



Forensic data analytics



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KPMG Lower Gulf



Forensic data analytics

Identifying fraud patterns is becoming increasingly difficult. As organizations increase their use of technology in day-to-day operations, we now have access to more data and information. 'Forensic data analytics' (FDA) is the mechanism in which we can solve the puzzle of identifying high risk indicators of fraud. FDA involves extracting and examining of data using specialized systems and software with an aim to identify fraud/misconduct or where control gaps have been exploited or manipulated.

Various forensic data analytics techniques can effectively undercover critical trends and metrics that would otherwise be lost in mass of information.

Responding to our clients' need to translate data into actionable intelligence, KPMG can now provide them with powerful data analytics services.

Our FDA services range from the collection, preservation, and analysis of databases, to the intelligent analysis of data to find patterns providing operational insight into a company's activities, entity relationships and any possible hidden relationships between, for instance, employees and vendors.

In addition, FDA supports several KPMG's Forensic service offerings, including fraud risk management, fraud risk assessments, proactive and reactive fraud analysis and anti-money laundering (AML) monitoring platforms.

KPMG's Forensic data analytics (FDA) platform

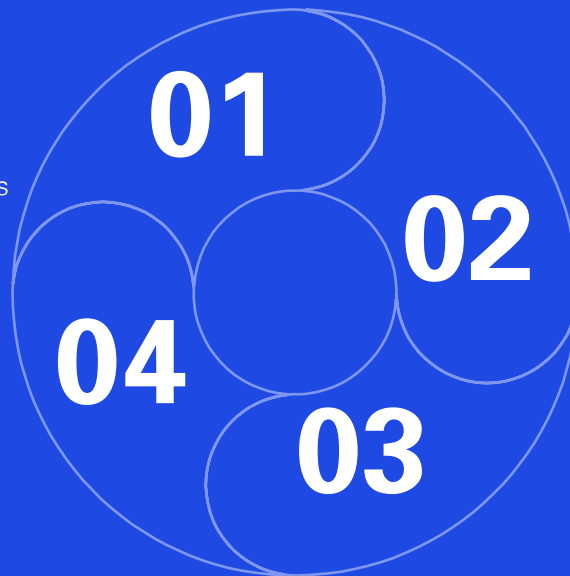
KPMG's FDA platform is built with the latest analytics tools and technologies and is capable of processing and analyzing terabytes of data for investigations or analytics needs. Our data science playground is equipped with tools to organize unstructured data (i.e., PDF, JSON, emails, etc.) into readable format and gives us the capability to run artificial intelligence and machine learning algorithm on the data. The platform allows clients to securely log into their dashboard to interact with data and receive instant insight from the analysis performed. This is illustrated below:



Identify client's proactive or reactive forensic needs



Determine fraud areas of focus and load data



Visualize finding on an interactive dashboard



Analyze data based on investigative or forensic instructions



Forensic data analytics suite

The KPMG FDA team has developed forensic data analytics suites compiled from over 20 years of FDA experience to assist companies in using their data to identify fraud, corruption, misconduct, or leakages in various operations within a company. The KPMG forensic data analytics team has extensive experience writing complex analytics algorithms that supports analytics in the following key business functions:



Procurement fraud analytics:

- Identify fake/ghost vendors
- Identify duplicate payments or invoices
- Identify unusual relationships between suppliers and employees
- Identify irregulars in PO, PR and payment patterns
- Compliance with payment approvals and thresholds
- Supplier payment profiling and test for payment terms
- Analysis of processing time



Payroll fraud analytics:

- Identify fake/ghost employees
- Identify inappropriate user access
- Overview and payroll analytics
- Bonus/commission profiling
- Unusual payments made to employee
- Unusual relationships between employees



Overtime fraud analytics:

- Analysis of employee overtime
- Time sheet to payroll comparison
- Leave and overtime analysis
- Identify unusual leave patterns
- Stratification or overview of employees with their normal working hours and overtime



And many more:

- Fraud Risk Management and development of internal fraud controls
- Sales and revenue leakage (kickbacks, pricing manipulation etc.)
- General ledger fraud analysis
- Identify anomalies in system audit logs
- Analysis of corporate expenses (i.e., expense policy violations)
- Insurance claims analysis/modelling (i.e., social network analysis)

Our value propositions



Technology agnostic solution: the KPMG forensic data analytics team can work with any raw data provided, data extracted from systems, or databases to conduct analysis. The team has experience working across technologies and tools to efficiently manage and obtain insight from your data to reduce client cost.

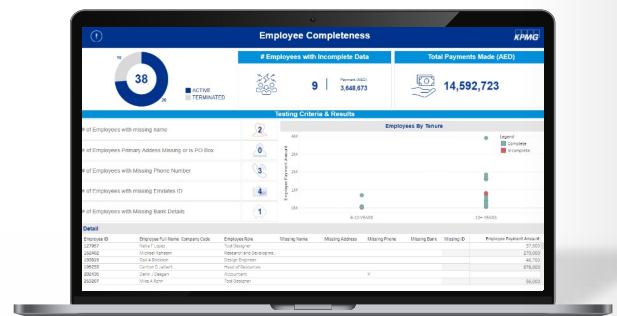
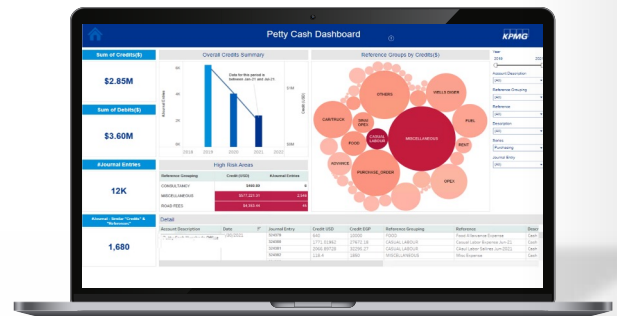


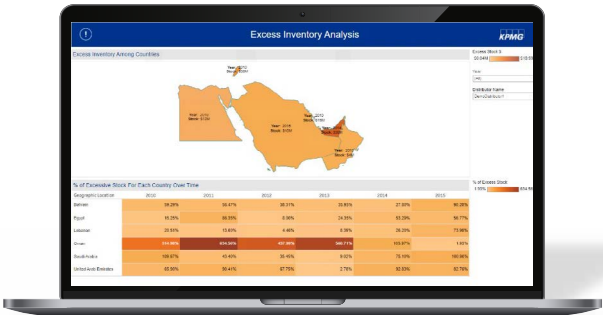
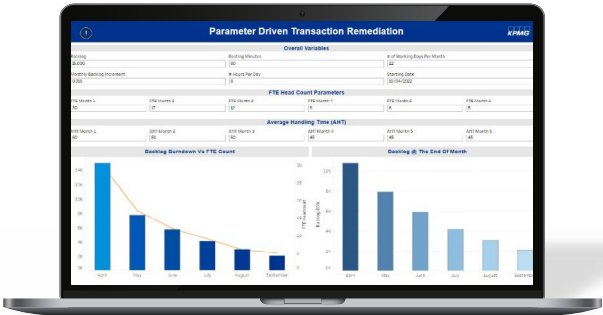
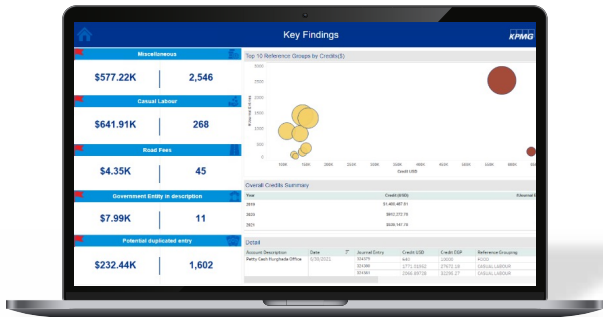
Forensic data platform: allows the team to work on data in a secured and monitored environment. Our internally developed tools in the platform allow automation for analytical processes with minimal manual intervention and improved productivity for our clients.



Client focus model: all our solutions are customized based on client requirements and benefit from our vast experience in working with data. Our analytics reports and interactive dashboards are fully customizable and aim to provide the greatest value at the lowest cost.

Sample dashboards below:





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