

THE VALUE OF PERFORMANCE.
NORTHROP GRUMMAN

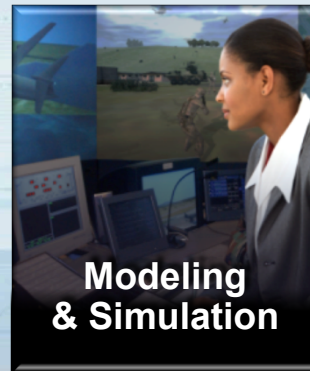
Cross Industry Sector Demands for Advanced Analytics for Structured & Unstructured Data

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Federal & Defense Technologies Focus

We protect & secure our global citizens – from improving health outcomes & reducing costs, to combating financial fraud & criminals, to defending against air and missile threats.



Common Threads & Cross Cutting Capabilities

Big Data and Analytics

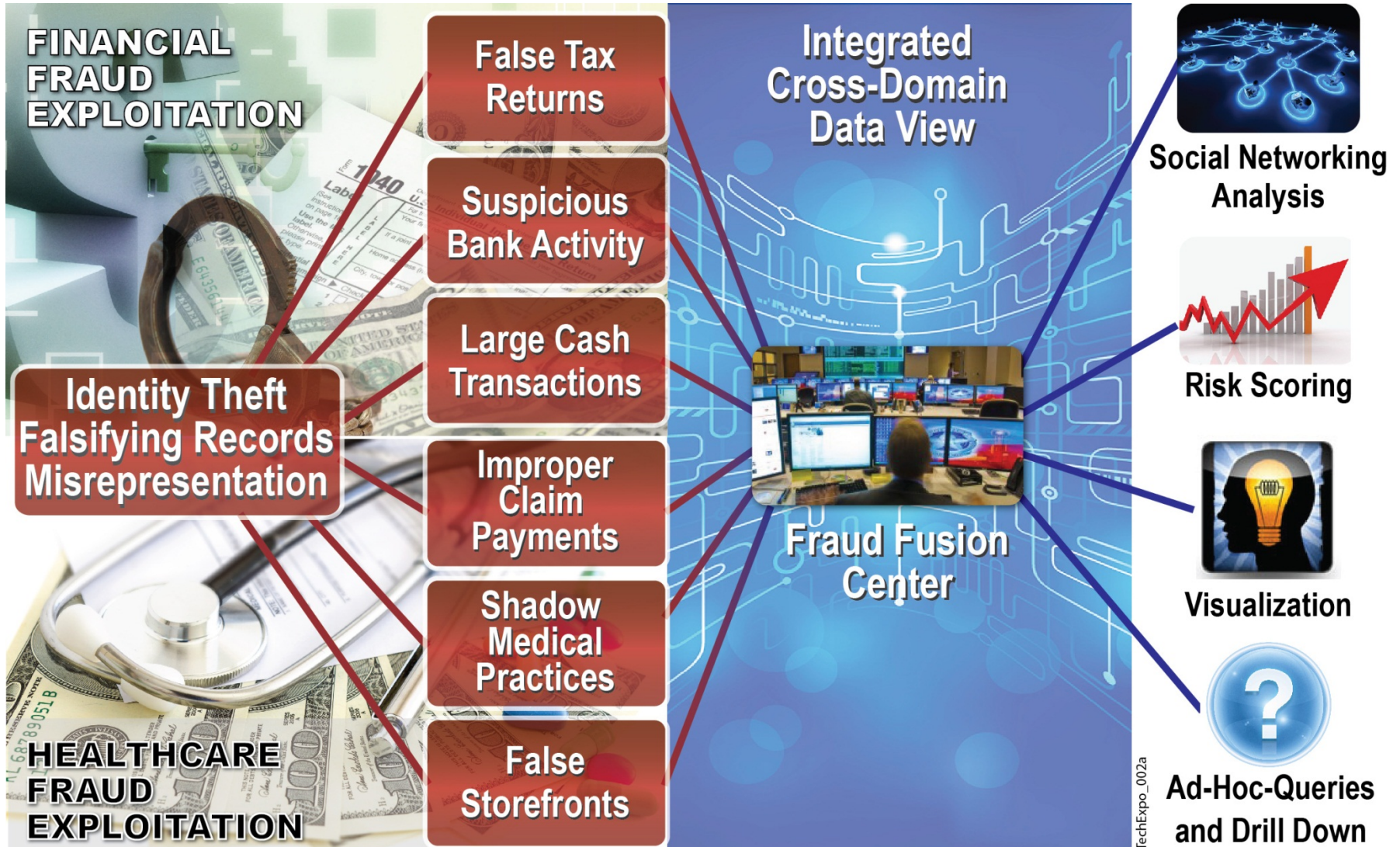
Mission Data Analytics & Intelligence, Fraud Prevention and Predictive Modeling

Cloud and Mobile Computing

Application Migration, SaaS, Security and Data Center Migration

Outcome: Protection

Cross Domain Data Fusion



Example: Analytics - End-to-End Fraud Detection and Management



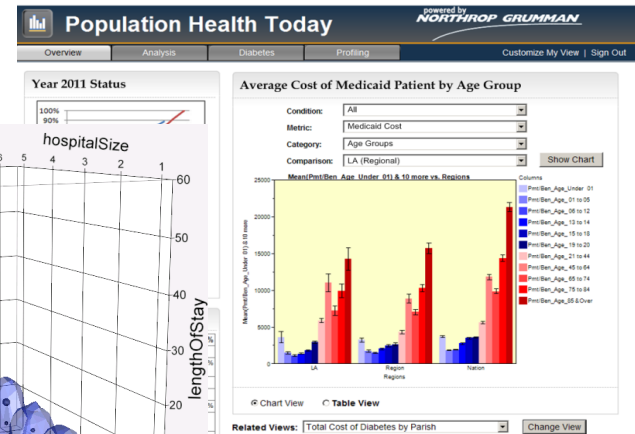
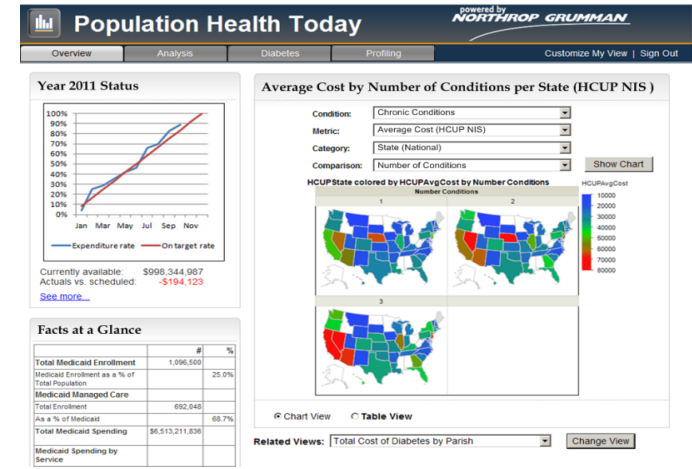
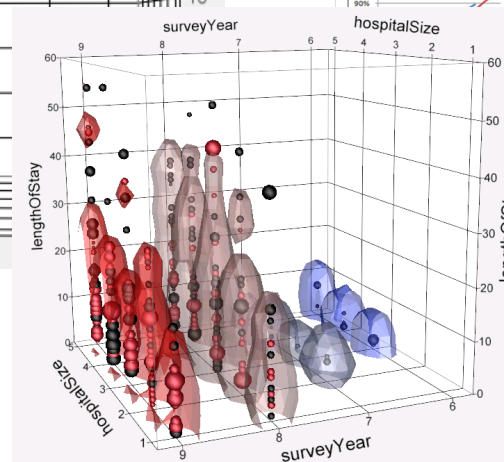
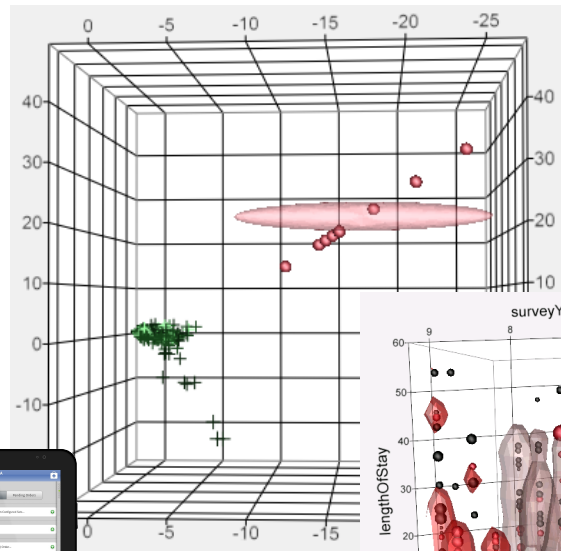
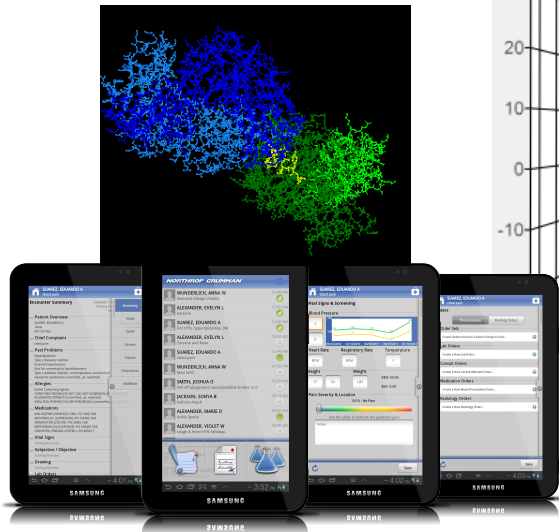
Cross Sector Interests: Focus may be slightly different, but, still need techniques across

- Cyber: long known to require massive data mining of structured and unstructured data... key predictive, adaptive algorithms, beyond data scientist capabilities (since we can't train or hire enough data scientists)
- DOD: command and control, modeling and simulation, geospatial/GIS, signals, threat
- Aerospace: James Webb telescope, biology in space, astro-physics
- Health: structured and unstructured, from the national view to the individual for improved health outcomes and reduced costs... ranging from prediction and prevention, to personalized health management, emergency preparedness and response and Learning Systems...
- Intel: multi-INT, massive data mining of unstructured data... overall awareness of Intel that bio based decision models will be key emerging tech... video, voice, image, social network analysis, forensics
- Overall: every device, every sensor, secure data, natural language processing, rules based algorithms, cloud, virtualization, mobile, cognitive processing, biometrics, weather, all need to be able to work together across platforms for real time data aggregation, analytics and distribution – creating new knowledge

Integrated Health Analytics Platform

Improving Health Outcomes and Reducing Costs through Analytics

- Characterize costs of care
- Analyze conditions and risk
- Identify improvement opportunities
- Estimate future costs
- Financials
- Fraud
- Prediction
- Image analysis
- Social networks



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