of municipal corruption control, CAPI assembled a Data Analytics Working Group (the “Working Group”). The Working Group met four times from March 2016 to February 2017 at Columbia Law School in New York City, to discuss questions such as:

- What are feasible applications of data analytics to targeting corruption?
- What data sources would be relevant, and how can they be accessed?
- What are useful indicators of fraud or corruption among those data?
- What tools could be developed, purchased, or adapted to glean actionable intelligence and useful information from those data?
- What would be the specifications for designing such tools to cost-effectively meet agency needs?
- What technical, logistical, or political challenges must be addressed to make those tools operational?
- How can a pilot be developed and tested within particular jurisdictions in order to test feasibility?
- What are realistic expectations for those tools, and by which metrics should they be evaluated?
- How can such tools be designed to comply with applicable laws and legal standards and to address any concerns of citizens, public servants, and policymakers?
- How can tools be shared across jurisdictions to minimize unnecessary duplication of efforts?
The Top 10 Approaches were adapted from the Center for the Advancement of Public Integrity’s report Taking a Byte Out of Corruption, which can be found on CAP’s website: www.law.columbia.edu/public-integrity

01
Fraud by Inspectors
Perform an outlier analysis to identify inspectors with the highest and lowest tallies of reported code violations.

02
Fraud by Inspectors
Search for code violations that were changed or downgraded following their initial logging.

03
Human Resources-Related Fraud by Public Employees
Perform an outlier analysis to identify the employees who report the most overtime hours, including unusually high weekend overtime.

04
Human Resources-Related Fraud by Public Employees
Search for suspiciously consistent employee overtime claims (e.g., always the same day of the week, or the exact same number of hours every time).

05
Benefits Fraud
Search for transactions from Electronic Benefit Transfer (EBT) cards outside the zip code of the beneficiary’s reported residence.

06
Benefits Fraud
Perform an outlier analysis to identify those employees who issue emergency benefits at the highest rates.

07
Campaign Finance Violations and Theft of Public Funds
Look for campaign donations from out-of-district donor zip codes.

08
Petty Theft of Public Resources and Inventory
Search for significant upticks in ordering, potentially indicating employees are selling excess inventory.

09
Procurement Fraud
Implement cartel screen software programs to help identify collusive bidding.

10
Fraudulent Legal Claims against the City
Search for approved claims at amounts right below the city’s cap to identify possible knowing approval of false claims.
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