

## SOLUTION BRIEF

# DUNDAS BI: FROM DASHBOARD TO SELF-SERVICE PLATFORM

Over its more than twenty years in the data visualization industry, Dundas has progressed on a product roadmap to grow from developer components to a compelling dashboard framework. Today, with the Dundas BI platform, Dundas is introducing an enterprise-class BI solution designed to deliver a self-service experience on one flexible platform.

With a product vision to provide organizations with a unified front-end to their data through a business intelligence solution that focuses on data visualization to enable effective performance management, Dundas Data Visualization is launching Dundas BI to go “beyond the dashboard” and provide a self-service, business user-oriented experience to unified data in one end-to-end customizable solution.

### A HISTORY OF VALUE

For over 20 years, Dundas has focused on helping to enable organizations to achieve operational excellence by delivering technology solutions that provide the ability to make timely, data-driven, actionable decisions for immediate business value. Today, Dundas is capitalizing on its proven history of value by expanding its solution in more ways to meet the needs of its customers.

Founded in 1992, Dundas Data Visualization began professional services and development operations that led to the 1994 release of its first data visualization product. For the next several years, Dundas continued to enhance this core product with network data transferring and mobile computing capabilities, building up to the release of Dundas Chart, Dundas’ first user interface and chart product, in 1998. During the following decade, Dundas worked to enrich Dundas Chart by developing connectors for ASP, JNET, .NET, OLAP Services, and Map for .NET, leading to the acquisition of Dundas Component Intellectual Property by Microsoft in 2007.

Dundas shifted its focus from components to dashboards with Dundas Dashboard in 2009, and was awarded the “Best of Microsoft Tech-Ed” in 2010. Since then, Dundas Data Visualization has followed an evolutionary product roadmap from component-based, to developer-based, and finally, to today’s end user-based

self-service platform with the release of Dundas BI. With Dundas BI, Dundas is building a unified front-end through a full-scope, end-to-end business intelligence solution.

### FROM THE DATA TO THE DASHBOARD

In its transformation from Dundas Dashboard to Dundas BI, Dundas has adopted a vision that focuses on building upon its proven successes to address what it has recognized as customer needs and market demands. With the Dundas BI platform, Dundas is introducing a platform that moves beyond dashboards to provide more self-service abilities for business users to access, consume, and interact with data in a single, flexible, end-to-end application.

As a full platform, browser-based Dundas BI is built from the ground up using the latest web technologies such as HTML5, CSS and JavaScript. It is designed to keep the flexibility and other strengths of the Dundas Dashboard platform but at the same time, it is designed to be easy to customize, extend, and integrate, thereby making it an easy to maintain, flexible platform better suited to serve the needs of customers who demand a full, end-to-end BI solution.

The Dundas BI architecture is comprised of four-tiers that flow logically from connectors, to the data model, to business needs, and finally, to consumption through interactive dashboarding, reporting, and scorecarding options. First, Dundas BI connects to data (via SQL Server, OLAP, Excel, etc.) to bring the data into the data layer. Using navigational tiles, users are directed to connect to data via a simple connection menu, or by using an intuitive drag and drop of Excel files onto the browser.

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Once connected to the data, Dundas BI allows users to move directly to the consumption layer by generating the data model and business metrics on the fly using auto detection and discovery of hierarchies and data relationships. However, Dundas BI also allows for the development of predefined data models to support easier data analysis and business metrics definitions by business users as well.

Through the creation of a Data Cube – a cube-like structure for doing analytics against any data (relational databases, cubes, flat files, web services, etc.) - Dundas BI allows users to define their own customized structures to analyze data. To create a Data Cube in Dundas BI, users drag in a table/source of data into the workbook to add a new node to select data. Users are also able to join other non-connected data sources by inserting additional join nodes to drag and drop connections to redefine flow. Then, users can configure the join by selecting elements to be used in the transformation for unique key binding. Users can add multiple sources of data through multiple join nodes and have the ability for additional manipulation of data. Finally, Data Cubes can be shared among users once the governance process is completed. The default behavior for the Data Cube is to extract data directly from the source at run time. In order to optimize performance, Data Cube models can also be pre-executed and stored into Dundas BI's own data warehouse or in-memory using a proprietary "hypergraph" algorithm to fuel discovery. If users prefer, Dundas BI is also designed to pull in pre-created cubes from external OLAP databases.

Once connected to the data, Dundas BI allows users to easily create business metrics through a "business layer" of hierarchies and perspectives before pushing the analysis to dashboards and reports. As data is unified in the data layer, Dundas BI detects hierarchies for different fields and, further, is designed to build on "natural" (i.e. Time and Location) and "non-natural" items to define more unique data relationships for analysis.

Beyond its expanded data integration abilities, the new Dundas BI user interface is built completely on top of public APIs (including .NET, REST, and JavaScript) and has a native extension mechanism

for customization via HTML and CSS overrides. Dundas BI augments the proven flexibility of its Dundas Dashboard in a canvas-like environment where users can drag and drop reusable metric sets from predefined measures and dimensions, and then customize for discovery. The visual discovery environment within Dundas BI includes an intuitive drag and drop dashboard designer that takes advantage of proven PowerPoint and Excel design techniques to support user familiarity and provide visual data discovery complemented with other BI capabilities. To make visualizations more immediately explorable, Dundas' "Re-Visualize" button and visualizations menu provides the ability for users to drill up and down in smart moving visualizations, complete with best practice animations that visually show the user the impact of changing dimensions within visualization outputs. And, users have the ability to story-tell within Dundas BI by annotating data points and including notes and context to data scenarios.

### KEY SOLUTION HIGHLIGHTS

With Dundas BI, Dundas is introducing an enterprise-class BI solution through a self-service, single experience on one flexible platform that leverages best practice-driven visualizations to create customized, tailored experiences for users of all levels. Most notable as key differentiators for Dundas BI are its focus on tailored self-service through four tiers of thoroughly defined user levels, as well as a highly customizable and intuitive interface designed for visual discovery.

#### Tailored Self-Service for All Users

From non-technical (or, "Pure Viewers"), to business users, to power users (business and data analysts), and very technical users, Dundas BI offers a self-service experience for all users, regardless of level of technical expertise.

On the Dundas BI continuum of "consume, create, and control," Pure Viewers are the consumers. These users consume and interact with already prepared dashboards, metrics, and reports, and generally like to create their own individualized views to analyze and visualize the data through simple drill-down/up

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activities, built in data brushing, and visualizations. Business users also mainly consume content, however they often create simple reports and analysis to analyze data across different data sources using drag and drop of predefined metric sets. These users discover data visually through a simplified design and viewing experience, and use dashboards to share their discoveries. Like Pure Viewers, Business Users have the ability to control data through drill down/up and visualization activities, but they also have some ability to modify data (i.e. add formulas, period over period comparisons etc.) and collaborate through annotations, alerts, schedule reports, and sharing.

As content creators in Dundas BI, Power Users customize their work. These users have the ability to create new metric sets and hierarchies to customize those on dashboards, reports, and scorecards. Power users can also analyze data further simply by dragging and dropping Excel files onto their dashboard canvas or use data cube measures and dimensions in a dashboard. Finally, technical users, such as IT, Developers, and OEMs have the ability to create new data cubes using the ETL layer and save the data models in-memory or in a data warehouse to support power users analysis and content creation process. Developer users can integrate and extend the user interface, and, as controllers, are those who deploy, maintain, and typically administer Dundas BI. These users are generally responsible for security, deployment, and control.

### From the Desktop to Mobile

In addition to providing broad self-service options for independent data discovery for users, Dundas BI provides easy access to data through the same consistent experience on any device – including mobile. Dundas BI mobile access is achieved through an HTML5-compliant user interface that works on any desktop, phone, or tablet. With a mobile-first strategy, Dundas BI deploys full scale via mobile and has a touch-responsive interface to ensure usability allowing not only to view, but also to analyze data on the go.

### ADOPTION TRENDS AND CUSTOMER USE CASES

One Dundas BI early adopter – a multinational conglomerate in the electrification and engineering value chain – sees performance as the leading use case for adopting Dundas BI. Along with performance is compatibility: this beta customer will continue to use its old data stores, export engines, and customized iOS apps – and will be able to run Dundas Dashboard side-by-side alongside Dundas BI for quite some time. This customer is still developing new projects in the Dundas BI platform, and expects to see Dundas BI leveraged widely across the organization – from marketing (customer satisfaction management), to procurement, to finance, and to logistics. This adoption is partly due to what they see as key benefits of Dundas BI: the fast development time for dashboards (which has been seen as significantly faster than with Dundas Dashboard), and new opportunities with HTML5 available to build additional functionality into BI.

### KEY BENEFITS

20+ years of industry experience, with 800+ enterprise customers and over 100 partners across 53 countries

Data Cubes provide customized, cube-like structure for analytics

Provides broad self-service options for users to analyze data independently and reduce the load on IT

Uses powerful visualizations functionalities -- such as best practice animations, data brushing, and interactivity -- to illustrate how data changes as metrics and dimensions are adjusted



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