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Industry Verticals for Visium's TruContext AI and Data Analytics

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KEY INDUSTRY VERTICALS FOR VISIUM'S TRUCONTEXT AI & DATA ANALYTICS

•Health Care

- Use-Case:** Predictive patient risk stratification & treatment optimization
- Description:** Fuse EHRs, medical imaging, wearable data, and genomics to identify high-risk patients, recommend personalized care plans, and reduce readmissions.

•Energy & Utilities

- Use-Case:** Real-time asset monitoring & predictive maintenance
- Description:** Ingest SCADA sensor streams, weather forecasts, and maintenance logs to forecast equipment failures, optimize load balancing, and minimize unplanned downtime.

•Telecommunications

- Use-Case:** Network performance optimization & customer churn prevention
- Description:** Analyze network telemetry, IoT device metrics, and social sentiment to predict outages, dynamically reroute traffic, and tailor retention offers for at-risk subscribers.

•Public Safety & Law Enforcement

- Use-Case:** Crime forecasting & situational awareness
- Description:** Combine 911 call logs, video surveillance analytics, social media feeds, and GIS data to predict hotspots, allocate patrol resources, and accelerate incident response.

•Cybersecurity

- Use-Case:** Threat intelligence & automated incident response
- Description:** Correlate firewall logs, endpoint telemetry, and dark-web indicators in TruContext to detect novel attack patterns, prioritize vulnerability remediation, and trigger containment workflows.

•Banking & Financial Services

- Use-Case:** Fraud detection & dynamic credit scoring
- Description:** Correlate transactional records, customer behavior analytics, and external market indicators for real-time anomaly detection, automated fraud alerts, and adaptive loan approvals.

•Manufacturing & Supply Chain

- Use-Case:** Quality control & demand forecasting
- Description:** Merge production-line sensor data, supplier performance metrics, and market signals to flag defects early, optimize inventory levels, and align manufacturing schedules with real-time demand.

•Transportation & Logistics

- Use-Case:** Route optimization & fleet management
- Description:** Combine GPS telematics, traffic patterns, and weather data to plan efficient routes, predict delivery ETAs, and proactively manage vehicle maintenance.

•Smart Cities

- Use-Case:** Urban infrastructure optimization & citizen engagement
- Description:** Combine IoT sensor networks, traffic cameras, public transit data, energy usage, and citizen feedback to manage congestion, optimize utilities, enhance public safety, and improve quality of life.

TRUCONTEXT AI PLATFORM OVERVIEW

TruContext is a big data analytics graphing platform that processes streams of events with joins, aggregations, and more. Based on MITRE's Cygraph, it provides real-time situational awareness and actionable intelligence.

Core Capabilities

- Real-time data visualization and analysis
- Threat indicators and vulnerability mapping
- Root-cause analysis and pattern detection
- Predictive modeling with AI/ML integration

Intuitive

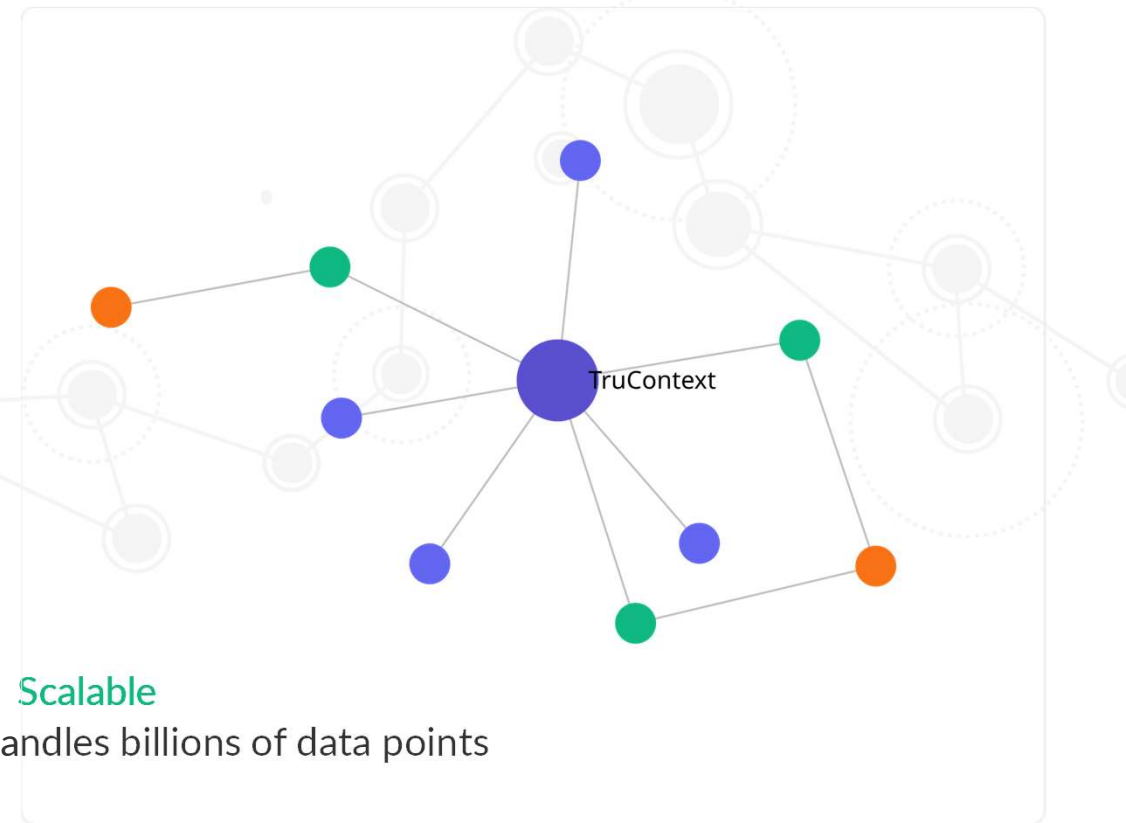
Easy to understand complex data relationships

Fast

Real-time processing and analysis

Scalable

Handles billions of data points



CYBER SECURITY

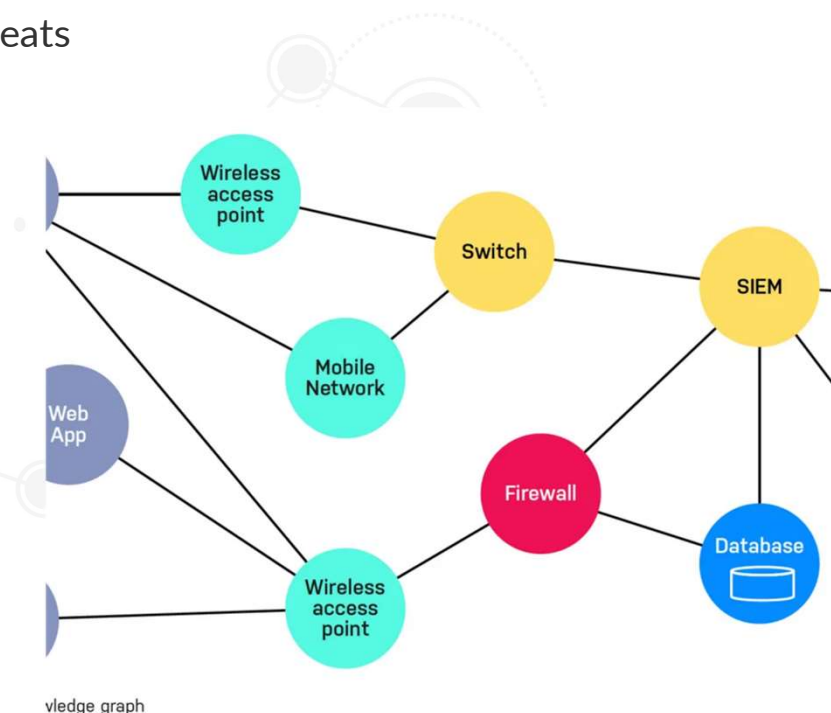
TruContext enhances cybersecurity operations by providing real-time visualization and analysis of network security data, enabling organizations to detect and respond to threats faster.

- **Real-time threat detection** - Visualize network anomalies and potential attack vectors as they emerge, reducing response time by up to 70%
- **Attack path modeling** - Map potential attack paths through your network using MITRE ATT&CK framework integration
- **Vulnerability prioritization** - Identify and prioritize critical vulnerabilities based on potential impact and exploitability
- **Incident response acceleration** - Reduce mean time to detect (MTTD) and mean time to respond (MTTR) with contextual intelligence

60%
Faster threat detection

100%
Reduction in false positives

3x
Faster incident resolution



SMART CITIES

- Smart cities generate continuously huge amounts of graph data
- Collection, processing, and analysis of graph data is crucial for city prosperity and progress
- Graph Database Systems offer storage and querying for graph data
- Apache TinkerPop's Gremlin protocol provides standard interaction methods
- Multiple specialized solutions available for different smart city scenarios.

Smart Cities Applications for TruContext:

- Traffic Management & Transportation
 - Real-time traffic flow optimization
 - Predictive traffic pattern analysis
 - Public transit route optimization
 - Parking management systems
- Energy & Utilities Management
 - Energy consumption monitoring
 - Predictive maintenance for infrastructure
 - Resource allocation optimization
- Real-time incident monitoring
- Crime pattern analysis
- Emergency response optimization
- Surveillance system integration
- Environmental Monitoring
 - Air quality monitoring
 - Pollution source tracking
- Smart grid optimization
- Weather pattern analysis
- Sustainability metrics
- Citizen Services & Engagement
 - Service delivery optimization
 - Citizen feedback integration
- Quality of life metrics
- Digital governance platforms
- Public Safety & Security

HEALTHCARE

TruContext transforms healthcare data into valuable insights, improving patient outcomes and operational efficiency by assembling disparate healthcare data into an intelligent, comprehensive picture.

- **Cross-reference health data** - Connect patient records, admissions data, billing information, and insurance claims to obtain a holistic view of patient care
- **Outbreak monitoring** - Quickly isolate and track disease outbreaks by visualizing patient connections and geographic distribution
- **Medication tracking** - Trace medications from manufacturer to patient, identifying potential adverse reactions and affected groups
- **Resource optimization** - Analyze patient flow and resource utilization to improve hospital operations and reduce wait times



70%

Faster data cross-referencing

58%

Faster outbreak isolation

98%

Patient investigation coverage

FINANCIAL SERVICES

TruContext helps financial institutions detect fraud, visualize unusual activities, and enhance compliance monitoring through advanced data analytics and pattern recognition.

- **Fraud detection and prevention** - Identify suspicious patterns and anomalies in transaction data before they result in financial losses
- **Anti-money laundering (AML)** - Visualize complex financial relationships and transaction flows to detect potential money laundering activities
- **Regulatory compliance** - Streamline compliance monitoring and reporting with automated data analysis and visualization tools
- **Customer behavior analysis** - Gain insights into customer financial patterns to improve service offerings and detect unusual activities



85%

Fraud detection accuracy

65%

Faster compliance reporting

40%

Reduction in false alerts

LAW ENFORCEMENT & PUBLIC SAFETY

TruContext empowers law enforcement agencies with advanced data analytics to reveal connections between cases, understand criminal patterns, and enhance investigative capabilities.

- **Case connection analysis** - Identify relationships between seemingly unrelated cases by visualizing common elements, suspects, or patterns
- **Criminal network mapping** - Visualize and analyze complex criminal networks and organizational structures to identify key players
- **Predictive policing support** - Analyze historical crime data to identify high-risk areas and optimize resource allocation
- **Digital evidence correlation** - Connect and contextualize digital evidence from multiple sources to strengthen investigations

40%

Faster case resolution

65%

Improved connection detection

30%

Resource optimization



CRITICAL INFRASTRUCTURE

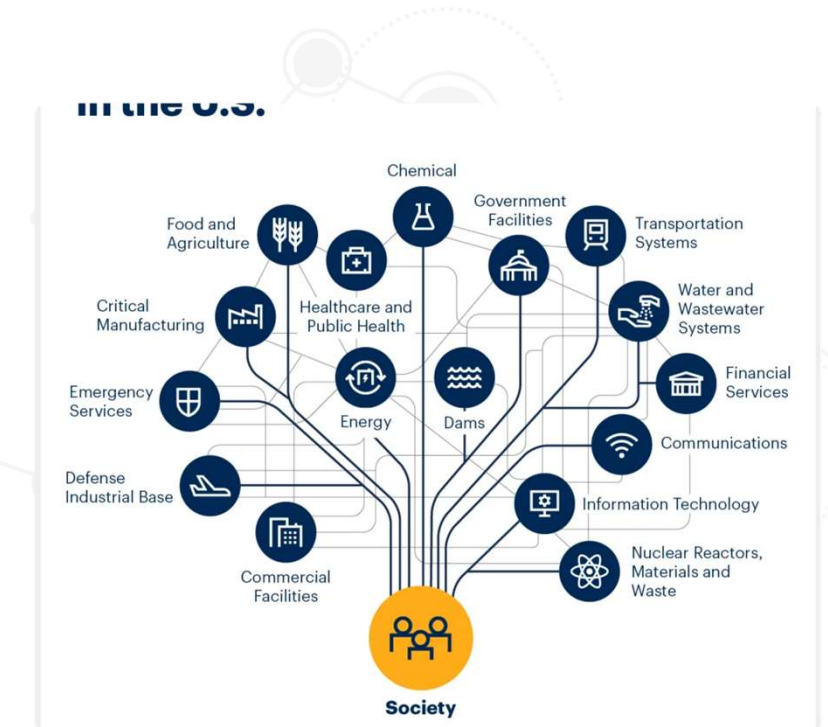
TruContext protects critical infrastructure by providing comprehensive monitoring, anomaly detection, and visualization of potential threats across interconnected systems.

- **Real-time monitoring** - Continuous surveillance of critical systems with instant alerts for anomalies and potential threats
- **Cross-system correlation** - Connect events across disparate infrastructure components to identify coordinated attacks or cascading failures
- **Predictive maintenance** - Identify potential system failures before they occur by analyzing patterns and historical data
- **Resilience planning** - Model potential disruptions and develop effective contingency plans for critical systems

85%
Faster incident detection

40%
Reduction in downtime

65%
Improved response time



SUPPLY CHAIN

TruContext transforms supply chain management by providing end-to-end visibility and analytics across complex global networks, enabling organizations to identify bottlenecks and optimize operations.

- **Network visualization** - Map complex supplier relationships and dependencies to identify single points of failure and critical paths
- **Risk assessment** - Identify and mitigate supply chain vulnerabilities through predictive analytics and scenario modeling
- **Performance optimization** - Track KPIs across the supply chain to identify bottlenecks and inefficiencies in real-time
- **Demand forecasting** - Leverage AI/ML capabilities to improve inventory management and reduce stockouts and overstock situations

32%

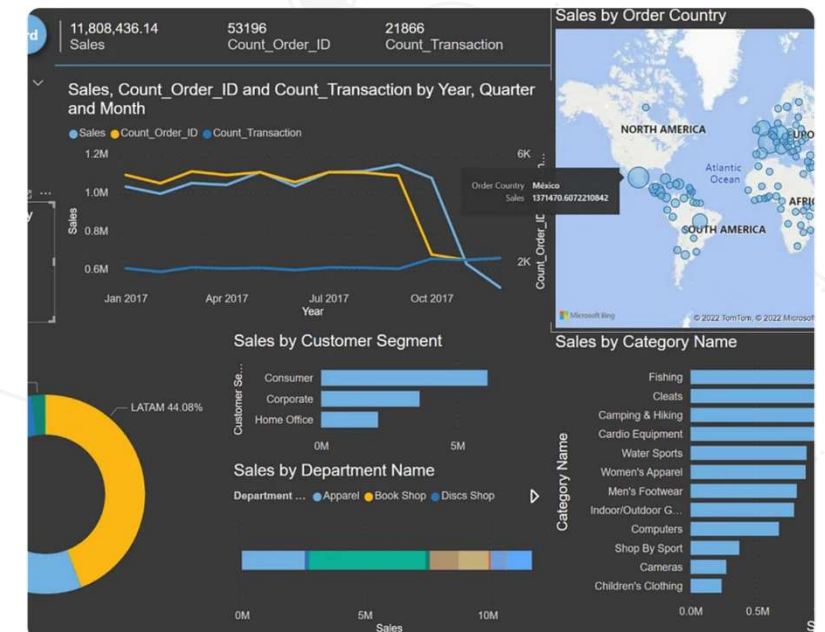
Reduction in disruptions

25%

Improved inventory accuracy

18%

Cost savings



ENERGY SECTOR

TruContext helps energy companies optimize operations, detect anomalies, and enhance security through advanced data analytics and visualization of complex energy infrastructure networks.

- **Grid optimization** - Monitor and analyze power grid performance to identify inefficiencies and optimize energy distribution
- **Predictive maintenance** - Identify potential equipment failures before they occur by analyzing operational data patterns
- **Cybersecurity for OT/IT** - Protect critical energy infrastructure from cyber threats through real-time monitoring and threat detection
- **Renewable integration** - Optimize the integration of renewable energy sources into existing power grids through advanced analytics

15%

Increased grid efficiency

40%

Reduction in outages

25%

Maintenance cost savings



TELECOMMUNICATIONS

TruContext empowers telecommunications providers with advanced analytics for network security, fraud detection, and operational optimization through real-time data analysis and visualization.

- **Network security monitoring** - Detect and visualize security threats across complex telecommunications infrastructure in real-time
- **Fraud detection and prevention** - Identify suspicious patterns in call data records (CDRs) and subscriber activities to prevent revenue loss
- **Network performance optimization** - Analyze traffic patterns and identify bottlenecks to improve service quality and customer experience
- **Customer behavior analysis** - Gain insights into usage churn patterns to develop targeted service offerings and reduce

75%

Faster threat detection

42%

Reduction in fraud losses

28%

Network efficiency improvement

