

## Composite Data Virtualization

### ***Composite Customer Value Framework***

Composite Software

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## **THE NEED FOR A VALUE PROGRAM**

Achieving compelling value from initiatives is critical, especially in information technology (IT) which is often an enterprise or government agency's largest capital expense. Technology for technology's sake does not cut it. Increasing business complexities and a plethora of technology choices creates greater-than-ever demands for diligence when making IT investments.

IT business cases must demonstrate value through tangible business and IT metrics that align with the strategic objectives of the business units that they serve and with the greater good of the ecosystem in which they exist. Further, not only must this value be proven, it must be proven early in the acquisition process to justify technology evaluation efforts and then re-proven again after implementation to justify expanded adoption.

Composite Software is committed to helping you maximize the value of your Composite data virtualization implementations. The Composite Software Customer Value Program helps participating customers prospectively estimate business and IT value from your use of Composite solutions, as well as demonstrate and communicate value actually achieved to the appropriate internal and external constituents. The program includes expert staff who work with members of your team to calculate and communicate value as well as a Customer Value Framework that provides structured tools, methods and deliverables.

For Composite prospects and customers who must measure and demonstrate value, this paper introduces the Composite Customer Value Framework and Customer Value Program.

## COMPOSITE CUSTOMER VALUE FRAMEWORK

The Composite Customer Value Framework is a comprehensive approach for assessing, delivering and communicating value designed to assist you prove business and IT value from your data virtualization projects and architecture initiatives.

The framework provides a full life-cycle approach to value including all the tools, methods, deliverables, and assistance required to:

- Assess Value
- Deliver Value
- Communicate Value

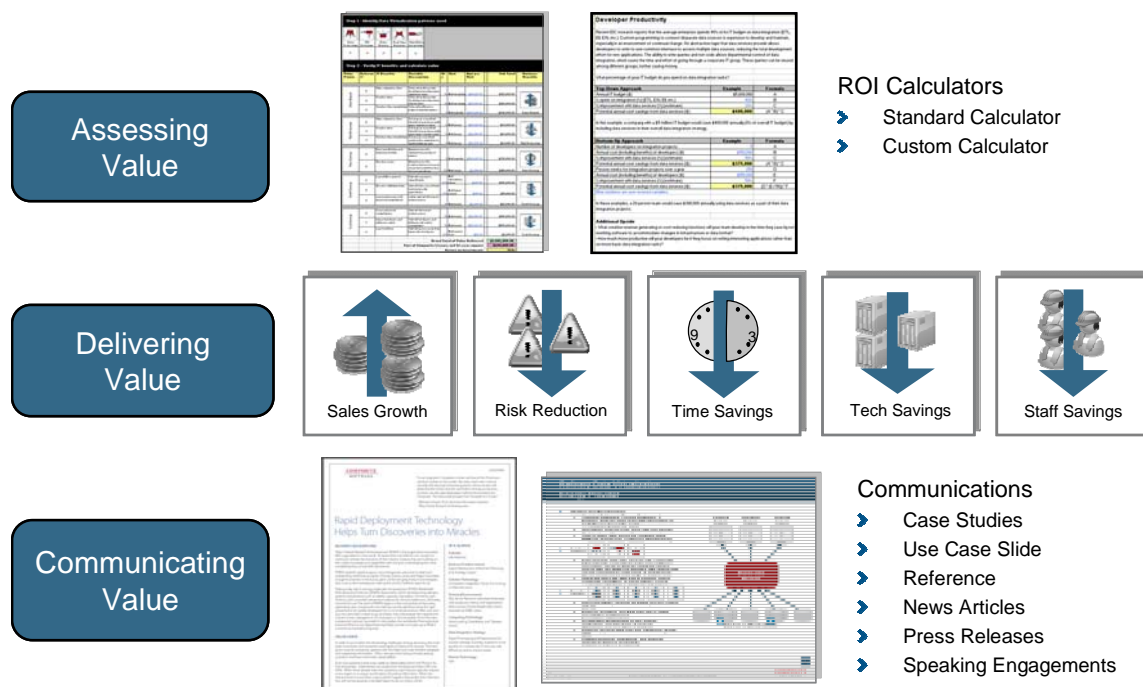


Figure One: Composite Customer Value Framework

### Assessing Value

New technology on its own merits is not enough. Your data virtualization investments compete for funding and must demonstrate a superior return on investment. The Composite Customer Value Framework provides value calculation tools and value assessment deliverables to help you assess the business and IT value resulting from your Composite data virtualization investments.

Tools used in calculating value are:

- **Standard ROI Calculator** – A high level value assessment based on Composite’s proven business and IT value points. This tool is often used for rapid value assessment, perhaps to justify a data virtualization evaluation or pilot project.

- **Customized ROI Calculator** – A more detailed assessment that is customized to your specific project and environment. This tool is often used to build a more formal business case, perhaps to justify new or expanded funding.

Composite Customer Value staff assists you to use these tools to create two types of value assessment deliverables:

- **Prospective Value Assessment** – In advance of your data virtualization project, Composite can help you develop a prospective value assessment that provides a baseline estimate of the project's potential ROI. This can be performed any time during your evaluation, purchasing, or implementation phases and may be revised and updated prior to the completed implementation.
- **Realized Value Assessment** – Once your project has been completed, Composite can also help you perform a realized value assessment that assesses the actual ROI for that project. This assessment may also be performed during implementation to measure the progress towards achieving the estimated ROI for the project.

## Delivering Value

Composite data virtualization can deliver value to your business and IT in a number of ways. To help you effectively understand measure and communicate that value, the Composite Customer Value Framework categorizes value using a set of key value points including:

- Sales Growth
- Risk Reduction
- Time Savings
- Technology Savings
- Staff Savings

More detail on each of these value points is provided in the Composite Value Point section below.

## Communicating Value

Investing in data virtualization is an important business decision. Your internal stake holders and external constituents want to know how your enterprise or government agency is benefiting from the intelligent use of Composite's data virtualization technology. As such, internally and externally communicating the value your data virtualization projects is a critical component of the Composite Customer Value Framework.

The Composite Customer Value staff collaborates with members of your team to develop any or all of the following communication deliverables:

- Case studies
- Use case slides
- References
- News articles

- Press releases
- Speaking engagements

These communications provide a number of benefits including:

- **Demonstrate Diligence** – Prove returns on your Composite data virtualization investments.
- **Justify Additional Investments** – Show how your future data virtualization investments will payoff based on a successful track record.
- **Accelerate Internal Deployments** – Help other internal IT teams learn from your successes.
- **Showcase Innovation Externally** – Gain from the premium that external constituents place on innovators.
- **Learn-by-example** – Apply use case solution examples from other Composite customers to your data virtualization challenges.
- **Expand Your Composite Relationship** – Team with Composite to help grow our business by demonstrating how our customers gain value from Composite data virtualization.

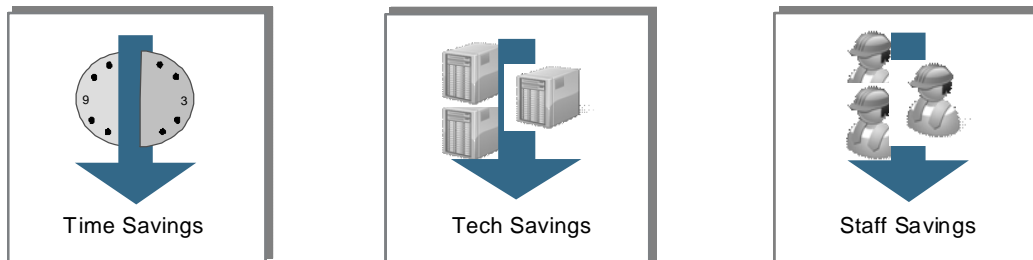
## COMPOSITE VALUE POINTS

There are many ways that Composite data virtualization can deliver value to your business functions and IT operations. To help you effectively understand measure and communicate that value, the Composite Customer Value Framework categorizes value using a set of key business and IT value points shown in Figure Two.

### Business Value Points



### IT Value Points



*Figure Two – Composite’s five major value points*

The following sections describe specific Composite data virtualization capabilities and the value you can derive from their use. Measurement techniques used by Composite’s ROI calculators are included to show the link between these tools and the value points. Finally, actual customer examples are provided to help bring these value points to life.

### Sales Growth

Sales growth is an important indicator of an enterprise’s success. In the public sector where revenue is not the measure, this objective is often called service growth or mission effectiveness. Sales growth can result from many strategies including improved offerings, better customer support, faster market response, and more. Composite data virtualization supports these strategies by providing the following capabilities and associated IT and business benefits:

Composite Capabilities	IT Benefits	Business Benefits
Data federation	▶ More complete data	▶ Comprehensive info for business decisions
On-demand data access and delivery	▶ Fresher data	▶ More timely & accurate business decisions
Data discovery and modeling	▶ Quicker time to solution	▶ Apps available sooner to support business

### ***More Complete Data***

Composite’s data federation capabilities let you integrate disparate data on the fly, without the need for physical consolidation. As a result, you can provide more complete data to your revenue-producing and customer-facing staff so they can make better sales related business decisions.

Composite’s Standard ROI calculator considers the value of improved decisions based on more complete data using variables such as:

- The number of decisions within scope of the project
- The revenue-enhancing value of improving each decision based on the availability more complete data

<b>Using Data Federation To Achieve Sales Growth</b>
<p>This energy provider needed real-time data to increase the oil production from their 10,000 wells. Their data included complex surface, subsurface, and business data in high volumes from many disparate sources. Their solution was to federate actionable information using the Composite Information Server, automating key maintenance and repair decisions throughout the day and relieving key resources for other value-adding tasks. This increased both staff and repair rig productivity and was a key factor leading to a 10% increase in well revenue performance and efficiency.</p>

### ***Fresher Data***

Composite’s on-demand data access and delivery capabilities let you reach difficult to access data and deliver that data to consuming applications in near real time. Armed with fresher data, your revenue-producing and customer-facing staff decision making is more timely and accurate, in many cases yielding sales growth.

Composite’s Standard ROI calculator considers the value of improved decisions based on more timely data using variables such as:

- The number of decisions within scope of the project

- The revenue-enhancing value of improving each decision based on the availability more timely data

### **Using On-demand Data Access And Delivery To Achieve Sales Growth**

This leading marketing information company wanted to grow sales by providing their large consumer goods clients with more timely access to the firm's huge volumes of consumer trends and demand information. Their solution was to build a data virtualization layer based on Composite Integration Server capable of rapidly supporting new and changing queries and delivering these results to self service reporting tools with high performance. This customer self service capability was a key factor leading to a 2% increase in revenue.

#### ***Quicker Time to Solution***

Composite's data discovery and rapid modeling capabilities let you reduce time wasted searching for relationships and can automate many of the detailed modeling and validation activities that would otherwise extend elapsed times and add labor content on your projects. With quicker time to solution, your new sales-impacting applications and their associated revenues are available sooner.

Composite's Standard ROI calculator considers the value of accelerating a sales-impacting application using variables such as:

- The number of months the project can be delivered earlier
- The revenue-enhancing value associated with each month where value was accelerated

### **Using Data Discovery And Modeling To Achieve Sales Growth**

This top tier investment bank wanted to increase revenues by improving their trade order management, debt/equity market research, and risk management applications. Their solution was to build an abstracted data layer within their services oriented architecture using Composite Information Server that let them rapidly model and create complex queries, shareable across the bank. The resulting 60% reduction in integration design and development time on revenue-enabling applications and portals contributed to a 2% revenue increase at the bank.

#### **Risk Reduction**

Risk reduction has becoming increasingly more important as a result of ever increasing complexity and regulation. Becoming more agile in response to risk, improving predictability in light of risk, and ensuring compliance with changing regulations and reporting mandates are but a few of the strategies you can use to reduce risk. Composite data virtualization supports these strategies by providing the following capabilities and associated IT and business benefits:

Composite Capabilities	IT Benefits	Business Benefits
Data federation	▶ More complete data	▶ Greater visibility
On-demand data access and delivery	▶ Fresher data	▶ Timely remediation
Data discovery and modeling	▶ Quicker time to solution	▶ Apps available sooner to support business

The Composite capabilities and IT benefits that drive risk reduction are the same as those that drive sales growth. In both cases more complete data faster enables arms decision makers. However in the risk reduction case, the business benefit of this better information is better risk visibility and faster problem remediation. In both cases quicker time to solution helps get new or improved applications online faster. However in the risk reduction case these might be applications for risk management or compliance reporting, rather than sales or customer management.

### ***More Complete Data***

Composite’s data federation capabilities let you integrate disparate data on the fly, without the need for physical consolidation. As a result, you can provide more complete data to your managers and decision makers in general, as well as risk and compliance management staff in particular, improving their visibility and thereby reducing your overall risk.

Composite’s Standard ROI calculator considers the value of improved risk management decisions based on more complete data using variables such as:

- The number of risk decisions within scope of the project
- The risk reduction value of improving each decision based on the availability more complete data

### **Using Data Federation To Reduce Risk**

This global pharmaceutical company wanted to shorten long research and development cycles in order to reduce the risk of new product delays. Their solution was to build a Research Scientists’ Workbench that combines disparate structured and semi-structured research data from across the company using the Composite Information Server. Armed with more complete information, researchers were able to uncover and resolve problems faster resulting in 60% fewer new product delays.

### ***Fresher Data and Quicker Time to Solution***

Composite’s on-demand data access and delivery capabilities improve the timeliness of your data so you can remediate risk issues faster. Composite’s data discovery and modeling accelerates new risk management and compliance reporting application development, thereby

delivering their associated risk reducing benefits sooner. Composite's Standard ROI calculator considers the value of these benefits.

**Time Savings**

Time is of the essence, especially as your business or government agency responds to an ever changing environment. New information systems must deliver more data while also reducing the latency between business event and business response. As a result, IT is under constant pressure to provide these new information systems and their associated information more quickly. Strategies that save development and deployment time as well as data latency are must dos. Composite data virtualization supports these strategies by providing the following capabilities and associated IT and business benefits:

Composite Capabilities	IT Benefits	Business Benefits
Data services library	▶ Less new code, greater reuse	▶ Save development time
Installation wizard, manager, and clustering	▶ Easy installation and reliable operation	▶ Save deployment time
Query optimization	▶ High-performance data delivery	▶ Save response time

***Less New Code, Greater Reuse***

Composite's data services library holds your entire collection of reusable services, including ones you build as well as those pre-built by Composite. These capabilities lessen new coding efforts and permit greater object re-use across multiple applications. This saves project development time for both new applications and existing ones where changes are needed.

Composite's Standard ROI calculator considers the value of time saved by reusing data services or views instead of having to recreate them using variables such as:

- The number of views or services planned
- The savings per view or service

Note: sometimes it is best to apply a percentage re-use factor to the total number of expected views that are planned for development within scope and for a specified time frame.

<b>Using a Data Services Library to Save Development Time</b>
This global bank wanted to build new applications faster but was slowed because key reference data, such as counterparty accounts was duplicated across applications. Beyond slowing development, this proliferation was contrary to good banking practice and data governance. Their solution was to implement a common set of web services using Composite Information Server for sharing counterparty master reference data. Results included faster time to solution on new or changing applications.

## ***Easy Installation and Reliable Operation***

Composite's installation wizard, manager, and clustering capabilities let you install your Composite data virtualization solutions quickly and run them reliably. As a result, you can deploy new solutions faster so the business can gain benefits sooner.

Composite's Standard ROI calculator considers the value of deployment time savings due to these advanced installation and deployment capabilities using variables such as:

- The number of months the project can be delivered earlier
- The assignable value associated with each month where value was accelerated

### **Using an Installation Wizard, Manager, and Clustering to Save Deployment Time**

This global life sciences R&D organization needed to quickly prototype, develop and deploy the new information solutions required to support strategic business decision by business executives. Their solution was to use Composite Information Server to rapidly build and deploy virtual data marts in support of multiple consumers including: Microsoft Sharepoint, Business Objects reporting, Tibco Spotfire, Microsoft Excel, and various web portals. This resulted in a 90% reduction in time required to deploy a new information set to answer a new business question or resolve a new business problem.

## ***High-Performance Data Delivery***

Composite's query optimization capabilities enable you to improve the performance of your federated queries as well and reduce their impact on source systems. High-performance data delivery eliminates data latencies, speeding the delivery of critical information to users and applications and thereby shortening the time between business event and business response.

### **Using Query Optimization to Save Response Time**

This North American telecom chip manufacturer needed to respond faster to customer requests. This meant their sales force management analytics required up-to-the-minute data from their packaged CRM application, Salesforce.com, as well as other systems. Their solution was to implement pre-built Composite Applications Data Services for Salesforce.com along with the Composite Information Server to further optimize query performance. Four minute report run times were brought down to 30 seconds or less.

## **Technology Savings**

With support for existing technology infrastructure consuming an ever greater share of IT spend, Finance and IT are scrutinizing this spend more than ever. Storage, server, and applications virtualization has demonstrated huge technology savings.

Composite data virtualization can provide similar savings by requiring fewer physical data repositories along with the systems required to build and operate them. Many Composite

customers find that these technology infrastructure savings alone can justify their entire Composite investment. And as such this may be great place to start when you want to show easily justifiable cost savings.

Composite data virtualization delivers technology savings by providing the following capabilities and associated IT and business benefits:

Composite Capabilities	IT Benefits	Business Benefits
Virtualized data integration approach	Fewer physical repositories	
	Lower hardware and software costs	Less spending on IT assets
	Lower facilities costs	

**Fewer Physical Repositories, Lower Hardware, Software and Facilities Costs**

Composite’s virtual approach to data integration does not require you to replicate data in intermediate physical data repositories as you would when integrating data using physical data consolidation. Fewer physical data marts and operational data stores means you need less hardware and software to support them. This in turn means less rack space, electricity, air conditioning, management software, and other facilities costs. Virtualizing data discovery, abstraction, access, federation, and delivery using the Composite means your business will spend far less supporting IT assets.

Composite’s Standard ROI calculator considers the business and IT value of lower IT asset spending due to data virtualization using variables such as:

- The number of servers that will not be required due to virtual federation rather than physical consolidation
- The assignable hardware, software, and facilities cost associated with each server

<b>Using Virtualized Data Integration to Achieve Technology Savings</b>
<p>This leading computer manufacturer wanted to reduce the cost of their supply chain and customer management operational BI applications which included over 50 intermediate data marts. Each mart required a server, resulting in life cycle hardware infrastructure costs of \$20K/each. Their solution was to build a virtual supply chain data hub using the Composite Information Server replacing these physical data marts with virtual data marts. This resulted in a \$1M in infrastructure cost savings.</p>

**Staff Savings**

The cost of the internal and external staff is one of your largest IT expenditures. Cost reduction is a key consideration that can result from many strategies. Reducing labor required by

substituting tools for labor is one strategy. Improving productivity by improving your SDLC processes is another. Simplifying work to allow substitution of lower skilled staff is a third. Composite data virtualization supports these strategies by providing the following staff savings capabilities and associated IT and business benefits:

Composite Capabilities	IT Benefits	Business Benefits
GUI development environment	Less skills required	Less spending on expensive consultants
Discovery validation, data services library	Greater collaboration	Improved synergy among staff
Virtualized data integration approach	Less maintenance of physical repositories	More resources for other projects

**Less Skills Required**

Composite’s GUI development environment capabilities let you simplify and automate the detailed design and development work that would otherwise require far more technically capable staff. With fewer skills required, you spend less money on expensive consultants and you can redeploy highly skilled staff to other, more critical work.

Composite’s Standard ROI calculator considers the value of reducing consulting staff expense staff or substituting lower skilled staff using variables such as:

- The number of consulting staff hours being reduced
- The cost per hour

Using GUI Development Environment to Achieve Staff Savings
This global money management firm wanted to reduce the efforts required by 100 financial analysts who build complex portfolio models used by fund managers. This work required deep knowledge of their underlying financial research data warehouse, which hindered portfolio model development. Their solution was to build a virtualization layer surrounding this warehouse to abstract away the complexity of underlying data using the Composite Information Serve. This simplification resulted in Financial Analyst productivity increase of 25%, allowing some of them to be redeployed to develop additional financial analytics for the firm.

**Greater Collaboration**

Composite Discovery lets your quickly validate new reporting solutions with your end users using live data early in the development process. Further, Composite lets you transfer work done in Discovery by your analysts and data designers to your application developers and operations teams who use Composite Information Server. This lets your team share insights, add value, avoid rework, and ensure nothing is lost along the way. Greater collaboration throughout this process means improved staff synergy.

Composite's Standard ROI calculator considers the value of improved staff synergy using variables such as:

- The number of hours saved
- The cost per hour

### **Using Data Service Library to Achieve Staff Savings**

This global money management firm wanted to improve collaboration between 100 financial analysts who build the complex portfolio models used by fund managers. Many of the financial models relied on similar data and data models, but these analysts were unable to effectively share their work. Their solution was to build a virtualization layer over their financial research data warehouse using the Composite Information Server so they could share reusable views of this data. In addition, they provided a dedicated DBA and data architect who could team with the analysts to rapidly create new views as needed. This improved collaboration resulted in higher portfolio returns and a 150% ROI in 6 months elapsed time.

### ***Less Maintenance of Physical Repositories***

Composite data virtualization enables you to integrate data without the need for physical data repositories. Fewer repositories means less maintenance effort is required, freeing these resources for other value adding projects.

Composite's Standard ROI calculator considers the value of reducing physical data repository maintenance costs using variables such as:

- The number of marts being eliminated
- The maintenance cost per mart per time period

## HOW DATA VIRTUALIZATION PATTERNS DRIVE VALUE

As described above, data virtualization provides business and IT value in a number of ways. Purpose-built as a lower cost, more agile approach that overcomes data complexity and silos, Composite data virtualization typical use cases fall into common patterns, each delivering value as seen in Figure Three.

More complete data	✓	✓			✓	
Fresher data	✓	✓		✓		
Quicker time to solution	✓	✓	✓	✓	✓	
Easy installation and implementation	✓	✓			✓	
Greater reuse		✓	✓			
Less skills required	✓	✓	✓	✓	✓	
Greater collaboration		✓	✓	✓		
Less maintenance of physical repositories	✓	✓	✓		✓	
Fewer physical repositories	✓			✓	✓	
Lower hardware and software costs	✓			✓	✓	
Less facilities					✓	

Figure Three – How data virtualization patterns map to value

### Data Federation

Data Federation yields more complete and fresher data. This in turn drives increased productivity, and often increased sales, because wasteful practices like reconciliation are eliminated and more informed decisions are made sooner. Additionally, expensive alternate methods for creating comprehensive information can be avoided, which means a quicker time to solution.

### Data Warehouse Extension

In addition to having similar value impact as Data Federation, Data Warehouse Extension also permits more re-use of data warehouse assets by allowing them to be more readily joined together into a virtual layer. This also yields more collaboration across the various departmental silos where otherwise bridging local warehouse assets can be difficult. The result is improved productivity of staff and lower operating expenses.

### Enterprise Data Sharing

Enterprise Data Sharing leads to a quicker time to solution for both data providers and data consumers. For instance, services can be re-used to cut development time for new applications and for new data consumers. This has a positive impact on both IT and business productivity, sales, and a reduction in risk.

## **Real-time Enterprise Data Infrastructure**

In some applications, increased sales and reduced risk are directly proportional reduced data latency and improved data delivery, especially directly to customers or customer-facing roles. As a side benefit, fewer physical repositories are needed when data is delivered from the source on need. As well, hardware and software costs are lower when workaround solutions are eliminated.

## **Cloud Data Integration**

The costs of locally hosting data can often be prohibitive. Having such data integrated from Cloud sources can have a positive impact on productivity and cost due to more easily bringing in sources. Less skill is required as well since managing the underlying infrastructures of those sources is external. This lowers risk, increases time to value, and reduces infrastructure costs.

## **CUSTOMER VALUE PROGRAM ENGAGEMENT MODEL**

Composite provides dedicated Customer Value Program staff who can work with members of your team to assess and communicate value using the Composite Customer Value Framework. To engage with Composite's value experts, your Composite Account Manager can set up an introduction and initial scoping session.

### **Introduction and Initial Scoping Activities**

In this first meeting, typically a teleconference, Composite will:

- Introduce the Composite Customer Value Framework and Composite Customer Value Program staff resources available to assist you.
- Discuss ways Composite and you might collaborate to assess and communicate your data virtualization projects.

In this first meeting you will:

- Gain a deeper understanding of how Composite data virtualization delivers value and how you can assess and communicate that value using the Composite Customer Value Framework.
- Identify the projects that you may want to assess and/or communicate with Composite's assistance.
- Identify business and IT staff that may need to be included in these activities.
- Determine a mutually agreeable activity time line.

### **Assessment Activities**

Assessing value is the typical next step. Composite Customer Value staff will meet with your team on-site to apply Composite Customer Value Framework value calculation tools and create the value assessment deliverables that will support subsequent business case justifications and other communications.

### **Communications Activities**

Based on the facts gathered during assessment, Composite Customer Value staff then collaborates with members of your team to develop a communications plan and create this plan's communication deliverables including case studies, use case slides, references, news articles, press releases, speaking engagements and more as appropriate.

### **Ongoing Activities**

As your data virtualization needs grow, so too does your Composite Customer Value Program participation. Customer Value Program staff, along with your Composite Account Manager, meet with you periodically to ensure Composite is delivering value and to map out new assessment and communications opportunities.

## **CONCLUSION**

Composite Software is committed to maximizing the value of your Composite data virtualization implementations. The Composite Customer Value Program and Framework described in this paper provides structured tools, methods and deliverables, and expert staff to help you calculate and communicate value.

## **ABOUT COMPOSITE SOFTWARE**

Composite Software, Inc. ® is the only company that focuses solely on data virtualization.

Global organizations faced with disparate, complex data environments, including ten of the top 20 banks, six of the top ten pharmaceutical companies, four of the top five energy firms, major media and technology organizations as well as government agencies, have chosen Composite's proven data virtualization platform to fulfill critical information needs, faster with fewer resources.

Scaling from project to enterprise, Composite's middleware enables data federation, data warehouse extension, enterprise data sharing, real-time and cloud computing data integration.

Founded in 2002, Composite Software is a privately held, venture-funded corporation based in Silicon Valley. For more information, please visit [www.compositesw.com](http://www.compositesw.com).