DATA FUSION FOR MISSION IMPACT

The Black Pearl research initiative leverages commercially available and non-traditional data sources for advanced analytics to deliver intelligence and investigative leads to enable federal and state government agencies. This cross-cutting capability, which includes the ability to characterize, resolve, and automate large datasets, transcends government partner organizations and missions.

Research Areas

Foreign influence—MITRE completed extensive research in areas of potential foreign influence in different geographical regions including Eurasia, Europe, Africa and South America. Analysis included areas of foreign corporate ownership, technology collaboration and trade relationships. Findings highlight both commercial opportunities and adversarial risks to both the U.S. and its allies.

Geospatial and financial data analytics—MITRE purchased global corporate data set that contains information on companies, transactions, shareholders, earnings, and patents. MITRE has leveraged the data to understand global footprint, financial trends of an industry, in a region or of specific entities of interest. These analytic capabilities are relevant to missions such as export control, commercial competition, and illicit network detection.

Applications

- Acquisitions
- Influence
- Counterproliferation and Supply Chain
- Transnational Organized Crime
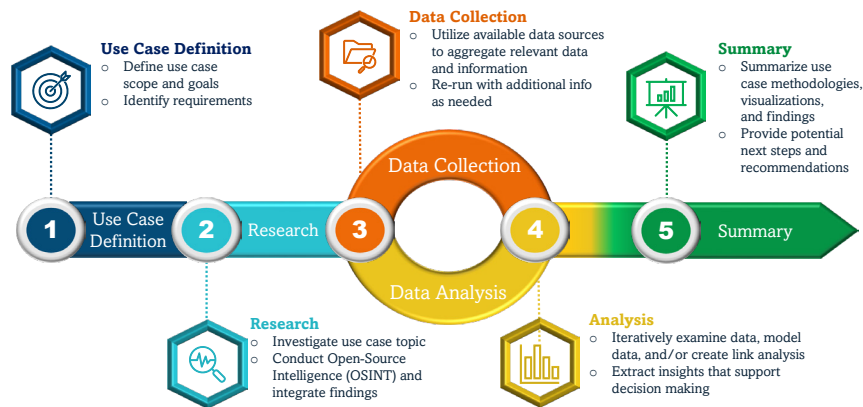- Environmental Intelligence
- Fraud Detection
- Technology Trends

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Supply chain analytics—MITRE characterized global trade data to develop and evaluate analytic approaches to generate investigative leads for illegal activity involving international trade. MITRE conducted analysis of trade networks and possible sanctions obfuscation through leveraging subsidiaries to enable illegal trade activities.

Technology trends—MITRE conducted research of emerging technology leaders through analysis of intellectual property trends, patent applications, collaborations on technical journal publications and inventions. This research provides a global landscape of the competition in key and sensitive technology areas.

Analytical Workflow

Use Case Definition
- Define use case scope and goals
- Identify requirements

Data Collection
- Utilize available data sources to aggregate relevant data and information
- Re-run with additional info as needed

Summary
- Summarize use case methodologies, visualizations, and findings
- Provide potential next steps and recommendations

Research
- Investigate use case topic
- Conduct Open-Source Intelligence (OSINT) and integrate findings

Analysis
- Iteratively examine data, model data, and/or create link analysis
- Extract insights that support decision making

1 Use Case Definition   2 Research   3 Data Collection   4 Data Analysis   5 Summary

Areas of Expertise

- Analytics roadmaps and strategies
- Business analytics
- Cyber analytics
- Database technologies
- Data fusion
- Data queries and optimization
- Data storage
- Data visualizations
- Emerging technologies and solutions
- Machine Learning/ Artificial Intelligence
- Natural language processing
- Pilots/prototypes
- Vendor tool shaping

Global Data Resources

- Corporate registry
- Intellectual property rights/patents
- Mergers and acquisitions
- Cross-border investments
- Trade/shipping
- Academic publications
- Recaptured breach data
- Vessel/Aircraft location data

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