Many agencies are facing the issue of managing ever-increasing amounts of information in a variety of formats, commonly referred to as “Big Data.” This volume of information comes from sensors, social media, digital pictures and videos, transaction records, cell phones, GPS signals, and more. Given the volume, complexity, and speed of analysis needed, Big Data is too large to process using traditional methods. The federal government has turned its attention to this challenge with a Big Data initiative designed to improve agencies’ ability to extract knowledge from complex data sets with the intention of helping to solve challenges faced by the nation. In order to extract this knowledge from Big Data, analytics are required. A nascent technology, Big Data analytics involves advanced analytic techniques in which a large volume of complex data is analyzed very quickly.

The Composite Solution
Big Data analytics is the process of examining large amounts of data of a variety of types to uncover patterns, business trends, correlations and other information for the purpose of quickly gaining high-value, actionable insights. Standard tools and procedures are not designed to search and analyze massive datasets, and as a result, a new class of data technology is emerging.

The Composite Data Virtualization Platform is a bridge to Big Data analytics, enabling agencies to leverage the power of new Big Data analytics tools in legacy architectures and acting as a testbed for Big Data analytics adoption. The platform provides an agile, high performance data integration approach that overcomes data complexity and disparate silos to provide analytics with both the Big Data and enterprise data needed to boost performance. The Composite Information Server forms the core of the Composite Data Virtualization Platform.

The Composite Information Server is a data virtualization server that connects to existing data non-invasively, federates disparate data, abstracts and simplifies complex data, and delivers the information as data services. The server includes a graphical development environment that enables rapid design and development of database-centric objects such as relational views and service-oriented objects such as XML Web services. The Composite Information Server also includes a complete set of management capabilities.

The award-winning Composite Data Virtualization Platform enables IT to:

- Respond faster to requests by delivering the data new and evolving applications require.
- Reduce costs by leveraging your existing data in new and powerful ways, without added replication expenses; reuse data services across multiple projects to compound your savings.
- Minimize project risks by enabling quick iterations and easy validation of user requirements throughout the development life cycle.

1 http://www.whitehouse.gov/sites/default/files/microsites/ostp/big_data_press_release_final_2.pdf
10 Reasons to Use Composite Information Server

1. **Break Down the Barriers Between Data Types** – Composite Information Server provides powerful data abstraction tools to simplify your complex data—whether it is structured or multi-structured—transforming it from native structures to common semantics for easier consumption. Quickly gain on-demand access to data, regardless of structure, physical location or the speed in which it comes in.

2. **Ensure a Scalable Solution** – Even if your data is continually growing, Composite’s scalability provides a solution that grows with you.

3. **Manage the Volume of Big Data** – Composite addresses how Big Data fits into the rest of your agency’s data ecosystem, making many data sources look like one source and allowing users to integrate and analyze data on demand. Bridge big data repositories, new agency architectures and legacy data stores to deliver the most seamless access to big data possible.

4. **Speed Up Data Analysis** – Query optimization algorithms and techniques provided by the Composite solution are the fastest in the industry, delivering the timely information your analytics require. Facilitate better analytic environments by improving coordination and data sharing among the different agencies, without fear or risk or original location disclosure, and with multi-level security features.

5. **Maintain Your Current Architecture and Data Locations** – Composite maximizes the value of your current data and works with your current architecture by creating a middleware layer that accesses your current data store, leaving your data where it currently exists.

6. **Move Data at the Speed Your Agency Requires** – Composite’s loosely-coupled data virtualization layer architecture and rapid development tools provide the agility required to keep pace with your ever-changing analytic needs.

7. **Enable and Optimize Hadoop** – Composite Information Server provides an enterprise-ready, SQL-centric high performance interface to Hadoop that eliminates a lot of the extra complexity that occurs with MapReduce and Hadoop data stores.

8. **Help Ensure Cybersecurity** – The data governance that Composite provides ensures data security, data quality and operations that are 24 hours a day, 7 days a week to maximize control.

9. **Free Your Data from “Stovepipe” Systems** – Composite Information Server provides agile, lower-cost data integration to overcome data complexity and isolated data silos.

10. **Reduce Physical Storage Issues** – Data federation provided by Composite’s solution virtually integrates your data in memory to provide the complete picture without the cost and overhead of physical data consolidation.