the Democratisation of Data

How information can give power to your people

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Executive summary

Businesses have long viewed information as critical to building a competitive advantage. Without full visibility into your business, how can you know with certainty what's making it succeed or fail? This on-going quest for knowledge has been responsible for a tremendous amount of investment and innovation in the business intelligence (BI) and analytics arena.

The end goal of these efforts, however, is a moving target. For many years, the focus was on getting basic information on financial or transactional data. As technology advanced and businesses mastered the basics, the BI radius expanded to keep pace. More systems and ways of communicating meant more automation and information, which in turn meant a whole host of new opportunities for collecting data across a wide range of business areas—from how many widgets per minute a piece of equipment produces to what color sweater customers in Atlanta prefer.

This "knowledge is power" philosophy has driven the BI movement to a pivotal and, in some ways, perplexing point. Much like the proverbial dog that catches the car, many businesses now have access to so much information that they are unsure of what to do with it. Indeed, we are in danger of reaching a point where we are no longer using information to drive business forward. Instead, the process of managing it is driving us. A study by IBM found that key executives spend 70% of their time finding data and only 30% analysing it.[1] These challenges are being compounded by the need to respond more quickly than ever to changing conditions and by a growing gap in the skills required to make sense of all the information available. In a 2011 study on big data, McKinsey and Company noted that the skill shortage is significant and growing, with the US facing a shortage of 140,000 to 190,000 workers with deep analytical skills, plus a gap of 1.5 million managers and analysts skilled at making sense of big data for analytical value.[2] As a result, businesses are looking for new solutions to simplify data and make it accessible to everyone. In fact, many businesses are viewing information as the next frontier of competitive differentiation.

One major push around this effort is a concept known as "the democratisation of data," which can be defined as putting data directly into the hands of business users. Now that companies have access to more data, they have come to realise that the key to unlocking its value is in making it available to the people who need it most. At the same time, employees are increasingly asking for access to information.

In a report on BI predictions for 2013, Forrester Research noted the following:

> **The current BI approach—a never-ending stream of business requests that IT cannot keep up with—has become unsustainable. Information workers get frustrated with the time lag between when they make requests and when IT fulfills those requests, so they demand more control over BI. End user self-service features of BI tools, such as semantic layers and search capabilities, will become increasingly critical when selecting and deploying BI tools and solutions.[3]**

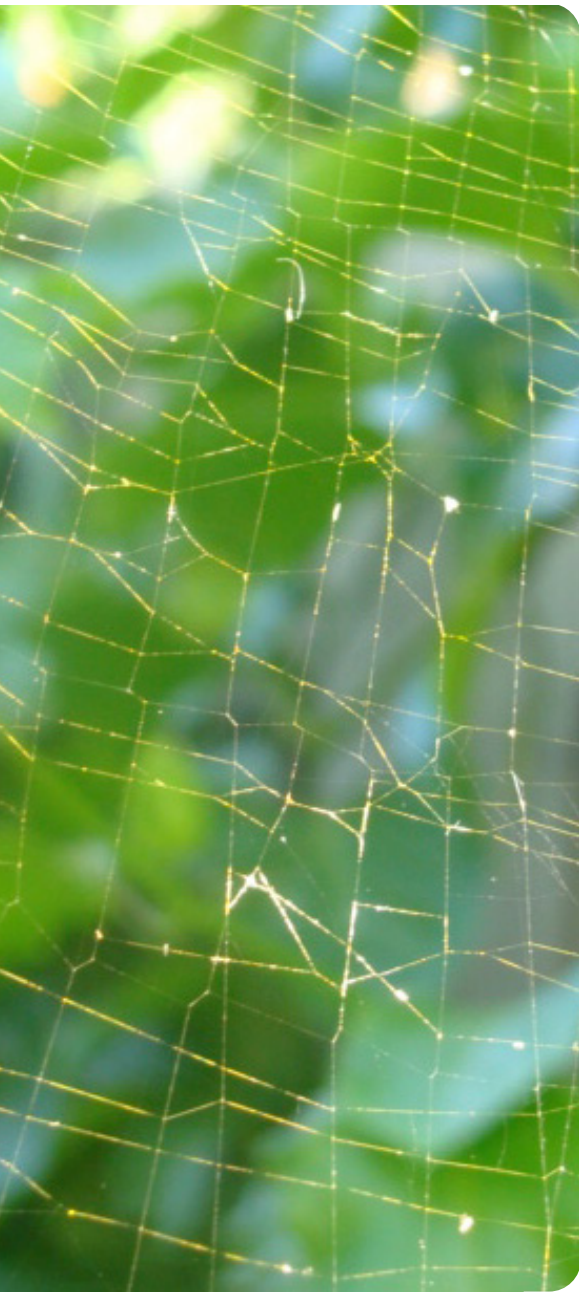
Previously, expanding BI access could be a difficult objective to achieve; however, technological advancements have made giving power to the people an increasingly viable option.

In this white paper, we'll examine the trend toward the democratisation of data, taking a look at what potential this approach holds, the challenges that many businesses face when trying to implement it, and how you can use analytics to put some distance between yourself and the competition.

1 IBM, The 2010 IBM Global CFO Study.

2 McKinsey and Company; Big data: The next frontier for innovation, competition, and productivity; Manyika, James; Chui, Michael; Brown, Brad; Bughin, Jacques; Dobbs, Richard; Roxburgh, Charles; Hung Byers, Angela; May 2011.

3 Top 10 BI Predictions for 2013 and Beyond, Evelson, Boris, Forrester Research, December 12, 2012



The democratisation of data: A definition

The democratisation of data is the process of expanding business information and the tools to analyse it out to a much broader audience than traditionally has had access. In most companies, the IT department has long been the gatekeeper of BI and analytical tools, not because of a desire to control information but out of necessity. The tools available were simply too complex for the average employee to use effectively, and analysing data was a cumbersome and complicated process. As a result, reporting was most often done to satisfy the needs of only a handful of top executives. Evolving and complex technology landscapes compounded these limitations, as disconnected systems made it more difficult to get a unified view of the business. Many companies still struggle to get a single version of the truth across all areas of the enterprise.

These obstacles have put barriers around organisational data that have been extremely difficult to breach, with the result being that employees often make decisions in isolation. It's not so much that decision making has been flawed in a wholesale way. Businesses have, after all, been working around their data issues for quite some time. It's more that decision making has been less than optimal and that opportunities now exist to improve it dramatically.

The quest to take advantage of this potential is driving the democratisation of data, with efforts to put information directly into the hands of employees who need it being delivered through a variety of channels. Although BI and analytical tools are leading the charge, they are not the only vehicles being used. In an analysis of major technology drivers in 2013 and beyond, Gartner references a concept they have named the "Nexus of Forces," which they define as "…the convergence and mutual reinforcement of four interdependent trends: social interaction, mobility, cloud, and information. The forces combine to empower individuals as they interact with each other and their information through well-designed ubiquitous technology." [4]

It is this convergence that is allowing analytics and business intelligence to be used in new and game-changing ways—some that represent a relatively minor evolution in technology but major advancements in terms of impact on the business; others that might have sounded like science fiction even a few years ago. Below are just a few examples of what is now possible:

- End-user analysis across the enterprise—Business intelligence and analytics tools have become increasingly user-friendly and less complex, giving end users the ability to easily analyse, track, and present business data in highly consumable ways. Employees can now run existing reports, create new ones, build dashboards, and more, without having a high degree of technical skill. These advancements have allowed BI and analytics to evolve from technologies of the few to resources for the many at a fairly rapid pace.
- Mobile access to business intelligence—BI tools are now increasingly being combined with mobile devices to give employees anytime, anywhere access to business information through both customised and packaged mobile applications. One of the key differences between the types of information that have traditionally been available via mobile devices (primarily email) and emerging BI access is that the convergence of technologies (like BI, mobile, and integration) allows employees to go from "knowing something" to "doing something." They no longer just have remote access to information. They can take action on it as well.

4 Gartner; The Nexus of Forces: Social, Mobile, Cloud and Information; Howard, Chris, Plummer, Daryl C., Genovese, Yvonne, Mann, Jeffrey, Willis, David A., Mitchell Smith, David; June 14, 2012

Mobility is another key trend cited by Forrester Research in its predictions for 2013:

…mobile BI caught up in 2012, will continue to progress in 2013, and will eventually become the norm. Why? Information workers can no longer wait to make decisions until they "get back to the office"—that may be too late. Forrester expects that, as BI goes mobile, certain robust mobile features will become the norm: multiple visual query methods, leverage of GPS signals for geolocation and geospatial analytics, animated displays, sensor-based queries, and integration with other enterprise mobile ERP applications.[5]

- **In-context business intelligence**—In-context business intelligence is information delivered directly and automatically to end users as they are in the process of doing their jobs. This capability is particularly powerful, primarily because it eliminates the need for employees to sift through large volumes of information that are often stored across multiple systems. Instead, BI technology senses the type of task in process and automatically displays role-based, relevant data. For example, a finance department employee processing an invoice might have that vendor's payment history for the last three months automatically displayed. Or a manufacturing supervisor might receive alerts about the likely need for maintenance on a critical piece of equipment in the middle of a major production run for a key customer. Because employees have the ability to specify the type of information they want to receive, they can combine data to gain new insights and see it exactly when and where it's needed, helping them capture opportunities and mitigate risks.
- **Alerts and exceptions**—Alerts and exceptions also fall into the category of business intelligence delivered automatically to employees, but the focus in this case is preventative. Systems can be set up to monitor particular areas of a business based on rules that stakeholders define, and then notify them at a desktop or through a mobile device when exceptions occur. Like mobile access to BI tools, this capability gives employees both information and the ability to take action, with the goal of responding quickly to potential problems and improving business performance.
- **Integration with social business**—Companies are still finding their footing with social business technology, but popularity and adoption are growing rapidly. The power of social business lies with integrating collaboration, core organisational systems (like ERP or supply chain management), information, and delivery mechanisms to allow employees to work in new ways. This technology is very much in line with efforts to democratise business data because of its heavy focus on collaboration and its ability to give employees access to data in a broader range of ways. In just one example, social business technologies can be used to "follow" particular aspects of a business, ranging from a piece of equipment to a top customer. When activities related to that item occur, employees can be automatically notified—wherever they are. Social business technologies are also designed to capture employee communications that are normally lost through vehicles like email or instant messaging. This allows companies to retain vital corporate knowledge and get a better understanding of the how and why around their decision-making processes.

All of these capabilities are designed to make the vast amounts of information now available to businesses valuable by putting it into the hands of the people who need it the most, which is the very essence of democratising data.

5 Top 10 BI Predictions for 2013 and Beyond, Evelson, Boris, Forrester Research, December 12, 2012

The next frontier of competitive differentiation

The driver for this level of innovation in the BI and analytics space is an old one—the on-going quest for the edge that will set a business apart. In an environment where competitive differentiation is increasingly difficult to come by, information is seen as having the potential to be "the next big thing."

In a recent Forrester Wave™ report, they noted:

> **For the foreseeable future, we will compete on information. In addition to its traditional role as a financial, management, and compliance and risk reporting platform, BI now has a much more important role. All products and services continue to become more commoditized in our global economy. As a result, it's becoming harder and harder for enterprises to differentiate and compete on quality and margins. But if there are two businesses that are marketing and selling identical products or services and one has more insight into its customers' behavior—or even if two share the same insights but one gets that information a day sooner—that business has a much higher chance.[6]**

The belief in BI's potential is reflected in technology spending priorities. In a Gartner survey on CIO technology priorities for 2013, business intelligence and analytics were at the top of the list. Among those same CIOs, 55% cited big data and analytics as the technologies most likely to be disruptive (the latest industry buzz word for game-changing).[7]

Competitive differentiation from BI and analytics initiatives can come in a number of different forms, as CIOs hope to realise benefits like:

- **Faster response times across many areas of the business**. This could mean an improved ability to recognise and take advantage of opportunities that more sophisticated analysis can reveal, proactive prevention of problems, and more.
- **Increased productivity,** achieved by putting information at employees' fingertips, dramatically reducing the amount of time they have to spend looking for data, helping them prevent mistakes, removing IT as the gatekeeper of business analysis, and allowing people to make better decisions faster.
- **A new level of customer service**, which is different than the somewhat ubiquitous goal of providing better customer service. BI and analytics can give companies the ability to market to and interact with customers in new ways that distinguish them from the competition. Personalisation is a big push and one area where advancing BI technologies are making a significant difference. However, democratising data is empowering employees to deliver a different level of customer service, as well. Sales reps can easily run reports and dig down into details from the road to make sure customer needs are being met. Support representatives can automatically have customer information displayed on their screens, allowing them to make customers feel recognised and important. The possibilities are virtually limitless. Imagine the opportunity to serve customers more effectively through 360-degree visibility into their overall relationship with your company, so that you can ensure each interaction with them across your organisation is consistent and that you maximize every exchange.

6 The Forrester Wave™: Business Intelligence Services Providers, Q4 2012; Evelson, Boris, Herbert, Liz with Andrews, Chris, Coyne, Shannon; Forrester Research, Inc.; October 18, 2012

7 Gartner, "Gartner Executive Program Survey of More Than 2,000 CIOs Shows Digital Technologies Are Top Priorities in 2013," January 16, 2013

- **Better decision making**, achieved by giving employees not just more information, but the right information and putting their decisions in context. Employees no longer have to make decisions in isolation or based on only a limited view of the business.
- **Improved strategic planning**, through closer linkage of business plans to strategic objectives. Companies can now generate more accurate forecasts and plans, easily analyse performance against those plans on a continuing basis, and make a djustments that increase the likelihood of achieving company goals.

The bottom line is that BI has the potential to positively influence a wide range of areas and has transitioned from being disconnected from business processes to driving them, allowing for decision making that's both better and faster. Executives will be keeping a close eye on the results, with high expectations for what can be achieved.

Building a BI strategy: Taming data to make analytics consumable and valuable

With all of this innovation, it's easy to wonder: "What's holding companies back"? As is often the case with technological advancement, the market is on pace with the progression of a subset of businesses, but ahead of the curve for others. Challenges vary by company type and industry and will be based not just on the size or complexity of your business, but also on your level of sophistication around BI and analytics. Often, larger companies have a more difficult time achieving an enterprise-wide BI strategy than smaller businesses with fewer resources because their environments are more complicated. We'll cover strategies for companies in varying stages of BI adoption later in this section. First, let's address an issue that nearly all organisations face: integration.

Integration has long been the bane of the enterprise software industry. Evolving capabilities and a rapidly changing software vendor market have left most companies with incredibly complex technology landscapes. Businesses end up with information in silos, a limited ability to get a unified view of the enterprise, and systems (particularly transactional ones like ERP) that are so complex that average business users have little chance of being able to uncover and manipulate the data that they house.

Recently, however, the technology available to address the integration issue has experienced a significant period of acceleration, giving rise to a new breed of what is commonly known as middleware. Built using an open architecture approach that relies on industry-standards like XML, rather than vendor-based standards, this technology provides a flexible, lightweight framework for quickly and easily connecting disparate systems without making them codependent. Systems can be made compatible, new technologies can be introduced, and existing software can be upgraded or even fail without taking down other applications.

This is good news for companies working to implement a cohesive BI strategy; it allows them to get a unified view of the business and analyse information from all key systems. No analytics strategy can be complete without a comprehensive integration plan; in fact, it should be a major component of any BI strategy. Whether you start small by testing integration of just a couple of systems or go enterprise-wide, you'll see the benefits not just in the area of analytics, but across your business.

With integration factored into the picture, additional strategies will be driven largely by your position on the BI evolutionary scale. Most organisations fall into one of three general categories:

8 Aberdeen Group, ERP Much Better Off With than Without, January 2011, p.6

Tactical

Definition

Companies in this phase are still focused primarily on tracking and measuring projected business performance against actuals. Efforts to assess the "how and why" of decision making are overshadowed by the need to meet basic reporting and regulatory requirements. Often, time-consuming, manual processes and outdated technology are the primary culprits.

Key strategies

- **Set clear goals for your analytics initiative**—Business intelligence has the potential to positively impact so many areas of the business that initiatives can easily expand and get out of control. Start by setting a clear and achievable set of goals and stick with them.
- **Get buy-in from key stakeholders**—Executives can occasionally view BI initiatives as an invasion of their territory and feel threatened by what they see as increased scrutiny of areas that they own. In reality, BI generally increases their ability to understand their part of the business and positively influence its performance. Including them early in the process and getting a clear understanding of the current way things are done will be essential for turning skeptics into advocates.
- **Start small**—Begin by identifying areas where lack of information or inaccurate data is causing the greatest pain, analyse the causes, and identify an approach for addressing that portion of your business alone. When planned carefully and executed well, the results of these initiatives usually speak for themselves, giving you a solid foundation on which to expand your efforts.

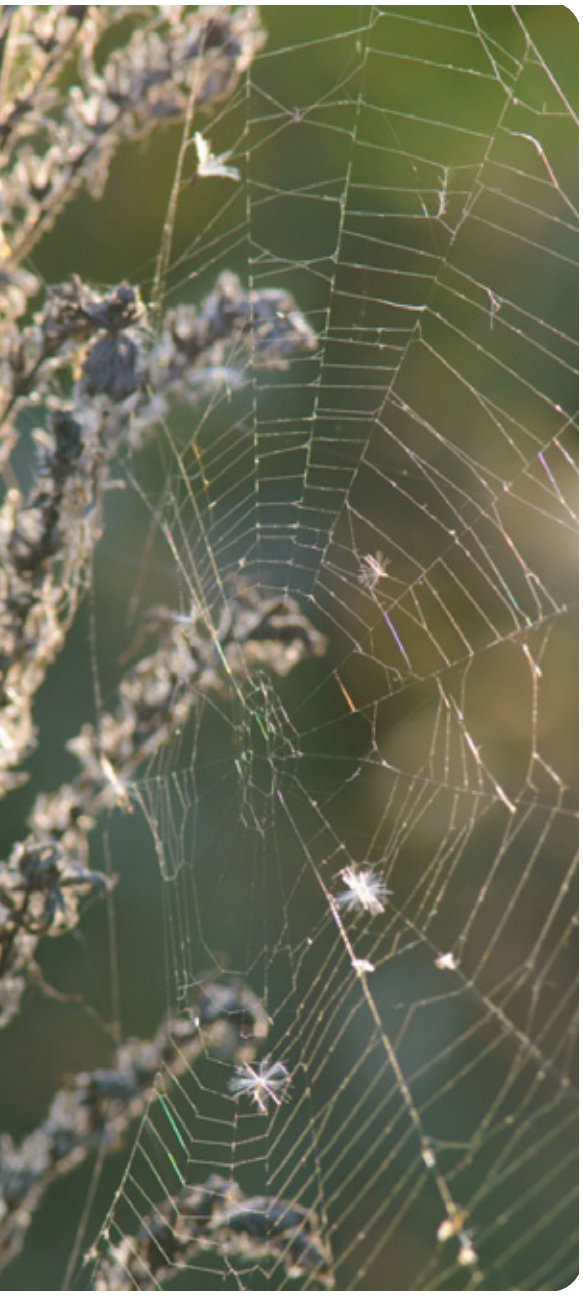
Strategic

Definition

Businesses in the strategic phase have mastered the basics of tracking business performance and are using data to steer their businesses, rather than just measuring where they've been. Often, however, companies in the strategic phase are restricted by the complexity of the BI and analytics tools available to them, putting IT in the role of gatekeeper and limiting in-depth use of business information to a select group of executives.

Key strategies

- **Expand the availability of user-driven BI and analytics tools through the use of packaged BI solutions**—Depending on when you last investigated this category, you may see some significant advancement in what's available. Packaged BI tools are an ideal option for many businesses and can often deliver a faster time to value than custom projects. Toolsets have become increasingly user-friendly, allowing employees without technical knowledge to easily analyse and manipulate data. Your employees and your IT department will thank you.
- **Reduce the amount of time that employees spend finding information**—This will largely be achieved by strategies like those mentioned above, including the delivery of in-context BI and automatic alerts, as well as more sophisticated enterprise search capabilities. The less time your employees have to spend finding information, the more they can spend analysing it—and using the results to help improve business performance.
- **Provide a foundation for the long-term**—Make sure any investments in new technology are flexible enough to meet changing needs over the long haul and that they're supported by sustainable vendor investments that will result in on-going innovation.



Driver

Definition

Companies in the driver phase have mastered the art of collecting information and moved on to the process of how best to take advantage of it. These companies use business intelligence as the foundation for critical business decisions not just at the executive level but across the business, working to put analytics into the hands of everyday users. As volumes of information increase, however, and opportunities for accessing large amounts of data become commonplace, these businesses must find the right path for managing it.

Key strategy

- **Investigate emerging technologies that can take your BI efforts to the next level**. Two that you may want to consider include social business and big data. No discussion around managing extremely large volumes of data would be complete without the inclusion of big data technology, which is growing rapidly in popularity.

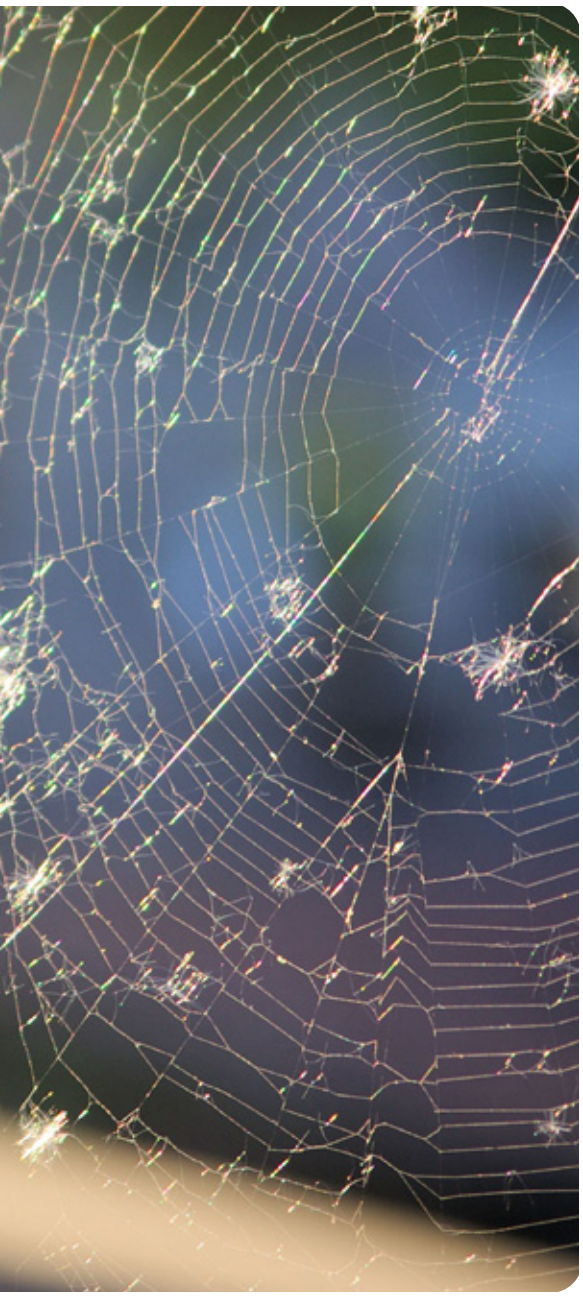
  At the most basic level, big data refers to volumes of information that are extremely large and growing. The challenge comes when the volume gets so big that it can't be effectively managed in a traditional batch processing way. If it takes many hours or even days to process large volumes of data, the information quickly loses its value. Big data solutions are designed to turn the information tsunami into an information goldmine.

  Questions remain about big data and its value. However, because of its potential, companies at the highest level of BI sophistication that are struggling with large volumes of data should consider proceeding with a slow and cautious approach. It's recommended that you start with your own data and master its manipulation before giving in to the temptation to buy data from enticing new sources like Facebook or Amazon. Just as you can't remove the salt from your stew, you can end up living with the consequences of importing large volumes of data before the business is ready for a very long time to come.

How TRG delivers on the promise of analytics

TRG is proud to deliver a unique combination in the enterprise software arena – solutions backed by decades of practical application and continually enhanced with the latest technology innovations from Infor. TRG aims to provide an innovative and growing range of analytics technology – as one of our commitment to redefining business software as you know it—and changing the way work is done in the process.

Infor Analytics gives you a comprehensive business intelligence platform that can be used in any domain or industry. Powered by an in-memory database, the solution offers a unique, multi-purpose web front-end, as well as mobile capabilities that put information at your fingertips. Easily integrated with both Infor and non-Infor data sources, Infor Analytics lets you take advantage of the information that resides in previously disconnected systems and get a real-time view of your entire business operation. You get all the tools you need to analyse, manage, and drive your business in one complete package, with capabilities that include:



- **Infor CPM Planning and Budgeting.** You can leverage technology to plan and forecast objectively, quickly, and accurately, and strengthen their overall performance. It also helps them assess the potential impact of key events across the organisation; simplify the creation and maintenance of relevant, dynamic plans and budgets that support organisational goals; and improve overall results. You can also quickly set high level plan targets, develop detailed driver-based operational and financial plans, and collect and manage the budget and forecast information required to achieve your planned objectives.
- **Infor BI.** With an industry-specific assortment of prebuilt reports and dashboards, Infor BI Business Analytics gives you immediate access to the detailed information and analysis you need to make effective plans and decisions. It also includes an easy-to-use report building utility that allows ordinary business users to create reports without having to go to IT to request them. It simplifies and accelerates the reporting process in a way that fosters clear, consistent use of data throughout your company.
- **Infor Financial Consolidation.** You can gain power over the data your company relies on to succeed. But you need a financial consolidation and reporting solution that lets you eliminate manual processes so you can focus on analysis. Plus, you can accommodate mergers, acquisitions, reorganisations, and other structure changes with a simple "drag and drop" of data, simplify the tasks associated with consolidation, so you can spend more time analysing results and guiding the business.

The Infor Analytics technology foundation: Infor ION

Infor's Intelligent Open Network (ION) technology is the foundation supporting the power of Infor Analytics. Infor ION is purpose-built middleware that makes connecting disparate systems simple and straightforward. By drawing on open standards and widely supported data formats, this technology delivers integration out of the box, along with the ability to leverage information from many systems simultaneously.

Infor ION generates value through a collection of interrelated technologies that combine to form a platform for faster growth and better performance across the enterprise. The elements of the Infor ION platform include:

- **Enterprise connectivity**—The connective technology behind Infor ION draws on a completely new approach to integration. In the past, enterprise integration took a hardwired approach, similar to the old, analog telephone network. It was appropriate for systems of an earlier era, but is too expensive and inflexible for today's requirements. Infor ION connectivity technology builds on the kind of freedom and agility represented by Internet technologies—flexible connections, open formats, and industry standard protocols. As a result, Infor ION supports advanced capabilities right out of the box for rapid integration, top performance, and easy scalability.
- **Business process workflow**—Because Infor ION communicates through an industrystandard, publish-and-subscribe process, the information it transmits can be harnessed to support advanced workflow and business process management. You can design and implement workflows in Infor ION to fit your business process so that you can standardise, monitor, and document the tasks that make the biggest difference to your business.
- **Event management**—Infor ION solutions can send alerts and route approvals to your desktop or to a mobile application to keep you fully informed and involved in your business process, no matter where you're located, at any time of day.

- **Mobile**—Infor Motion, our mobile technology, is built on the same technologies that drive Infor ION integration, workflow, and business intelligence, which means you can implement a mobile strategy as a natural extension of your integration technology. You won't need to integrate mobile support as yet another unconnected technology because you'll have a seamless technology platform that encompasses the desktop, web, office, shop floor, field, and your favorite mobile device. You'll also be able to easily manage access to mobile applications with central provisioning capabilities. You can drag-and-drop to allow or restrict mobile access and quickly cut off permissions when changes occur, making management of mobile access simple and straightforward, while keeping your information secure.

Conclusion

Business intelligence and analytics solutions are widely considered by CIOs and analysts to have great potential for delivering measurable, bottom-line improvements to the enterprises that are best prepared to take advantage of them. Results to date and technology investment patterns indicate that these technologies will be a priority for top-performing companies for the foreseeable future. By taking steps to democratise data, companies can put the power of analytics into the hands of every day users and dramatically increase the value of information that is often ready and waiting to be exploited.

About TRG International

TRG International—a Gold Channel Partner of Infor—is an independent provider of IT business solutions, and supports thousands of users in 70 countries. Clients range from small domestic companies to large global multinationals in both the public and private sectors.

Our activities focus on enabling business and people to perform better.

- Business applications solutions for accounting, strategy, planning, budgeting, retail, hospitality, ERP, business intelligence, golf and virtualisation.
- People solutions to select the right people and develop them to their full potential.

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