CASE STUDY

Pentaho Analytics Help Kiva - Teach a Man to Fish, Feed Him for a Lifetime

Micro-lender Visionary, Kiva.org, Taps the Power of Real-Time Information Using Pentaho Reporting and Analytical Software

About

Kiva.org was founded in 2005 to connect people around the world to create real change – one microloan at a time. Since its founding, it has grown rapidly to make possible over $225 million in microloans between individual lenders and entrepreneurs all around the world. As of April 2011, the organization has brought together almost 575,000 lenders (through people like you and me putting in $25 or more towards a specific project), over 130 microfinance institutions (called Field Partners), and almost 600,000 borrowers.

KIVA
loans that change lives

QUICK FACTS

- Industry: Nonprofit, Microfinance
- Headquarters: San Francisco, CA
- Website: kiva.org
- Products/Services: Pentaho Reporting, Pentaho Analysis, Pentaho Data Integration, Pentaho Training

Challenges

While the dollar amounts involved with each loan might be small, the scale, scope, and amount of data involved with processing the transactions are significant – and growing rapidly. Loan repayments are split between the several individuals who funded a particular borrower, resulting in hundreds of thousands of transactions each month. As a web-based business with a global presence, users make transactions 24 hours a day.

As many small to medium-sized businesses often do, Kiva started by using spreadsheets to perform ad hoc analysis of this data. These legacy reporting tools relied on daily snapshots of the entire database hosted on non-production hardware. Kiva was able to get by during the early years, but with plans to exceed 100 gigabytes of transactional data and event logs in 2011, and a growing set of business users, it became apparent that this approach was highly inefficient, cumbersome, and unsustainable.

In 2010, Kiva decided to dedicate staff and resources to addressing information management and reporting needs. Kiva's data warehouse team is a two-person effort manned by Greg Allen, a Business Analyst responsible for analysis and report development, and Jonathan Kart, a Senior Engineer in charge of the underlying data architecture and infrastructure. Being a non-profi t with limited resources, Allen and Kart began building a data warehouse and researching

© 2013, Pentaho. All Rights Reserved. pentaho.com. Worldwide +1 (866) 660-7555

> With employees in other departments now able to answer questions on their own my job to create reports will become obsolete. That's really my goal.
>
> – JONATHAN KART
> *Senior Engineer at Kiva.org*

different BI technologies including Pentaho BI Enterprise Edition, Pentaho BI Community Edition, Oracle Warehouse builder, ClickData, Tableau and Cognos. Kiva required a flexible, scalable and cost-effective data warehouse and reporting system that would be able to unify a variety of data sources and satisfy an equally varied number of data customers.

Solutions

- Pentaho BI Enterprise Edition – Kiva selected Pentaho BI Enterprise Edition to take advantage of professional support and product updates. The organization has also benefitted from ongoing attention from their assigned Pentaho Customer Success Manager who helps ensure the deployment is running smoothly and successfully in production.
- Pentaho Reporting – Using Pentaho Reporting, Kiva is now able to deliver statistical information, such as daily loan volume, from the data warehouse back to the production website delivered via a newly developed API. The team is also doing traditional embedding of reports to benefit its business users. For example, if there is a problem with a transaction, a customer service representative can pull a report to identify the specific issue as quickly as possible.
- Pentaho Analysis – Kiva leverages the Pentaho Analysis OLAP server (Mondrian) to create a selfservice tool for business users. As a result, users from multiple departments can extract data from different sources and turn that data into reports without ever having to contact IT.
- Pentaho Data Integration (PDI) – Kiva is experimenting with the Pentaho Data Integration server to help with third-party data sources like Salesforce.com, Google Analytics and other web service providers. This approach has enabled Kiva to add complementary data quickly while continuing to develop core data structures.
- Pentaho Training – In the first month of the project, both Allen and Kart participated in a four day Pentaho BI Bootcamp training class. Allen explains, “Attending training at the beginning of our project helped start the project off on the right foot. The Pentaho BI Bootcamp class helped us to organize and define our work plan, collect information dimensions across the organization and helped frame the way we think about the project moving forward.”

Results

- Innovation – Kiva’s IT team is adopting an Agile BI and real-time data flow approach based on the Pentaho BI technology. Kiva believes this will play a key role in helping their organization scale, focusing the operational database to support web user traffic and develop statistics to inform business users via Pentaho. Kiva also plans to use the API and data from the warehouse to feed back to its website to modify site behavior. Using the API, Kiva provides Field Partners with performance on updating loan descriptions. It’s this type of rapid turnover that allows Kiva to make realtime decisions on problematic data. Kent advises not getting too bogged down in a big vision and is a true advocate of an Agile BI methodology.
- C-Level Buy-In and Value – In addition to the two, fulltime IT architects who designed the data

© 2013, Pentaho. All Rights Reserved. pentaho.com. Worldwide +1 (866) 660-7555

warehousing and BI system, Kiva's CTO and CFO also played crucial roles in setting the direction for the system. In the past, the organization's CFO relied on data connected in Excel sheets to look at trends. Updating, analyzing, and sharing this data was cumbersome and inefficient. Using the new system, her main goals are to improve the ability to manipulate, share, and make data public, and to ensure the consistency and accuracy of the data.

- Future-Proof and Sustainable – Kiva's CTO wanted to make sure Allen and Kart made the right technology investment, beyond just pure fi nances. He required technology that would be easy to maintain and scale with Kiva through the years and that would support Kiva's ambitious growth plans.
- Self-Service Automation – The microlender has gone from a "spread-mart" environment where each department had different numbers with disparate data sources, to being able to validate and publicize numbers company-wide.
- Immediate Payback – Kiva believes the return on investment with Pentaho has been almost immediate. By replacing Excel, Kiva is already seeing payback with people outside of IT creating their own reports.
- Empowered Business Users – With business users now able to create their own reports, Kiva's engineering team is able to focus on the heavy lifting its website requires rather than building custom reports. Staff can monitor Field Partner performance and drill into data for underlying metrics to understand trends or issues.
- Transformative – Kiva now has access to analytical tools that have turned their employees into true knowledge workers. Running an online microlending organization requires rapid, daily – if not hourly – decision-making. The more Kiva can empower all parties involved with sound data for decision making, the more it can ensure capital is directed as smartly as possible.

Summary

Kiva, a non-profi t microfi nance platform has gone from a "spread-mart" environment where each department had different numbers with disparate data sources, to being able to validate and publicize numbers companywide. Using the Pentaho BI platform an internal data warehouse, its business users are able to create their own reports, enabling Kiva's small IT team to focus on the heavy lifting its website requires. To achieve all of this, the team has adopted an Agile BI and real-time data flow, empowering all internal employees to pull and analyze their own data. With improved reporting on their data, Kiva is able to better allocate funds to discover innovative programs in countries around the world, enabling Kiva to support the lending institutions making the biggest impact on alleviating poverty around the world.

To learn more about Pentaho software and services, contact Pentaho:
pentaho.com/contact +1 (866) 660-7555 (worldwide)

Be social with Pentaho:

© 2013, Pentaho. All Rights Reserved. pentaho.com. Worldwide +1 (866) 660-7555