TRANSFORMING DATA PROBLEMS INTO DATA SOLUTIONS

Noblis turns raw data into actionable intelligence that drives mission-critical decisions
SOLVING BIG DATA CHALLENGES THAT MATTER

Big data challenges are rapidly becoming more difficult, more common, and by default, more daunting. Noblis leverages our internally sponsored research to develop essential insights into emerging technologies that support missions that matter. Our end-to-end approach to advanced analytics systematically moves stakeholder data through a repeatable process, and effectively addresses the technical components of complex problems to determine a useful strategic path. Because we have our own high performance computing platforms, we can ensure our strategic paths are implementable, and your data investments will result in intelligent decisions. Our interdisciplinary team helps clients harness the power big data can bring—regardless of the complexity of data.

OUR PROCESS

Our end-to-end approach to advanced analytics systematically moves the stakeholder data through a repeatable process.

1. **Requirements**
   - Use Case Identification and Value Analysis
   *Requirements.* Noblis works with stakeholders to identify use cases and business value with the understanding that these elements drive the architecture of the big data solution.

2. **Analytics**
   - Data Capture, Data Transfer, and Data Preparation
   *Analytics.* Combining our understanding of the customers’ mission needs with deep domain expertise enables Noblis to rapidly identify, acquire, and exploit the right data for the task.

3. **Data Acquisition**
   - Tools, Techniques, and Platforms
   *Data Acquisition.* Expertise in modern, predictive analytics, automation techniques, and high performance computing, including HPC clusters, supercomputers, and cloud-based supercomputing.

4. **Post Processing**
   - Business Value Extraction and Visualization
   *Post Processing.* Noblis extracts business value from the raw output of the analytics. This step is iterative, resulting in multiple outputs that depend on use cases identified in the requirements phase.

BIG DATA

by the numbers

A hybrid approach to high performance computing.

- Ran a computation on **OVER 35,000 CPU CORES** in the cloud for 20 million core hours
- Allows researchers to find out of half a million in 3 clicks
- Built systems that can scan over **3 TB** of network data per hour for cyber-threats
- Analyzed graphs with over **30 MILLION NODES** in real time
- Designed an algorithm that cracks passwords in **0.02 seconds**
- Can detect a pathogen in **UNDER 30 MINUTES**
Noblis is supporting a federal agency’s mission by developing and operating a behavioral analytics capability focused on detecting fraudulent user access of web self-service applications and information. Our experts leverage transaction log information integrated with other sources for anomaly detection and couple this with forensics research to classify suspicious activity and misuse. We are also supporting development of an insider threat analytics capability.

Noblis worked with the Social Security Administration (SSA) to develop a series of models to help identify the skill sets, lab processes, and tool sets needed to effectively govern and run the ADAL. Noblis then assisted lab management in developing initial big data analytics tests and visualization experiments.
DOING WHAT'S RIGHT AND WHAT WORKS FOR OUR CLIENTS

Noblis fosters a culture of collaboration. Through our Centers of Excellence (COEs), we are connecting our staff so that they may better serve our clients. The COEs reach across domain areas and our three companies to ensure the right capabilities, people, tools, and expertise are applied to our work. This enables us to offer every client the best solutions to fit their needs and challenges.

ABOUT NOBLIS

Noblis is a nonprofit science, technology, and strategy organization that brings the best of scientific thought, management, and engineering expertise with a reputation for independence and objectivity. We work with a wide range of government and industry clients in the areas of national security, intelligence, transportation, healthcare, environmental sustainability, and enterprise engineering. Together with our wholly owned subsidiaries, Noblis ESI and Noblis NSP, we solve difficult problems of national significance and support our clients’ most critical missions.

WORKING WITH US

Government agencies can access Noblis through a variety of contracting mechanisms. We have several IDIQ contracts in place and available to civilian and DoD agencies. We are also a GSA Schedule holder. For a full list of vehicles, visit noblis.org.