



PUSH INTELLIGENCE

Bridging the Last Mile to Business
Intelligence & Big Data

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INTRODUCTION

Many organizations have implemented Business Intelligence (BI) tools in the hopes of making their operations data-driven and therefore more effective. Yet, despite the investment of billions in BI tools, the technology has under-delivered on its promise. As noted by Gartner and many other analysts, user adoption of BI tools remains poor.

Business Intelligence Not Meeting Objectives:

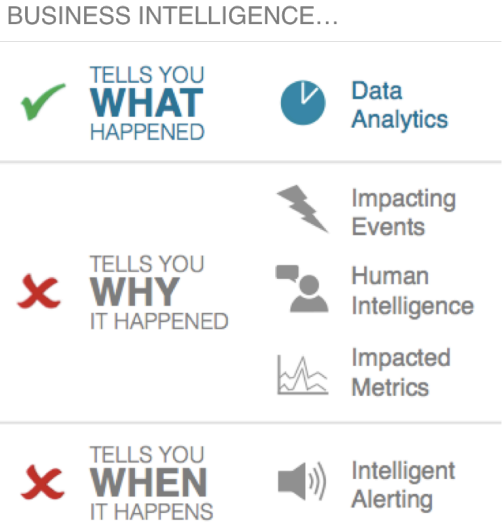
“Fewer than 30% of business intelligence projects meet the objectives of the business”

Gartner “Predicts 2012: business intelligence still subject to non-technical challenges “

BI tools do a good job of supporting business analysts in the collection and analysis of enormous quantities of data. The problem, however, is that most BI tools fall short when it comes to delivering relevant data to specific business users, with context, at the right time, in an actionable form.

The current paradigm requires too much work for business users. They have to dig through an explosion of dashboards and a myriad of emails to find out what exactly happened, and why. It isn't helping people to work smarter or faster. The data exists, and the supporting context is available, but users have to work too hard to find the information that matters to them. BI tools do a good job at answering what happened, but they do not tell you why it happened or when.

This is the “Last Mile Problem for Business Intelligence”



CHALLENGES WITH BI

The Dashboard Dilemma

Businesses today have more data available to them than ever. The dilemma though is that the dashboard approach to BI is already failing. More and more dashboards are being published around different business use cases (e.g. sales, marketing, finance). Business users are experiencing data overload and are struggling to make sense of what matters in the data to make productive business decisions.

Architectural Limitations of The Data Warehouse Approach

Data warehouses are optimized to support, high performance, ad-hoc analysis using arbitrary queries, against huge data sets. A custom ETL (extraction, transformation and loading) layer gathers data from a variety of sources, which are merged into the custom designed data model within the warehouse. Meta data describes the data and the relationships between those data sets.

The technical analyst is able to use tools to perform deep analysis of the data in their pursuit of different trends and correlations.

To support the business user, data are extracted from the warehouse to support different use cases, and stored in individual data marts from which use case dashboards are published.

Business users have libraries of dashboards available through which they can hunt for information that's relevant to them.

Poor Adoption of BI:

“Only 17% of ... data workers ... use a data dashboard or business intelligence tools as part of their job”

Forrester Research “Foresights Workforce Employee Survey, Q4 2012”








PUSH INTELLIGENCE

Push don't Pull

Push Intelligence is the new approach to Business Intelligence that enables the business analyst to better support the needs of the business user. Rather than requiring business users to crawl through dashboards to find relevant changes, Push Intelligence proactively alerts users to important changes in the key performance indicators (KPI's) that they care about and provides the supporting context that quickly identifies root causes and gets teams quickly into coordinated action.

Push Intelligence personalizes BI. It is focused around the individual needs of each business user, rather than use cases, and makes sure that each user gets actionable information when they need it.

PUSH INTELLIGENCE...

 TELLS YOU WHAT HAPPENED	 Data Analytics
 TELLS YOU WHY IT HAPPENED	 Impacting Events  Human Intelligence  Impacted Metrics
 TELLS YOU WHEN IT HAPPENS	 Intelligent Alerting

Don't My BI Tools Do This Already?

Data warehouse implementations have often strived to support some of the functions of Push Intelligence, through costly custom development, but require labor-intensive maintenance to keep running and often fall short of business user expectations.

Metric Insights has developed a new approach called Push Intelligence that solves the BI Last Mile Problem, utilizing a patented KPI Warehouse. Unlike data warehouses, which are optimized to support high-performance, ad-hoc analysis, the KPI Warehouse is optimized to deliver the results of selected queries (KPIs) to specific users under specific conditions - along with rich metadata that provides the context for the results - thereby reducing “dashboard overload” and enabling users to collaborate and respond quickly to significant business issues.

KPI Focused

Data warehouses are built to support traditional ad-hoc analysis. The need to deliver acceptable performance for arbitrary queries over potentially enormous data sets places significant constraints on the structure of the data warehouse.

The Metric Insights KPI Warehouse is designed to store the data associated with user-selected KPIs along with associated metadata, rather than focusing on ad-hoc analysis. A KPI extraction layer pulls only the data needed to support key business metrics, from any source system, BI tool or existing data warehouse and stores it via an optimized KPI schema. The KPI schema enables a wide variety of structured and unstructured metadata types to be stored along with each KPI data point. The rich context provided by the metadata enables the Metric Insights Push Intelligence platform to determine when to alert a user to a significant KPI value or change. It enables alerts to include the context that explains what happened, why it happened, and who knows about it. It also ensures that all KPIs that reference the same data include the same metadata. As a result, users can “connect the dots” and respond quickly and appropriately.

It's Not Just The Data

In order for business users to take action on KPI's they need supporting metadata, such as impacting events and user comments, to understand the complete context of the results.

A typical data warehouse will store data points, e.g. sales transactions, Web clicks, patient admissions, etc. Any related metadata, such as customer support logs, marketing events, data center outage reports, and annotations entered by users are often scattered around in other systems, making it difficult to keep metrics and their metadata together. It requires analysts to be constantly pulling and correlating data from multiple systems to support the needs of the business users.

The KPI warehouse stores metadata together with the KPI query results. This ensures that user comments, impacting events, thresholds for alerting and more remain tied to the data.



Wherever a metric is used, in any chart or alert, the supporting metadata stays with it automatically, and all users viewing the same data get complete context.

Data Point vs. Chart Collaboration

BI tools typically allow users to add comments to charts or reports. The comments are stored as part of the report, and are not indexed to the underlying data points themselves. This means that a users looking at a metric via one chart or dashboard will not see commentary from a user who may have viewed the same data via another chart or dashboard. As a result, users must resort to email threads and other “back channels” to stitch together a conversation to determine what happened and support effective collaboration.

The KPI Warehouse stores user commentary at the data point level. Users will see comment threads in any chart, report or alert that contains an annotated data point. This ensures that the “story” about the result is never lost and every user benefits from the context regardless of how they are viewing the data.

Personalized Alerts

Alerting is usually something that is bolted-on to data warehouse implementations. It is done at a global level and is not personal to users. Users not only get swamped with dashboards, they get swamped with alerts, and have to dig through them to find what’s important to them.

The KPI warehouse stores thresholds specific to individual users. This ensures that users are only alerted to information that is relevant to them.

Often alerting suffers the same problems as dashboards in that there is a big maintenance overhead to manage targets and thresholds to keep alerts current and relevant.

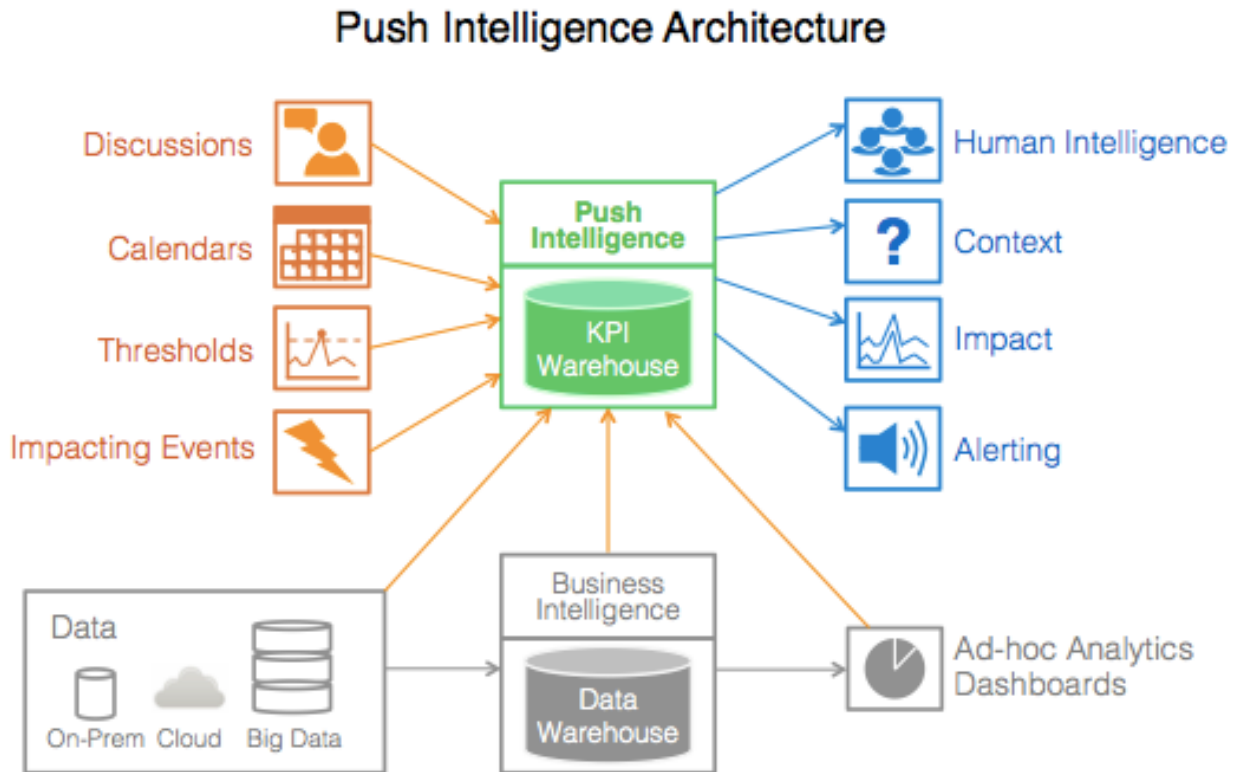
The KPI Warehouse is designed to monitor statistically significant change in metrics automatically. Any significant change can trigger alerts. This method happens automatically and therefore requires no setup and maintenance.



Anomaly Detection

With no standard way of storing KPI's in a data warehouse it becomes difficult to understand which metrics are impacting each other.

The KPI warehouse has a consistent way of storing metrics and therefore is able to support advanced functions such as Anomaly Detection easily. Whenever a KPI has changed significantly, the system can easily look for related metrics that have also changed significantly over that same time period. Alerting the business user to these related changes helps them to better understand, respond to and anticipate both the causes and effects of key events.



Have questions?

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About Metric Insights

Metric Insights (metricinsights.com) bridges the last mile to Business Intelligence and Big Data. Metric Insights lets your users cut through the noise, focus immediately on the critical business issues that warrant their attention, and take action. Our Push Intelligence platform connects quickly and easily to your existing business intelligence tools, big data and SaaS applications. Metric Insights uniquely delivers a patented KPI warehouse, collaboration and notification technologies that tell you when your key business metrics have changed, and, more importantly, why.