

DATA WAREHOUSING FOR ALL

Innovative Cloud Technologies to Help Small- and Mid-enterprises Compete in the Age of Big Data

The obstacles facing small- and mid-enterprise (SME) organizations in the digital information age continue to grow. Today's businesses are challenged to obtain, load, and analyze data as quickly and cost-effectively as possible in order to remain competitive.

As competitive pressures increase, businesses must find ways to extract greater actionable insights from data using mining and predictive analytics to support mission-critical activities.

But the deck is stacked against SMEs hoping to do so without breaking the bank. Legacy data warehouse (DW) systems and analysis processes remain difficult to retrofit for today's agile business needs, and new products on the market aren't built to handle all the ways data should be analyzed and mobilized.

TODAY'S DATA IS DIFFERENT.

In the good old days, companies were content to use whatever data they had in their internal systems – ERP, CRM, transaction systems, and more – as the basis for strategic decision making. Data was consistent, structured, and defined. Even as the volume grew because companies wanted more granularity, it was still relatively easy to manage and predictable.

Times have changed. And so has the volume, velocity, and value of data.

Today's information comes from a variety of sources beyond your own business systems. It comes from social media. It comes from petabytes of real-time and historical weather data, industry research and analyst reports, real estate transactions, and virtually any other source you can imagine. And it comes in a variety of structures – XML, JSON, Avro, and other formats.

Data Produced By Social Media, Per Minute¹

- 2.77M videos watched on Facebook
- 347,222 tweets on Twitter
- 17,361 profile views on LinkedIn
- 300 hours of video uploaded to YouTube

¹ Kapka, Matt. 7 staggering social media use by-the-minute stats. CIO.com. April 28, 2015

TODAY'S DATA IS DIFFERENT.

Businesses are not only seeking new sources of information and insight, but also exploring new ways to use it. Previously, data may have been processed in pre-scheduled batches daily or even weekly, as resources and time allowed. Today, things need to move much faster because information is only actionable and relevant for short periods.

It's imperative to mobilize data as quickly and easily as possible to test new products or service concepts, model what-if scenarios, and uncover deeper market trends or buyer behaviors that can be leveraged for better segmentation and targeted communications that impact the bottom line.

The Value of Data in Today's Business:

- 75% enterprise executives believe data collection and analysis will fundamentally change the way they do business within the next three years.
- 53% of companies are currently implementing or planning to implement data-driven projects – projects specifically undertaken with the goal of generating greater value from existing data within the next 12 months.
- 65% of business managers say that management decisions will be driven by hard-numbers analysis.
- The typical Fortune 1000 company can net \$65 million in additional income with just a 10% increase in data accessibility.
- The average retailer can increase operating margins by as much as 60% using intelligent data collection and analysis.

Sources: "IDG Enterprise Data and Analytics Survey 2016." IDG Enterprise. July 5, 2016.; McCafferty, Dennis. "Surprising statistics about Big Data." Baseline Magazine. February 18, 2014.

Yet, less than 0.5% of all data is ever analyzed and used². Why?

YESTERDAY'S DATA MINING DOESN'T WORK

Data mining has traditionally favored big companies with deep pockets. Existing data warehousing solutions are expensive to purchase, scale, and maintain. They require years of planning, costly and inflexible infrastructure to build, and highly-skilled staff to run it that often puts the solution out of reach for companies with fewer resources.

But cost isn't the DW's only limitation. Most companies with a data warehouse only have operational data and don't track historical changes to dimensional data. These systems are in place merely for operational reporting, not ongoing data mining. Implementing slowly changing dimensional data to enable data mining of past and present information adds another layer of complexity and cost that many companies can't afford.

And when you consider that failure rates for building a DW exceed 50% according to various reports, many organizations will likely decide that it's not worth the effort anyway.

² Regalado, Antonio. "The Data Made Me Do It" MIT Technology Review. May 2013.

NEW BIG DATA PLATFORMS ALSO FALL SHORT

Cloud-based big data platforms like Hadoop and HPCC appear to offer an attractive alternative to conventional data warehousing for managing enormous streams of data from sources both inside and outside of the organization.

But in reality, these platforms weren't intended for on-demand analytics. Businesses implementing a Big Data platform will still need a data warehouse to gain the speed and efficiency required for analytics, along with hiring a small army of highly specialized data scientists to handle the work. And that gets pricey.

Over time these skilled experts will be harder to find, as competition for their services increases and eventually prices smaller businesses out of the picture. Still, the bigger issue with Big Data platforms is that Gartner's reports estimate that as much as 80% of business intelligence (BI) initiatives with these platforms fail, largely because they can take up to three years to build, at an average cost of \$2.3 million³ – far exceeding the means of most organizations.

THE DATA WAREHOUSE DO-OVER

Despite their best efforts and intentions, data warehouse and Big Data platform providers have failed to provide an affordable, integrated data intelligence solution that make financial and strategic sense.

If you were to build a new data warehouse from the ground up – ideally tailored to small- and mid-enterprises – what would it look like?

For starters, it would be a cloud-based solution emphasizing self-service data warehousing and analytics.

You'd also want it to:

- Dynamically scale both compute and storage to match current business demand, so you don't pay for more than you need. It would be flexible and enable you to accept, analyze, and relate multiple forms and formats of data-structured, unstructured, and semi-structured.
- Deploy quickly and be easy to manage. You should be able to get up and running without months of architecting, expensive personnel, and exorbitant start up fees. More importantly, it would allow you to easily manage ongoing data warehouse maintenance, like adding new data feeds or modifying existing feeds quickly, simply, and without having to hire a special department.
- Enable ad hoc BI. An ideal solution will provide ad hoc business intelligence and self-service reporting capabilities without having to code complex queries. It should include multi-dimensional OLAP reporting and allow you to use end reporting tools such as Tableau, [Microsoft Excel](#), or Power BI with no learning curve.

CALIBRUM.IO: DAWN OF THE INTELLIGENT DATA WAREHOUSE

The Calbrum.io Intelligent Data Warehouse is uniquely built to the demands of the modern business. The service-based data warehousing and analytics platform is ideally suited to small companies who understand the business impact of data insights and want to be more competitive, but don't have the resources or expertise of the larger players in their markets.

³*"The Foundations of Wisdom: The Financial Impact of Data Warehousing" International Data Corporation (IDC).*

End-to-End Self-Service Data Warehousing and Analytics

Calibrum.io delivers the data warehousing infrastructure, features, and functionality you need out of the box. The **Microsoft cloud-based system** makes it easy to deploy a robust data platform without specialized coding or development.

All of the structures, processes, and other resource-intensive aspects of data warehousing are done for you, so you no longer have to spend time or valuable resources on software or hardware installation, updates, or system management.

Calibrum.io automatically stages and validates your source files and loads them into the data warehouse, while also logging all data changes, monitoring processes, and building meta data. And the intuitive self-service reporting capabilities enables virtually any authorized user in your business to access and analyze rich data sets, freeing up valuable development resources that might otherwise be tied up in report building.

Fast Time-to-Value

With Calibrum.io, you can start loading and analyzing historical and current data in mere hours instead of the 12-36 months conventional solutions require. Easily combine all of your data – CSV, XML, and less structured data like JSON – into one place for a single source of truth. You can add new or modify existing data feeds, run multi-dimensional analytics, and schedule the date and time when schema changes should take effect – all without any special development or maintenance.

Calibrum.io At-A-Glance

- Microsoft cloud-based data warehousing as a service
- Self-service analytics with no special development or maintenance
- Get up and running in just hours, not months
- Combine CSV, XML, and JSON data into a single source
- Reduce time-to-insight by 99%
- Eliminate 95% of traditional DW/BI costs

SUPPLYING THE LIFEBLOOD FOR TODAY'S BUSINESS

Data collection, analysis, and mobilization are essential for small and mid-enterprises to remain competitive in an evolving digital economy. The Calibrum.io Intelligent Data Warehouse delivers the powerful warehousing and business intelligence capabilities usually reserved for big, rich companies to the small and mid-sized businesses who need it most.

Already, Calibrum.io customers have reduced time-to-insight by 99% and eliminated 95% of costs of traditional data warehousing and business intelligence systems.

To learn more about how Calibrum.io Intelligent Data Warehouse can help your business, contact us at sales@adaptivedge.com to see it in action.