



Agile Business Intelligence

**Real-Time Intelligence for Smarter, Faster
Decisions**



Abstract

'Agile Answers: Real-Time Intelligence for Smarter, Faster Decision-Making' is an executive's guide to the meaning, application and impact of Real-Time Intelligence (RTI). Topics in *'Agile Answers'* include:

- What is RTI?
- Where is RTI most applicable in an organization?
- What are the most important qualities of RTI?
- What is the ROI of RTI?
- How does RTI fit with traditional Business Intelligence?

No prior knowledge of RTI or Business Intelligence is required of the reader.

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Have Your Decision-Support Tools Evolved with Your Needs?

The Greek philosopher Heraclitus wrote 'the only constant is change.'¹ Today's business environment is dynamic in ways that previous generations never imagined possible. Economics, competition, markets, supplies, and customers can change overnight. In such an environment, an organization's survival comes from the ability to rapidly respond to change and make quality decisions from the latest information.

The breathtaking pace of change is matched only by the amount of information that an organization must harness to make decisions. The 2009 IDC Digital Universe Study² estimates that the amount of information created will grow 500% in just 4 years. And it is in this deluge of data that vital or irrelevant markets, technologies, products, partners, and initiatives are found, evaluated and addressed.

"...the growth of digital information collides with everyday business and everyday life. Those who use information growth to their advantage are seeking out new and creative ways to manage, secure and protect the rapidly-growing volumes."

Joe Tucci, Chairman, President and CEO, EMC Corporation

How do organizations manage to survive and compete in such an environment? Traditionally, enterprises have relied on business intelligence (BI) to provide the information that supports an organization's decision-makers. Described as 'techniques used in spotting, digging-out, and analyzing business data'³, the BI systems within most organizations 'roll up' critical data into warehouses that are separate from the sources themselves. It is this disconnect that can lead to useless or even misleading decision-support, leaving out the most recent and most relevant information.

The combination of environmental change and data growth means organizations can find that their once-stable decision-support processes are suddenly and dangerously outdated. *Intelligent Enterprise* described the problem through a simple example⁴: '...a manufacturer's strategy dictates that every plant maintains a certain profit margin. This requirement could be monitored with KPIs set to specific thresholds, but without a direct link into the transactional environment, alerts wouldn't go off until unprofitable orders are a matter of history.'

Why hasn't our use of BI evolved with our needs? The *International Journal of Applied Mathematics and Informatics*¹ asked in 2007:

'Almost every business practice has adapted to shortening business cycles, except for the Business Intelligence world. Why do we run our business operations disconnected from the insights that could make us more money and reduce costs? Why should we use out-of-date information all the time? Clearly something has to change in the way that we (human beings) use technology to process and analyze data.'

Why can't we simply add the freshest, most recent data to our existing business intelligence systems? Over the past decades, traditional BI systems have mostly been designed to manage highly-structured processes, such as monthly sales reports and quarterly financial statements. While these systems

¹ <http://en.wikiquote.org/wiki/Heraclitus>

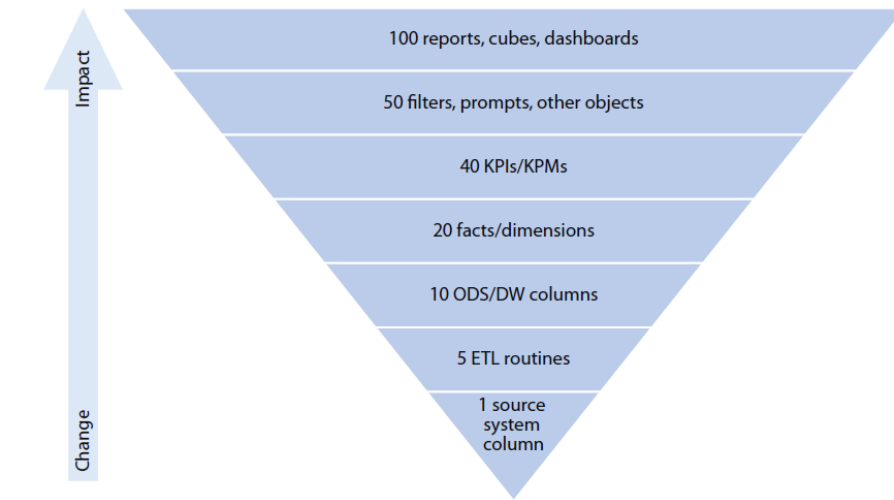
² <http://www.emc.com/about/news/press/2009/20090518-01.htm>

³ http://en.wikipedia.org/wiki/Business_intelligence

⁴ http://www.informationweek.com/news/business_intelligence/analytics/showArticle.jhtml?articleID=224900510

perform these structured processes extremely well, they weren't designed to accommodate constant, real-world change. In '*BI Workspaces: BI Without Borders*', Forrester Research described the cost of introducing a single column of data into a business intelligence infrastructure in this way:

Figure 1 The Cascading Effect Of Interdependent BI Components



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Source: Forrester Research, Inc.

While traditional BI systems facilitate many important business processes, the time and cost of adapting a traditional BI solution can make it an imperfect solution for more agile decision-making needs.

The shifting, vibrant nature of today's information requires a forward-looking solution that paints a *real-time* picture of an organization's *current* situation, not just a rear-looking snapshot of its past. In an always-changing world, seeing, understanding and acting in real-time is what will mark the difference between organizational success and failure in modern organizations.⁵ Enterprises that can provide live, fast, adaptable information will be the inevitable winners in this new information age.

⁵ <http://www.wseas.us/journals/ami/ami-5.pdf>






Defining Real-Time Intelligence

With today's rapid pace of change and the explosion of information, Real-Time Intelligence has a crucial role in many modern enterprises. Organizations cannot remain effective and competitive if all critical business information is delivered based on past information.⁶ While traditional business intelligence fills an important role for most organizations, an increasing portion of an organization's decision needs will require Real-Time Intelligence.

Identifying the problems or opportunities within an organization that demand Real-Time Intelligence is an important task. There are five characteristics that are common to many real-time problems:







"There are very few secrets out there anymore. The only competitive advantage becomes speed. At the end of the day, it's about getting from point A to point B quicker than everybody else."

Rollin Ford, CIO, Walmart

<i>Problem Style is:</i>	Situational, actionable and operational	
<i>Information is:</i>	Always changing and time sensitive	
<i>The User:</i>	Interacts with the information	
<i>Information is from:</i>	Many data sources, including BI sources	
<i>Available:</i>	Whenever and wherever the user needs it	

If that's what a real-time problem looks like, what does a solution based on Real-Time Intelligence look like? And how can my organization best capitalize on this Real-Time Intelligence trend? Fundamentally, RTI Solutions connect directly into the 'live' information source and provide intelligence to the user in real-time. RTI Solutions also include the tools to radically speed up the time it takes to assemble authoritative data into actionable Real-Time Intelligence. To support these claims, RTI Solutions must support the following diverse set of qualities:

⁶ <http://www.wseas.us/journals/ami/ami-5.pdf>

	Live. Must deliver data directly from authoritative information sources, rather than using a disconnected data warehouse.
	Fast. Must provide tools to create Real-Time Intelligence answers quickly, often in minutes or hours.
	Portable. Must provide answers that can be delivered anywhere a decision-maker might need them, including portals, desktops, spreadsheets, websites, and mobile devices.
	User-Driven. Must provide tools for non-technical users to create their own answers, removing the dependency on IT resources whenever possible.
	Social. Must provide a collaborative ecosystem, letting users share their own work and leverage the work of others.
	Secure. Must ensure end-to-end security and governance common to most enterprise environments.

Combined, these elements can deliver Real-time Intelligence to the decision-makers when and where they need it. The results of such a solution can benefit everyone in an organization, from the decision-maker to the information analyst to the technical staff in the IT department.

How Can Real-Time Intelligence Benefit You?

An August 2010 study from Aberdeen Research, 'Operational Intelligence'⁷, summarized the result of a dynamic approach to decision-support as 'the ability to make quicker and more informed decisions', enabling organizations to 'improve operational efficiency, optimize the sales pipeline, enhance customer satisfaction, and drive profitability'.

When comparing 'best in class' and 'laggard' organizations, the difference in critical performance indicators was striking:

"We are targeting a 20% to 25% reduction in some spending areas and we are looking for a sevenfold increase in real time data. By getting the right data to the right decision maker at the right time, we can become increasingly efficient and productive."

Bob McDonald, CEO, Procter & Gamble

	'Best-in-Class'	'Laggards'
Year-over-year financial performance (profit, cash flow)	17%	1%
Year-over-year sales pipeline	29%	2%




⁷ <http://www.aberdeen.com/aberdeen-library/6528/RA-operational-business-intelligence.aspx>

performance (new account, conversions, sales)		
Customer service score (retention, satisfaction)	94%	74%

In addition to this substantial impact upon the bottom line, Real-Time Intelligence can have a positive impact for many specific roles and individuals across an organization.

Better Decisions: RTI for Decision-Makers




RTI can have an immediate positive impact on the *quality* of business user decisions.

	<ul style="list-style-type: none"> • Faster Time- to-Decision: Information is delivered to the business in hours or days, instead of weeks or months.
	<ul style="list-style-type: none"> • Better Information Quality: Information that is surfaced for business action and decision-making is <i>live</i>, not a stale copy.
	<ul style="list-style-type: none"> • Higher Relevancy: The business is able to do 80% of the work themselves, reducing their dependency on IT and eliminating 'translation' issues.

In addition, the portable nature of RTI can benefit you as well, allowing you to use the information wherever you might be. If you prefer your Intelligence in a browser, in a spreadsheet, or on a mobile device, RTI can still provide you the same live information.

Better Answers: RTI for Analysts

As one of the 'creators' of your organization's Intelligence, RTI enables you to rapidly find, assemble, and customize Intelligence and securely share it with decision-makers. Your RTI solution can mashup any

	<ul style="list-style-type: none"> • No Waiting: RTI is predominantly a 'do it yourself' visual activity, letting non-technical users perform most of the work and leads to much shorter Intelligence delivery times.
	<ul style="list-style-type: none"> • Increased Productivity: The social nature of RTI means users can safely build on their previous efforts and the work of their peers. Every RTI effort can use previous RTI results as a building block.
	<ul style="list-style-type: none"> • Better Quality: RTI lets users create results interactively, ensuring relevancy and accuracy. RTI also offers collaborative features that

relevant data from disparate information assets, whether they are on-premise or 'in the cloud'. And your RTI can be used seamlessly on any enterprise destination.

In other words, Real-Time Intelligence unlocks your data, enabling the rapid assembly of disparate sources, delivering your information wherever you want to use it, and making it easy for you to share your results with decision-makers. And you can get your Real-Time Intelligence *without waiting for IT*.

Better Control: RTI for IT

RTI provides a more productive division of labor between IT and the business users so IT can focus on data access, security, governance, and the creation of the most complex RTI building blocks, while the business assembles solutions to address their situational decision needs. The results of this user-empowerment can mean:



- **Reduced Backlog:** With business empowered to do more, IT is able to focus their support on major application development needs.



- **Reduced Costs:** By building upon investments in existing enterprise systems, IT is able to reduce costs while delivering more value.



- **Improved Governance:** Instead of guessing where data is cut-and-paste data is used, RTI lets IT establish a secure, monitored environment for users to create and share.

Regardless of your part in the information supply chain, RTI can have a positive impact on your efforts and results.

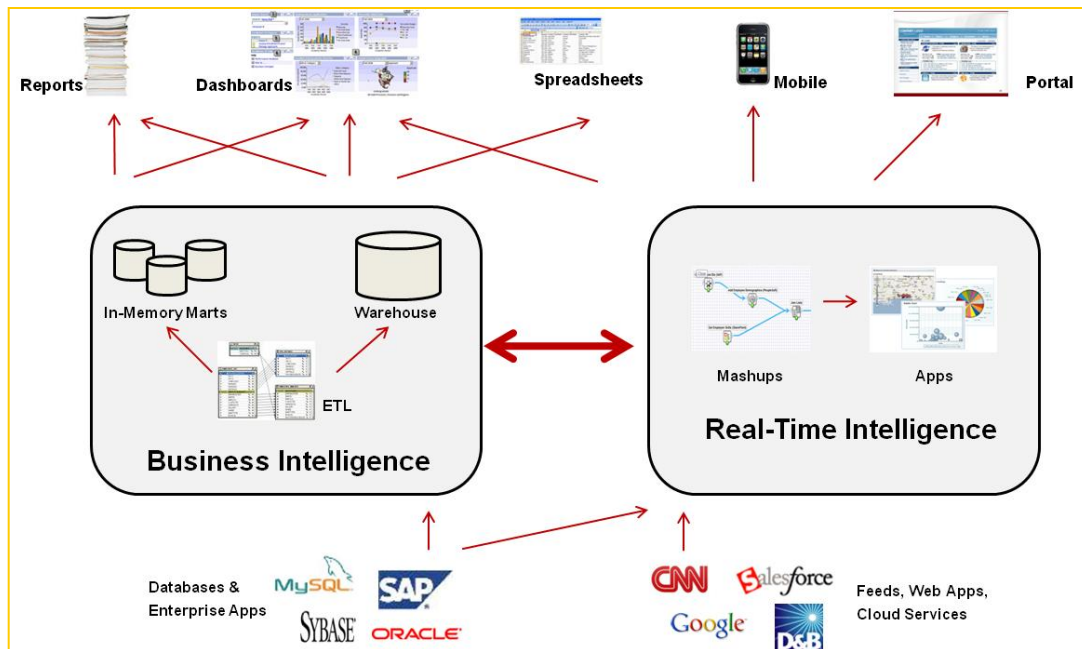
Real-Time Intelligence & Business Intelligence: Not an ‘Either / Or’ Choice

You might compare Real-Time Intelligence with traditional styles of Business Intelligence software. Some of the more important distinctions between Real-Time Intelligence and traditional Business Intelligence include:

	Real-Time	Traditional
Problem/question type	On-Demand, Dynamic	Predefined, Structured
Data Timeline	Current data ('What's happening?')	Historic Data ('What happened?')
Decision Style	Collaborative	Individual
IT Dependency	Low	High
Typical Data Sources	Live Databases, Services	Data Warehouse/Mart
User Interface Mechanism(s)	Portable 'Apps'	'Spreadsheet Dump', Reports, Query by Example
Adaptability	Dynamic Mashups	Static 'Models'

These distinctions can be subtle, but their importance cannot be understated as they can help an organization avoid a costly mistake: Real-Time Intelligence is not a substitute for a traditional BI Solution, nor is BI a substitute for RTI. In other words, the use of RTI and BI is not typically an 'either or' option. RTI Solutions and BI Solutions complement each other as each provides a valuable tool for different types of enterprise intelligence.

The connection between RTI and BI isn't simply a logical one. There is a practical, functional connection between RTI and BI, with each solution acting as a potential 'input' to the other. In addition, they often use some of the same source systems and can deliver results to some common destinations:




By understanding the value, best-uses and interchange of RTI and BI, an organization can significantly enhance the value of both solutions and benefit from the unique synergy between them.

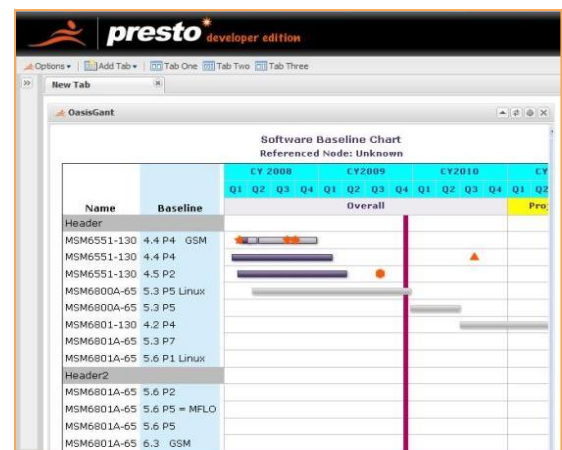
Every organization, regardless of its focus or industry, can benefit from Real-Time Intelligence. Exemplar uses of Real-Time Intelligence in action include a wide variety of functions, problem areas and organizational missions:



Three Real-Time Intelligence case studies are described in more detail in the following sections.

RTI in Manufacturing

 Qualcomm (www.qualcomm.com), an \$11 billion manufacturer of digital wireless telecommunications products, grew its organization very quickly, both organically and through acquisition. The result was a disparate, disconnected collection of production management portals that provided a patchwork view of their manufacturing efforts. Qualcomm used a Real-Time Intelligence Platform to provide a 360-degree view of all available chip manufacturing process data. The solution provides management with comprehensive 'App Dashboards' that unify and correlate all available manufacturing information, delivered through the existing



Source: www.jackbe.com

RTI in Entertainment & Media



This large U.S.-based entertainment & media company operates a variety of consumer-facing locations that necessitate tight management and control of thousands of point-of-sale (POS) terminals and tablets in use by the various employees across the organization. While the IT department tasked with managing these systems has been amply staffed and well suited to support such a large network of terminals, the process for identifying and solving technology issues was too slow and reactionary. The organization decided to create a special task force to implement an operational dashboard for monitoring and managing their network of several thousand in-store POS systems. This “right-time” visibility into POS health and transactional information has saved significant cost, time, and resources for the organization.

Source: www.aberdeen.com

RTI in the Military



The US Department of Defense's (www.defense.gov) National Senior Leadership Decision Support System (NSLDSS) supports senior military

decision-makers, including the Joint Chiefs of Staff, during events of national significance with a rapid situation awareness (SA) solution to support response planning and execution. A Real-Time Intelligence Platform is employed as the secure Dashboard solution for presenting situational information from hundreds of disparate services to commanders on secure US DoD networks. The rapid deployment of the situational awareness solution saves years of development time and enhances national security.



Source: www.jackbe.com

Presto: The Real-Time Intelligence Solution

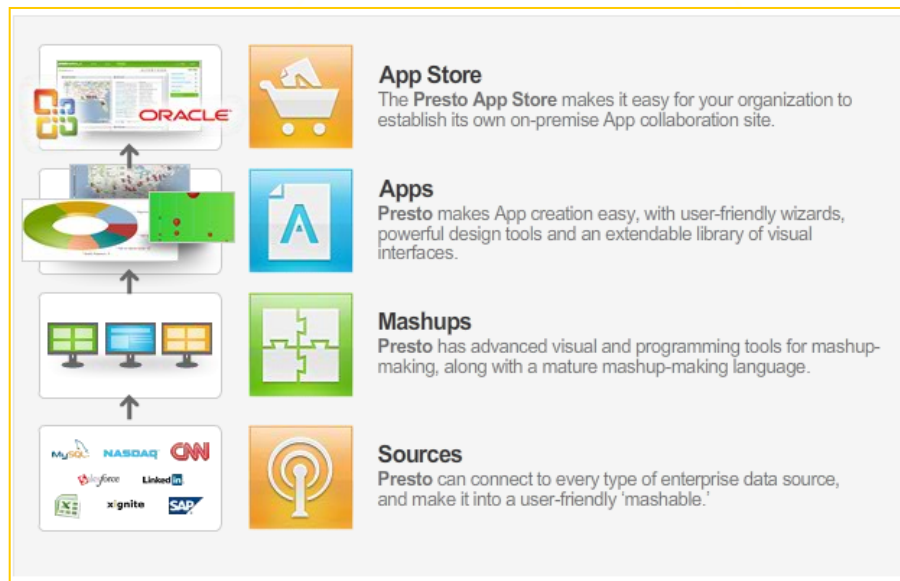


JackBe (www.jackbe.com) is a provider of Real-Time Intelligence Solutions. JackBe's Real-Time Intelligence Platform, Presto™, helps organizations solve today's most common information problem: helping users get actionable, contextual information in real-time from disparate, fast-growing data sources. Presto empowers your organization with tools for every step in the Real-Time Intelligence lifecycle, from unlocking dynamic sources of information, to dynamic Mashups, to interactive 'Apps', sophisticated Dashboards, and even a private App Store for easy collaboration.

"...huge amounts of data [are] available to organizations, but it's not always clear how to make practical use of it. Tools like JackBe can help turn all this data into something end users can work with minimal support from IT."

ReadWriteWeb,

<http://www.readwriteweb.com/cloud/2010/11/mashups-cloud-azure.php>



JackBe's customers include more than 100 enterprises and government agencies in a wide variety of industries around the world including publishers, banks, retailers, manufacturers, utilities, and government agencies. Presto provides these organizations with powerful visual and programmatic tools to create Real-Time Intelligence Solutions.

JackBe's customers have time-sensitive information needs, often requiring answers within hours or days. These organizations often have slow, labor-intensive, insecure and error-prone processes to access and combine information, or their technical staff did not have the time, budget or human resources to address their changing or individual user needs. Today they have Real-Time Intelligence for their most time-critical decision-support needs.

More information about Presto, including demonstrations and a free trial software, is available at www.jackbe.com.