

# Realizing the Pentaho Agile BI Opportunity: BI for the Masses and Customer Success

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## ***Executive Summary***

Making business intelligence and related technologies available to the largest possible number of users – known as *BI for the masses* – historically fell prey to the complexities of the disconnect between business intelligence technology, the IT departments charged with implementing the technology, and the business users mandated to use the technology.

The delivery and consumption of business intelligence doesn't have to follow this trajectory. When done right, good BI in the hands of managers and other key stakeholders drives tremendous value for both business users and IT departments.

One of the companies successfully delivering on the concept of BI for the masses is Pentaho Corporation, a leading commercial open source business intelligence and data integration vendor based in Orlando, Florida. Through the company's Agile BI Initiative, Pentaho is using its support for end-to-end integration of business intelligence and flexible on-demand and on-premise capabilities, combined with enterprise-level support for its open source-based solutions, to break the BI logjam in the enterprise.

Pentaho's Agile BI Initiative centers around delivering an integrated, enterprise-class BI toolset that consists of the following individual components:

- Pentaho Data Integration
- Pentaho Analysis
- Pentaho Reporting
- Pentaho Dashboards
- Pentaho Data Mining

Enterprise Applications Consulting's interviews with Pentaho's customers showcase the broad swath of BI needs that Pentaho can cover with the Pentaho BI Suite Enterprise Edition. The overall results of these interviews provide a strong case for Pentaho's combination of open source roots and enterprise-class products, its integrated suite approach, and its attention to the simultaneous needs of end-users of all levels of sophistication and the IT departments that are charged with serving them.

Pentaho's example is indicative of how enterprise-class open source solutions can upend aging business and technology models while paying close attention to the two issues that matter most for customers: performance and price. This new paradigm augurs well for changing the dynamics of the BI industry, as well as truly extending the promise of business intelligence to the broadest number of users. Pentaho is one of the companies leading the way in making that new paradigm a reality today.

## ***Introduction: Overcoming the Disconnect Between Business Intelligence and the Business User***

Making business intelligence and related technologies available to the largest possible number of users – known as *BI for the masses* – has historically been a great idea that failed to live up to its promise. Despite the best efforts of all concerned, BI for the masses fell prey to the complexities of the disconnect between business intelligence technology, the IT departments charged with implementing the technology, and the business users mandated to use the technology.

This disconnect, discussed at length in the whitepaper *Business Intelligence at the Crossroads: The Need for Lean, Agile, and Effective End-user Solutions*, has come at a heavy price. The cost of poor or inadequate analysis on business outcomes and strategies is incalculable. Also incalculable is the damage done by the internal dysfunctionality between IT departments and business users, a result of the inability to readily and cost-effectively deliver and maintain the BI solutions that key business users need to do their jobs.

The delivery and consumption of business intelligence doesn't have to follow this trajectory. When done right, good BI in the hands of managers and other key stakeholders drives tremendous value for both business users and IT departments. A well-executed business intelligence strategy – using the right technology and products – can focus on both end-user and IT requirements simultaneously, and in the process, deliver the analysis needed to drive business success in both a competent and cost-effective manner.

The results derived from getting business intelligence on the right trajectory can have significant impact across the enterprise, from enabling new business opportunities and improving end-user uptake of business analytics, to lowering costs and complexity in the IT department, all the while contributing to a successful BI partnership between IT and business users.

One of the companies successfully delivering on the concept of BI for the masses is Pentaho Corporation, a leading commercial open source business intelligence and data integration vendor, based in Orlando, Florida. Through the company's Agile BI Initiative, Pentaho is using its support for the end-to-end integration of business intelligence and flexible on-demand and on-premise capabilities, combined with enterprise-level support for its open source-based solutions,

to break the BI logjam in the enterprise. The result is that Pentaho is able to deliver cost-effective and highly functional BI to business managers.

In order to showcase this capability, Pentaho has asked Enterprise Applications Consulting to interview its customers and, by analyzing their experiences, help define the parameters of the Agile BI Initiative and rate its success at delivering BI for the masses. The results of EAC's interviews show that Pentaho's solution and its Agile BI Initiative is delivering measurable results for a broad number of customers along an important set of business and technological parameters.

This report is organized into three sections. The first is an overview of the concepts of BI for the masses and how Pentaho's Agile BI Initiative seeks to fulfill that mandate. The next section is a discussion of how Pentaho customers, using the company's commercial open source products, have broadened the footprint of the BI initiative and derived measurable value without incurring significant costs. The conclusion discusses how the Pentaho approach is changing the foundations of what enterprise software and business intelligence mean for industry and user organizations alike.

## ***BI for the Masses and the Agile BI Initiative***

The requirements for bringing the power of business intelligence to the broadest number of users have grown significantly in recent years. As companies adopt new business models or opportunities that significantly broaden their operations and the number and extent of their stakeholders, the need to have an agile BI environment that matches the agility of the company becomes an imperative.

As these data and business requirements grow, companies need to break out of the classic deadlock between the IT department and line of business, in order for the business requirements and opportunities to be realized. This means a new approach to BI that gives more direct power to the consumers of BI, while lowering the IT burden – and cost – of delivering agile BI to the masses. This dual approach is at the core of Pentaho's Agile BI Initiative.

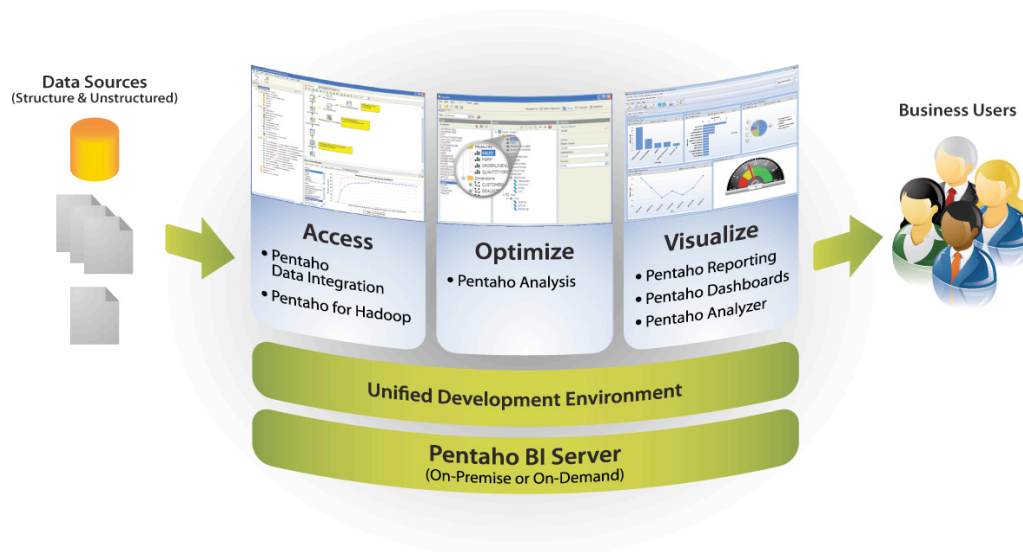
Pentaho's Agile BI Initiative centers around delivering an integrated, enterprise-class BI toolset that provides the kind of deep functionality that both IT departments and end-users require in

order to fulfill these new mandates. One of the key ways in which Pentaho can accomplish this formerly contradictory set of requirements is to leverage the company's use of open source technology and best practices (which significantly lowers development and go-to-market costs), while delivering a fully supported, enterprise-class product set.

That product set, the Pentaho BI Suite, contains five basic modules that can be implemented as part of a fully-integrated suite or as standalone applications, depending on the customer's requirements (see Figure 1). These modules include:

- **Pentaho Data Integration:** This is a modern, advanced ETL environment that supports a highly visual, model-based ETL process. While this is a professional IT tool, Pentaho Data Integration's Agile BI components allow end-users to participate in the design and implementation of BI solutions so that projects that are delivered meet end-user needs immediately.
- **Pentaho Analysis:** This application allows business analysts to create and distribute sophisticated analyses based on OLAP architecture. Pentaho Analysis allows for visualization, filtering, and other advanced analytical techniques.
- **Pentaho Reporting:** This application allows end-users to create and distribute their own reports without requiring IT resources. Reports can be output in a number of different formats, including PDFs and Excel spreadsheets, among others. Pentaho Reporting is a key element in the company's BI for the Masses initiative.
- **Pentaho Dashboards:** This application brings the power of highly visual dashboarding to the business user. Pentaho Dashboards can be integrated with Pentaho Reporting and Pentaho Analysis, to support drilling down and other capabilities.
- **Pentaho Data Mining:** This is an advanced analytical environment that provides tools to develop complex, algorithm-based analyses. Pentaho Data Mining allows end-users to access sophisticated analyses out-of-the-box, or it can be deployed by a development team to build highly customized reports, using Java.

Figure 1: The Pentaho BI Suite Enterprise Edition



Source: Pentaho

These applications, delivered either as standalone or full suite, provide Pentaho customers with extraordinary flexibility in terms of who builds the BI environment, who creates the reports and analyses, and who consumes them. While Pentaho technology can be deployed solely by an IT department on behalf of its business users, the Pentaho BI Suite has significant functionality that can be utilized directly by the end-user community, or in collaboration with IT.

The flexibility in how the Pentaho Suite can be used is perhaps its greatest asset. As we shall see from the customer examples in the next section, the concepts of BI for the masses and Agile BI can significantly differ from one company to another. The Pentaho Suite is able to meet the needs of these different use cases in both a time and cost-effective manner. This by itself represents a major shift in how BI is delivered and deployed in the enterprise.

## ***BI for the Masses in Action: Driving Customer Value using Agile BI***

Enterprise Applications Consulting's interviews with Pentaho's customers showcase the broad swath of BI needs that Pentaho can cover with the Pentaho BI Suite Enterprise Edition. The overall results of these interviews provide a strong case for Pentaho's combination of open source roots and enterprise-class products, its integrated suite approach, and its attention to the simultaneous needs of end-users of all levels of sophistication and the IT departments that are charged with serving them.

### **Delivering BI for the Masses in the Dynamic Real Estate Market**

Keeping up with the dynamic and complex real estate market requires sophisticated business intelligence, and for ZipRealty, Inc., a real estate Internet pioneer based in Emeryville, CA, that meant increasing both the number of BI users, and the quantity and quality of the reports they use.

ZipRealty also needed to keep its BI infrastructure "lean and mean," according to Salvatore Scalisi, ZipRealty's Director of Business Intelligence, and that meant finding a way to expand its

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— Salvatore Scalisi,  
Director of Business  
Intelligence, ZipRealty

BI capabilities without incurring significant new costs. "We have a pretty small crew," said Scalisi. "We need to closely manage our resources."

Scalisi's search for a new BI strategy led him to Pentaho, and, his initial test of Pentaho's Data Integration module was very positive. "It was surprisingly easy to use," Scalisi said. "We ended up converting our custom Java code to Pentaho."

The use of Pentaho's ETL capabilities had another important benefit as well: a reduction in the time it took to load new data into the data warehouse, from twelve hours to four. "We had been wanting to do a daily load, but the load time cut into the users' time on the system," added Scalisi.

The fact that the Pentaho BI Suite includes reporting capabilities as well as ETL also proved to be beneficial to ZipRealty. The company was looking to build a BI for the masses strategy that would reach new users and expand the kinds of reports Scalisi's team could deliver, and the previous proprietary reporting tool was proving to be both inadequate and costly. "It wasn't economical to add the number of users we wanted," said Scalisi. "The licensing fees became substantial."

Pentaho, on the other hand, provided a much more cost-effective way of expanding the user base at ZipRealty. "It's really pretty simple; the Pentaho licensing model allowed us to reach more users," said Scalisi.

The ability to expand the depth and breadth of analysis at ZipRealty has had distinct benefits for the company. One of the problems with ZipRealty's old BI model was that key information about real estate listings – price, availability, how long a property was on the market – wasn't easily available across the company. "Our field didn't have insight into the housing inventory," explains Scalisi. "Individual agents knew, but the district managers didn't."

For ZipRealty, *BI for the masses* meant making sure this data is available across the company. "Giving our managers a report that helps them monitor inventory on a regular basis is very valuable," says Scalisi.

Information from the Pentaho BI Suite is also used by district managers to track conversion rates. In addition, data are rolled up by the Pentaho BI Suite for use by senior management. "It gives the managers and executive team the insight they need," adds Scalisi.

Moving forward, Pentaho has become a key tool in driving ZipRealty's client services and satisfaction by allowing the presentation of information to clients in a very user-friendly manner. Scalisi's team is currently working on a map-based mashup of real estate listings on its website, among other projects. "We spend a lot of time thinking about what clients are interested in and what helps them make the right decisions," said Scalisi. "We can use Pentaho to help drive more analysis."

## Leveraging Enterprise-Class Open Source BI

For Estalea L.P., a technology incubator and holding company based in Santa Barbara, CA, the appeal of Pentaho started with its roots as an open source-based vendor. Estalea's preference for open source technology and its strong Java programming expertise made Pentaho particularly appealing. "We're a Java shop; we use open source everywhere," said Jon Cotter, director of product design and technology at Estalea. "Pentaho was the only viable open source product, particularly in the ETL area."

And while the company still uses parts of Pentaho Community Edition, Cotter realized that as Estalea's use of and reliance on Pentaho grew, moving to the Enterprise Edition made a lot of technical and economic sense, considering the technical support and enterprise features that are part of the Enterprise Edition. "We're resource-constrained," says Cotter. "Anything that allows us to push the work back up the chain and still retain control is good for us. That's what sold me on Pentaho Enterprise Edition."

The efficiencies gained from using Pentaho Enterprise Edition more than offset the cost of moving from a free, open source product to a well-supported, enterprise-class product. "The Community Edition works well but it needs a lot of tweaking," says Cotter. "If you add up all the

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hours over the year, it was an easy argument to move to the Enterprise Edition."

"The cost of two months of my senior people's time balances off the cost of Pentaho Enterprise Edition," Cotter adds. "This way I can take on projects with people with less experience and move my senior people to other projects."

The simplicity of the user experience in Pentaho has also helped Estalea deliver BI to its holding companies without requiring them to have deep technical capabilities.

Estalea's ETL engineers prepare the BI environment for each holding company, and then the individual company's BI analysts take it from there. Back-end data integration is critical to any successful BI project. By leveraging Pentaho's robust ETL functionality, the IT department is able to hand off reporting and analysis functions to end users,

knowing that the data is integrated and ready for use. The BI analysts in Estalea's holding companies "are able to start building their own cubes and aggregates," says Cotter. "It's easy for them to do, it removes a bunch of steps, and it greatly simplifies the process."

Pentaho's pricing model also works to Estalea's advantage. With four holding companies that depend on Cotter's team for BI support, Estalea needed a pricing structure that allowed its companies to use their BI tools without worrying about how many user licenses they or Estalea possessed. "Pentaho works well because it's priced per CPU," says Cotter. "There is no per user cost."

### **Graduating Business Users from Excel to OLAP**

While Loma Linda University Health Care's reasons for using Pentaho are many, the ability to provide Excel users with their first tastes of OLAP analysis, and for it to be a positive experience, was perhaps the most important of all. Excel is the default tool in many BI projects because of its widespread use. Often referred to as spreadmarts, Excel-based analytics quickly reach their functional limits, necessitating more powerful tools that can support data integration and analysis across multiple data sources. "We did some cube analysis using Pentaho Data Integration as a proof of concept," said Darrin Blocker, a decision support analyst at the southern California health care provider. "The reaction was absolutely positive."

The ease of use available in Pentaho BI Suite Enterprise Edition is expected to greatly expand the use of BI at Loma Linda. Even Loma Linda's physicians, a group notoriously uninterested in do-it-yourself BI, are reacting positively to their new BI environment. "Some of them are very

interested in analyzing their activity," said Blocker.

"Pentaho is accessible even to them."

*"Pentaho had an out-of-the-box solution that could accommodate our needs and our growth. It was everything we needed."*

— Darrin Blocker,  
Decision Support Analyst,  
Loma Linda University  
Health Care

The promise of shortcutting the BI report process and taking a lot of the support off the shoulders of the IT department has been a major selling point for Pentaho inside Loma Linda. "Just the idea of being able to select attributes and pivot that data and get a response in seconds, versus having to send in a report request and waiting for a week was a big selling point," Blocker points out.

The general-purpose nature of Pentaho and its broad ETL and BI functionality made it possible for Loma Linda to forgo using the costly, healthcare-specific solutions that lacked much of the functionality of Pentaho. In addition, the potential savings to Loma Linda over the well-known commercial BI toolsets were significant. “Most of those solutions were going to cost somewhere close to six digits,” Blocker adds. “We are not even paying one-fourth that much.”

Blocker adds that the use of Pentaho does not require Loma Linda to sacrifice support for key issues like HIPAA compliance. “We can link our reports to an active directory” that supports report access based on HIPAA regulations, says Blocker. “That was another big selling point.”

While cost was a major factor in Loma Linda’s decision to pick Pentaho, Blocker says, the healthcare provider also needed enterprise-level support. “Cost was important: we needed a low total cost of ownership and the ability to implement quickly. And we needed the support because we have a small group,” says Blocker.

The integrated product set that Pentaho offered was another major selling point. “Pentaho had an out-of-the-box solution that could accommodate our needs and our growth,” Blocker adds. “It was everything we needed.”

Table 1: Matching Requirements to Capabilities:  
 Pentaho Enterprise Edition's Broad-based Appeal

ATTRIBUTE	Loma Linda	Power Costs	Estalea	ZIPRealty
Affordable Pricing	X	X	X	X
Supports New Analysis and Business Opportunities		X		X
Lowers Burden on IT	X	X	X	X
Empowers New Groups of End Users	X	X	X	X
Supports Complex Technical or Business Requirements	X	X	X	X
Facilitates Legacy Migration	X			
Customer Experienced with Open Source	X	X	X	
Integrated Solution	X	X	X	X

## Opening Up New Business Opportunities Without Breaking the Bank

At Power Costs, Inc., a Norman, Oklahoma-based vendor of optimization technology and services to the energy business, starting a new analytical offering for its utilities customers required a highly adaptable BI environment that the company could use to stage reports and analyses for its customers. The requirements were significant. Power Costs needed an integrated BI environment that was highly adaptable, very user friendly, and able to handle complex data types and structures. Power Costs also needed a solution priced to support a broad and elastic user base scattered across the company.

The fact that Power Costs was generating upwards of ten gigabytes of data each month and needed to maintain a seven-year history of their data added an additional burden to their BI requirements. The system had to be highly scalable without sacrificing usability. “Our customers need to have the right data to poke around in and visualize what they are doing,” says David Nilsson, Vice President of Product Strategy at Power Costs.

The choice of the Pentaho BI Suite was a good fit for Power Costs on multiple levels. The company has expertise with Java and experience with commercial open source products, and Pentaho was able to handle specialized requirements such as handling a non-24-hour day, a particular requirement in the energy industry, where usage and demand patterns don’t always

follow a strict 24-hour/day pattern, Nilsson says.

*“We couldn’t have gone into this line of business if the pricing wasn’t the way it is with Pentaho,” says Nilsson. “We didn’t know what the customer response would be. The risk would have been too great.”*

— David Nilsson,  
Vice President of Product  
Strategy, Power Costs

Power Costs’ new analytical offering uses Pentaho Data Integration to collect data from its customers, and then adds Power Costs’ own market data to the BI environment. That combination is then used to produce sophisticated analyses that are an important tool for optimizing the energy bidding process that is central to these customers’ businesses.

This makes having an extremely robust and reliable set of tools to support the BI lifecycle absolutely essential

for Power Costs. While the individual parts of the Pentaho offering are highly functional – Nilsson’s analysis was that Pentaho’s ETL tool was “one of the better ones that we had seen” – the fact that Pentaho provides a fully integrated BI environment was very attractive to Power

Costs. “We are happy they have all the components such as dashboards and data mining, even if we aren’t using them all the time,” says Nilsson. “Most vendors’ products don’t integrate as well.”

Power Costs was also looking to create its own version of *BI for the masses*. The goal was to provide a reporting system to its customers that would allow the broadest possible use of the data within an individual customer’s environment. Pentaho Analysis fit the bill, according to Nilsson. “Pentaho Analysis gives us an environment where the user can build a report without going through IT,” Nilsson said.

Pentaho’s pricing model was a key factor in Power Costs’ ability to launch the new offering. “We couldn’t have gone into this line of business if the pricing wasn’t the way it is with Pentaho,” says Nilsson. “We didn’t know what the customer response would be. The risk would have been too great.”

The new analytic programs that Pentaho supports at Power Costs are starting pay off, and the company believes it achieved a return on its investment in less than four months after implementing Pentaho, according to Nilsson, and that means the new service is generating revenue. “We wouldn’t have had this revenue stream if it wasn’t for the Pentaho toolset.”

## ***Conclusion: Changing the Foundations of Business Intelligence***

The ability of Pentaho to provide value while enabling users and the IT department to drive new business opportunities makes it a unique product offering in the BI market today. The examples above show that Pentaho can appeal to vastly different types of companies and organizations, and provide valuable solutions for many different use cases. These different use cases are unified by the universal need to provide more business intelligence to a greater number of users at lower cost, while resolving the disconnect between business users and IT departments.

The fact that Pentaho can be delivered as a full suite and consumed module by module as needed further reflects the company’s understanding of the lifecycle of business intelligence projects in the enterprise. Being able to match the specific requirements of a given project with the right combination of BI tools allows companies to build their BI capabilities according to their needs and budgets, and not according to the product management classifications of a vendor.

Finally, the foundations of Pentaho in the open source community provide a strong basis for both the cost-effectiveness and technical sophistication of the company's products. This ability to rethink the traditional enterprise software vendor model and leverage that to the mutual benefit of customer and vendor represents a breakthrough in how software is delivered and consumed.

Pentaho's example is indicative of how enterprise-class open source solutions can upend aging business and technology models while paying close attention to what matters most for customers: performance and price. Pentaho is able to demonstrate how value can grow when critical software functionality is provided at a substantially lower cost than is available from traditional, proprietary vendors. This new paradigm augurs well for changing the dynamics of the BI industry, as well as truly extending the promise of business intelligence to the broadest number of users. Pentaho is one of the companies leading the way in making that new paradigm a reality today.