

Enabling Self-Service BI Success: TimeXtender's Discovery Hub® Bridges the Gap Between Business and IT

Abstract

As data-driven cultures continue to develop and data-driven organizations garner larger segments of the market, executives are looking at the best practices of those companies to see how they can replicate their results. One key component of a data-driven organization is the implementation of self-service analytics environments that enable business analysts and decision makers to explore and analyze data at a faster pace than ever before.

TimeXtender's Discovery Hub® brings together the worlds of data governance, self-service analytics, and business intelligence (BI). Discovery Hub® enables business leaders to quickly discover and access data from within their organization and from third parties. TimeXtender enables IT departments and technical resources to focus on strategic goals as opposed to tactical tasks that can be readily automated.

Discovery Hub® is an integrated analytics architecture that delivers faster time to value with fewer resources. It combines all of the practices and disciplines required for organizations to provide relevant data to the business. With Discovery Hub®, there is no need for standalone data preparation and blending tools or metadata catalogs. Discovery Hub® sits on top of the SQL Server stack, providing the enabling structure for self-service analytics.

TimeXtender designs, develops, sells, and supports the Discovery Hub® architecture and the TX DWA platform; their agile data warehouse automation software that enables organizations to automate the development of their analytical environments. This ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) solution brief reviews TimeXtender's Discovery Hub® architecture and the TX DWA platform and recognizes the company as an innovator in the field of self-service analytics, supporting architectures and the automation that enables those environments.

Corporate Background

TimeXtender is a software product house that develops an SQL Server-based analytical environment automation tool that supports self-service analytics, enterprise data warehouses, and data mart designs, creation, and maintenance. TimeXtender's solutions and products significantly reduce the need for coding, simplify the implementation process, and minimize the amount of time spent turning disparate data sources into valuable information for organizations.

TimeXtender is the leader in the analytics automation environment for the Microsoft SQL Server market, with more than 2,600 customers and partners worldwide. Headquartered in Denmark with offices throughout Europe and the USA, TimeXtender is an international, partner-driven company. Microsoft ISV named TimeXtender their Partner of the Year in Denmark in both 2008 and 2010.

HIGHLIGHTS

Vendor Name: TimeXtender

Solution Name: Discovery Hub®

Availability: General availability

Solution Function: Automation for analytical environments to enable self-service analytics delivery

Vendor Contact: info@timextender.com

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Key Benefits

- **Connection to Multiple and Disparate Data Sets** – TimeXtender’s Discovery Hub® provides access to all the information across an organization, including existing data warehouses, external, cloud-based, and third-party data, with a fast time to implementation model that integrates best practice guidelines with automation.
- **Flexible Data Models and Architecture** – The restrictive data models of the past were the best technology could support. With advances in underlying technology and the need for increased flexibility, TimeXtender’s Discovery Hub® architecture allows IT organizations the flexibility to provide self-service analytics and the ability to take advantage of new database and processing technology.
- **Exposing Business Data in Business Terms** – Data-driven decision makers come from lines of business such as marketing, finance, and operations. Putting self-service analytics data sets in the terms of customer, product, store, and region allow those stakeholders to focus on moving the business forward rather than spending time translating technical definitions to business ones.
- **Enable Speed and Agility via Automation** – TimeXtender’s Discovery Hub® architecture empowers IT organizations from the CIO to the chief data officer (CDO) to the data architect. This empowerment means each level of a company can implement self-service analytics environments without getting into the weeds of tactical implementations and allows them to focus on the strategic partnership between IT and business stakeholders.
- **Details** – For more detailed information on TimeXtender’s Discovery Hub® architecture and the TX DWA platform that powers their metadata-driven automation, go to <http://www.timextender.com/discovery-hub/>

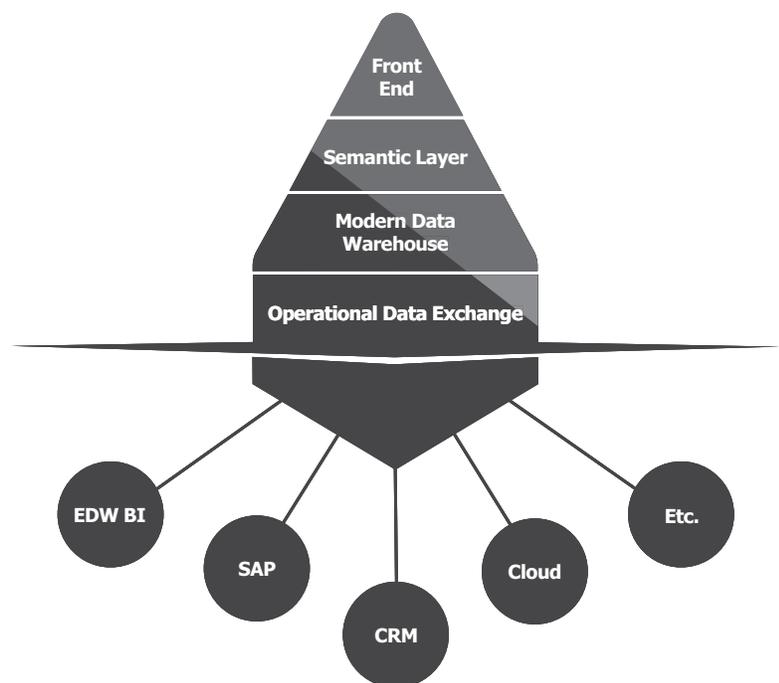
Offering Description

Discovery Hub®

TimeXtender’s Discovery Hub® brings together the worlds of data governance, self-service analytics, and business intelligence (BI). Discovery Hub® enables organizations to:

- Provide business users with access to data from across the organization
- Maintain data governance, user security, and strategic control of data sources
- Provide a single, consistent, and trusted source of the truth
- Reduce the backlog of tactical IT requests associated with analytical environments
- Increase the pace of business change

Discovery Hub® is an integrated architecture that delivers faster time to value with fewer resources. It combines all of the practices and disciplines required for organizations to provide relevant data to the business. With Discovery Hub®, there is no need for standalone data preparation and blending tools or metadata catalogs. The Discovery Hub® sits on top of the SQL Server stack and provides the enabling structure for self-service analytics.



Discovery Hub® includes the following layers:

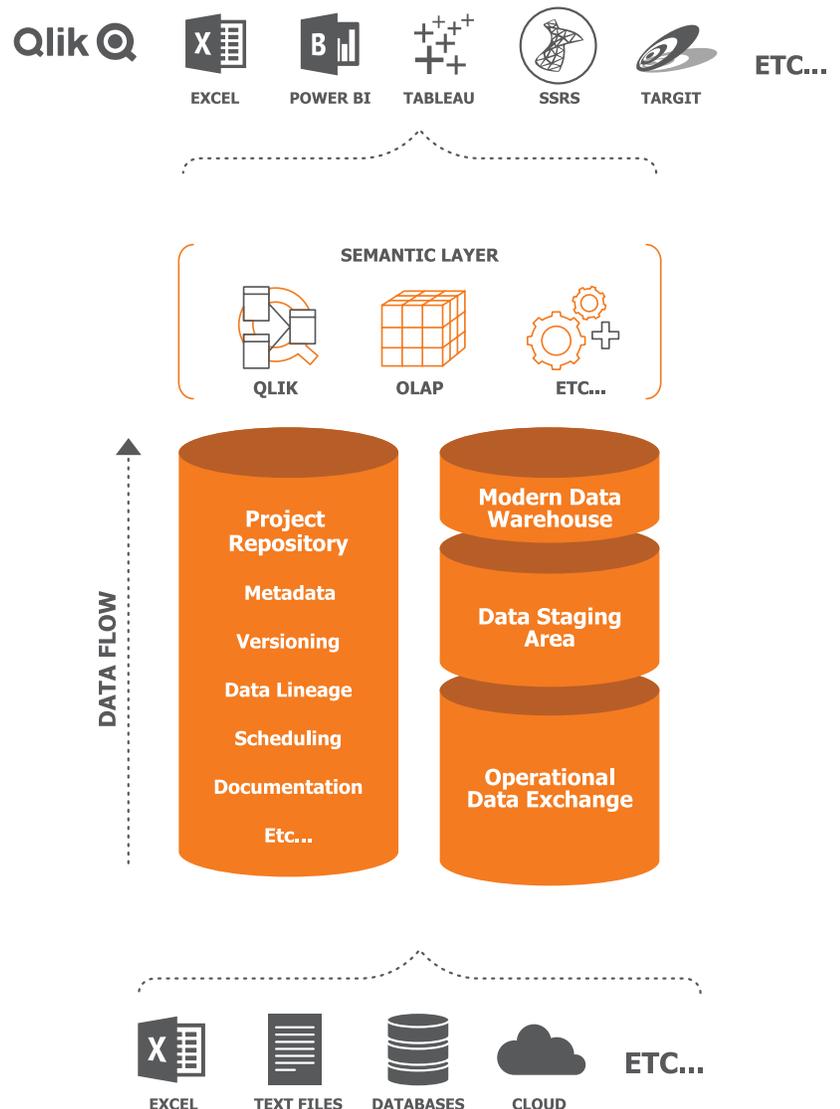
- **Operational Data Exchange:** With Discovery Hub®, organizations connect to the various and often disparate data sources inside their organization such as enterprise resource planning (ERP) and enterprise data warehouses (EDW), as well as external sources from the cloud and third parties.
- **Modern Data Warehouse:** The modern data warehouse is a flexible data architecture layer that provides a key difference over traditional EDW environments. Data is structured with a data discovery and self-service analytics approach in mind instead of a reporting structure such as a star schema. This data model provides a flexible and agile structure.
- **Semantic Layer:** In the Discovery Hub® semantic layer, data from the modern data warehouse layer is simplified into purpose-specific models that utilize terms and definitions that business users understand – customer, product, region, revenue, and events.
- **Frontend:** The final component is to make the Semantic layer available to self-service analytics data consumers via their tool(s) of choice. Discovery Hub® supports Qlik Sense, Tableau, and Microsoft PowerBI formats, as well as enabling organizations to use tools such as Microsoft Excel, MicroStrategy, and other JDBC/ODBC-enabled visualization and exploration tools.

TX DWA Automation

TX DWA is the design and automation software used to build and maintain Discovery Hub®. It is metadata-driven and designed to fully automate the creation, maintenance, and operation of Discovery Hub®, as well as other analytical environments such as enterprise data warehouses and data marts. The automation principles and practices within TX DWA enable organizations to access, model, govern, and understand their disparate data sources. By combining automation with a metadata-driven approach, TX DWA delivers analytical environments faster and with fewer resources than traditional methods.

TimeXtender's TX DWA supports the following concepts to improve the implementation of analytical environments:

- **Connectors and Adapters:** TX DWA can connect and extract data from virtually any data source and comes equipped with intelligent adapters for some of the most popular data sources. These adapters retrieve data using the business logic of the source platforms and allow organizations to extract and synchronize data from those sources efficiently.



- **Data Lineage:** The data lineage functionality within TX DWA tracks all objects and their dependencies, delivering an end-to-end visual representation of the data within Discovery Hub®. This functionality allows organizations to answer questions like: “What sources am I looking at?” and “Which transformations were applied to which data sets?”
- **Impact Analysis:** One key challenge of any analytics environment is determining how changes to data sources and transformations impact downstream uses of information. TX DWA shows organizations everywhere a change(s) influences end results before the proposed change(s) is made within Discovery Hub’s® layers.
- **Documentation:** With the click of a button, TX DWA reads the entire metadata model of Discovery Hub® and describes it in a PDF. The documentation allows readers to see the names, settings, description, and code for every object.
- **Security:** With the security features built into TX DWA, users can access rights and enable object and row-level security within the Discovery Hub®.
- **Semantic Layer:** One of the core capabilities within Discovery Hub® is semantic layer modeling, which provides easy access to data that is relevant to a specific department or purpose. The semantic layer modeling capabilities within TX DWA enable organizations to focus on the definitions that business users can easily understand.
- **Flexible Implementations:** With cloud, on-premises, and hybrid implementation choices available, CIOs and architects use the implementation strategy that makes the most sense for their business instead of being forced into a single methodology.

EMA Perspective

Self-service analytics is one of the key components of a data-driven organization, including the ability to quickly and flexibly access information without engaging the IT department for implementation. By removing IT from the tactical implementation of exploration and analytics, organizations can enable their business stakeholders to make business decisions at a much faster rate than they previously could. In the past, business stakeholders made requests for changes to IT organizations for the smallest of adjustments to analytical environments. Data-driven organizations do not have time to wait for these types of tactical adjustments.

Self-service analytics also has the advantage of freeing IT from tactical changes. By enabling and empowering business stakeholders to explore through and make business decisions with “certified” data sets, IT departments and CIOs in particular can take a strategic approach to their analytical environments. They can focus on the identification and certification of data sources under specific, strategic service-level agreements (SLAs), much like how a utility provider focuses on the distribution of power as opposed to how exactly power is utilized within a particular business or home.

The TimeXtender Discovery Hub® architecture, enabled by the TX DWA platform, allows for organizations to empower a self-service analytics environment to meet the needs of their business stakeholders. It also allows their IT organization to take a step back from tactical implementation teams to strategic partnership with the business. TimeXtender does this through the following features: connection to multiple data sources, a flexible data model, and a business-oriented semantic layer.

By connecting to a wide range of disparate data sources, TimeXtender’s Discovery Hub® includes all the data business stakeholders need for their self-service analytics activities. Using automation, IT departments can quickly connect, validate, and perform any of the necessary transformation/data quality activities. Also by using automation, IT departments can promote these data sources from initial discovery to validation to production with a level of assurance that quality and integrity are maintained.

With the TimeXtender flexible data model (the Modern Data Warehouse layer), organizations can push back the “walls” associated with self-service analytics and fully explore the many data sets brought into the organization through the data connection layer. By utilizing a flexible schema, business stakeholders can explore and discover the answers to questions and even look for new questions they were not aware of to power business decisions. This type of flexibility is key to data-driven cultures and the adoption and use of self-service environments. IT stakeholders can be assured that tactical adjustments are handled according to best practices, and that change is pushed from development to test to production with speed and accuracy.

Finally, the ability to translate the flexible model of the modern data warehouse layer into terms such as customer, product, region, and store that relate directly to business stakeholders enables those performing self-service analytics to focus on the concepts of business, rather than attempting to translate from customer event table to “customer.” Again, automation enables the semantic layer because as new sources of data become available, TimeXtender can assure that the information is assigned to the right locations throughout the validation testing process and promoted to production quickly, without errors.

EMA considers the concepts of self-service analytics and automation to be essential to strengthening the relationship between business stakeholders and IT departments, moving beyond the days of siloed desktop analytics such as spreadmarts and slow, tedious waterfall implementations. As their competition and corporate cultures drive organizations toward shorter decision cycles, implementing self-service analytics and powering those environments with automation will become requirements for leadership in market share. EMA recognizes TimeXtender as an innovator in the field of self-service analytics with their Discovery Hub® architecture. The combination of flexible architecture and speed of implementation via automation techniques and best practices will serve organizations looking to make self-service analytics part of their corporate DNA.

About EMA

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help EMA's clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise line of business users, IT professionals, and IT vendors at www.enterprisemanagement.com or blogs.enterprisemanagement.com. You can also follow EMA on [Twitter](#), [Facebook](#), or [LinkedIn](#).

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Discovery Hub® from TimeXtender is a comprehensive end to end solution. Unlike other approaches, which rely on a mix of tools and vendors, for things like scripting, data prep, and data blending, Discovery Hub® is an integrated platform that leverages the power of automation and provides the benefits of both speed and agility.

www.timextender.com