

Can spreadsheets alone help your business performance excel?

How business intelligence dashboards can overcome the issues inherent in spreadsheets

See the bigger picture with Business Intelligence dashboards

Introduction

Every business is reliant on efficient, timely access to management information, in order to make strategic and tactical decisions about its performance. Many organisations use a wide range of varied information systems to run their core operational functions, and spreadsheets are the common business tool of choice for data analysis and reporting. This white paper looks at some of the issues arising from an over-reliance on spreadsheets and explores how Business Intelligence (BI) dashboards can overcome these issues and provide an effective way to meet the needs of all information users within an organisation.

In an increasingly competitive landscape, every organisation, irrespective of its size, location or sector, depends upon management information to make informed business decisions. As the need to differentiate becomes increasingly critical, so is an organisation's ability to manage and leverage their information as an asset. In fact, the ability to realise valuable business insight from existing information resources can prove crucial in achieving a competitive advantage, reducing costs and accelerating operational efficiencies.

Traditionally, management reporting has been built on the foundation of spreadsheets, with many information users relying on them as their reporting and analysis tool of choice. While spreadsheets are a familiar business application offering many benefits, they also present a number of drawbacks, which impact on usability, data visualisation, accuracy, collaboration and, ultimately, effective decision-making.

The Limitations and Risks of Spreadsheets

Right at the top of the list of issues experienced by spreadsheet users is their tendency to be fraught with errors, creating a major challenge when the reports they generate need to reflect accurate information as the basis for decision-making. Much of this is due to usage error, with many users cutting and pasting raw data from other applications into a spreadsheet, before applying their desired formats and logic. This approach is inefficient and risky, resulting in numerous silos of spreadsheets containing data from varied sources being distributed throughout the organisation. Too often, nobody knows who created, updated, or modified individual documents, nor how they were updated or why. Without an audit trail, it is nearly impossible to manage the risk of inaccurate or inconsistent information being passed around. This leads to multiple versions of the truth, questionable results that cannot be easily verified, and opportunities for mistakes and fraud, all of which present major compliance risks. These risks are far greater when spreadsheets are used for tasks related to budgeting and forecasting, data delivery to customers and suppliers, and employee compensation.

Devoid of drill-down functionality, spreadsheet users cannot conduct a detailed investigation and analysis of the underlying factors which influence performance.

Can You See and Share What You Need To?

A reliance on spreadsheets can result in inconsistencies in the presentation of data, making it more difficult to analyse trends and issues, while also introducing uncertainty about the accuracy and reliability of what is presented. Using spreadsheets to gather, monitor and analyse information can be cumbersome and the process of data consolidation is never a simple task. Equally, spreadsheets do not offer publishing and collaborative capabilities, restricting users from sharing information easily. Devoid of drill-down functionality or easy integration with other core business systems, users cannot conduct a detailed investigation and analysis of the underlying factors which influence performance. The net result is that valuable business insight is inaccessible and largely unexploited by those who most rely on it for day-to-day decision-making.

Even for the most expert user, spreadsheets offer minimal analytical features and can be complicated to use. If a user wants to create a spreadsheet with complex analytical formulae and data sorting, ranking and filtering, they often have to seek support from an often overstretched IT department to develop bespoke reports. Assuming that some control is assigned to an IT expert in order to develop these higher level reports, the resulting spreadsheets still lack the detail needed to deliver proactive alerts to potential performance shortfalls. The result is that issues go unidentified and unresolved for extended periods of time, at which point the issue has hit critical level and the organisation is in fire-fighting mode, rather than taking preventative action.

The primary driver for information users is gaining access to relevant data, presented in a way that supports uncomplicated analysis and interpretation and enables faster action based on the results.

With almost 90% of spreadsheets containing serious errors, an over-reliance on them compromises the reliability and accuracy of critical management information which many users depend upon for their business intelligence.

In many organisations, spreadsheets remain the reporting tool of choice for the finance and accounting functions. But what about the wider community of information users seeking simpler access to their data? These users are not experts in spreadsheets, nor are they particularly adept technically. Their primary driver is gaining access to the data that is relevant to them, presented in a way that allows fast and uncomplicated analysis and interpretation, with an end goal to take action based on the results.

For many organisations running a large number of data systems, it would be much more beneficial for users to view data appropriate to their specific role from a single point of access. The sheer quantity of information in most organisations presents the additional challenge of collating relevant data into a useable format for different audiences, particularly as users may only want to “consume” and analyse information, with little or no need to generate or manipulate the information presented.

Are Spreadsheets Accurate Enough?

Taking these issues into consideration, it is unlikely that spreadsheets can provide the deep insight, trend analysis and proactive alerts needed to make effective, informed decisions. A research report from the Aberdeen Groupⁱ notes that, while spreadsheets can be useful, they can also lead to serious errors when used inappropriately. “Spreadsheets, a widely available and familiar tool at mid-sized companies, are a poor choice for strategic activities,” says David Hatch, Aberdeen Vice President and Principal Analyst. “Our research shows midsized businesses that rely more on spreadsheets for key analysis tend to perform poorly across a broad range of financial and operational metrics, as compared to top performers who have left spreadsheets behind in favour of analytic applications. The danger of over-reliance on spreadsheets is clear.”

With almost 90% of spreadsheets found to contain serious errorsⁱⁱ, it is clear that an over-reliance on them compromises the reliability and accuracy of the most critical management information which many users depend upon for their business intelligence. The question is, how do organisations use technology to implement a solution that can deliver information to users in a format that they require, while reducing the errors associated with the use of spreadsheets?

See the Bigger Picture

Most information users are looking for a more “joined-up” approach to business intelligence that allows them to answer the following questions:

1. What are the key trends?
2. What is the status of our performance now?
3. Where are we against our plan?
4. Where are we heading?
5. What actions do I need to take today?

Using BI dashboards, key information can be shared easily among staff, allowing greater collaboration and faster resolution of potential issues that threaten to throw performance off-course.

Business Intelligence dashboards offer an effective, easy-to-use solution to accessing and revealing fresh business insight. They provide a secure way to connect, extract, visualise and analyse information from a wide range of disparate data sources, presented in a consolidated, graphical view. Users can customise the presentation of data and view a real-time snapshot of the overall wellbeing of an entire organisation, operational area or specific function. Using this type of solution, users get on-demand access to the most critical information they need for in-depth analysis to support their business decisions. Key information can be shared easily among staff, allowing greater collaboration and faster resolution of potential issues that threaten to throw performance off-course.

Reliable Data Visualisation Reveals Fresh Insight

With faster access to streamlined data, managers can make rapid decisions based upon reliable, up-to-the-minute information for precise reporting and decision-making.

By offering a single point of access to relevant information, users no longer have to log in to individual systems to access, review and monitor their performance data. With concise information presented in a graphical, dashboard format, users gain reliable data access, through consolidation of the most relevant data across an organisation’s existing information systems. This unified view provides a strong foundation for informed and responsive decision-making, by revealing previously hidden insight into trends, potential issues and opportunities.

Unlike spreadsheets, this collaborative approach presents managers with meaningful, real-time information, so they can track and monitor the Key Performance Indicators (KPIs) relevant to them, ensuring any issues or trends are spotted instantly and corrective action can be taken before an issue becomes critical or a performance metric of an SLA is breached. With faster access to streamlined data, managers can make rapid decisions based upon reliable, up-to-the-minute information for precise reporting and decision-making.

BI dashboards provide:

- An intuitive visualisation to drive faster identification of trends, variances and shortfalls.
- Real-time connectivity to data stored in all of an organisation's wide-ranging systems.
- Data lineage showing where data came from and what transformations have been applied.
- Proactive alerts to potential issues, shortfalls or non-compliance.
- Navigation from top-level KPIs to the underlying causes of trends, variances and shortfalls.
- A unified, graphical view without the need to log in to each individual data system.

From Spreadsheet Insanity to Data-Driven Decisions: Real Life Examples of Why You Need to Make the Move.

For those considering a BI dashboard solution, these examples outline the risks inherent in executive decision-making based on information contained within spreadsheets.

London 2012 organising committee oversells tickets

The London 2012 organising committee, Locog, made an error in its ticketing process that led to four synchronised swimming sessions being oversold by 10,000 tickets. The error occurred when a staff member made a single keystroke mistake and entered 20,000 into a spreadsheet, rather than the correct figure of 10,000 remaining tickets.

Huge additional costs incurred by financial advisors

Due to a calculating error by its financial advisors, West Baraboo officials learned they would be paying approximately \$400,000 more over the lifetime of their 10-year borrowing plan than originally projected. An "operator error" resulted in a spreadsheet underestimating the total cost of the 10-year bond, when it was discovered that a cell was not being added correctly.

Overinflated income expectation results in massive profit write-down

An accounting error forced outsourcing specialist Mouchel into a major profits warning and sparked the resignation of its Chief Executive, as analysts warned the firm was in danger of breaking banking agreements on debt, after it had to reduce full-year profits by more than £8.5million to below £6million. The mistake was assigned to a spreadsheet error that meant a pension fund deficit had been wrongly valued. As a result, Mouchel had to write down profits by £4.3million.

Key Comparisons Chart

Issue	BI Dashboards	Spreadsheet
Consistency	Increases productivity and decreases risk by providing consistent and integrated data for analysis.	Users apply various techniques to extract and analyse data, producing inconsistency in reporting and formatting.
Integration	Designed to integrate with multiple sources and handle large volumes of disparate data, without the need for manual manipulation, reducing the risk of human error. .	Spreadsheets do not support multiple source integration, meaning analysis of disparate data is difficult and as it is manually manipulated, it is unreliable.
Integrity	Easy integration with and extraction from multiple information systems creates an accurate view of current data without compromising on its integrity. .	Data often manually extracted from multiple sources in various formats, making extraction and presentation difficult and as the data is manipulated, the quality and integrity of the data reduces.
Functionality	Highly sophisticated and robust analytical capabilities yet simple-to-use, with drill-down functionality for immediate insights.	Data analysis is challenging and time-consuming, making it difficult for decision-makers to effectively interpret the data and have confidence in the results.
Collaboration	Designed to encourage collaborative working, with users able to access shared dashboards for faster decision-making. .	Not designed or structured to support collaborative working, with no capability for publishing across multiple users.
ROI	With inherently quick deployment, the ROI for many businesses is immediate with multiple savings often achieved within the first few months. .	It is difficult to place an ROI against the use of spreadsheets as they are so often limited in what they can achieve for a business, and are reliant upon human skills at interpretation rather than functionality.
Technical Skills	Designed for business, rather than technical users, they are simple-to-use with no technical or specialist analytical skills required.	Spreadsheet analysis will often require specialist IT or analytical support to both optimise its capabilities and interpret the resulting data into meaningful insight.
Intuitive	Built for the business user, without putting extra pressure on IT resources, intuitive to use and most users are up and running within days.	Most common levels of functionality are generally understood however, the more complex features of spreadsheets are frustratingly difficult to understand and often produce inconsistent results.
Implementation	Web-based, so no desktop installation is required, and can be deployed and accessed “anytime, anywhere”, ensuring all users have access to the most accurate, real-time information.	Mostly require installation on individual desktops which can be a timely cost to IT resource, and meaning if a user does not have the software installed, they cannot access the analytical tools.
Planning	With trend and issues alert and analysis functionality, they provide both the historical and current data required in order to effectively and proactively forward plan.	As spreadsheets require detailed analysis and interpretation of data, managers are unable to effectively forward plan as the data is often out-of-date by the time analysis is completed.

“ Unlike spreadsheets, our use of Intuitive Dashboards enables us to view and analyse our financial performance against targets in a visually meaningful way, allowing us to identify and resolve potential issues far quicker. Real-time access to a consolidated perspective of our performance helps to drive enhanced outcomes, because we benefit from a consistently reliable and interactive view of our key financial metrics – something that spreadsheets simply cannot match.

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Mark McDermont, Group Finance Director
MAMG

The Critical Imperative for Business Insight

To remain competitive, organisations must have a holistic perspective of their performance, based upon reliable, up-to-the-minute data. Many organisations remain over-reliant on spreadsheets for data and trend analysis and management reporting, despite its proven unreliability and frequently, its detrimental impact upon the efficient management of those businesses. Issues such as lengthy data input processes, incorrect formulae, complex analysis and lack of collaboration prevent the empowerment of non-technical information users and undermine decision-making processes.

Increasingly, spreadsheets are no longer viewed as a prerequisite for measuring organisational performance. Forward-thinking organisations are taking advantage of the progressive capabilities offered by dashboard solutions such as Intuitive Dashboards, instantly benefitting from fast and easy access to their critical management information. BI dashboards allow the presentation of performance against goals, targets and KPIs visually and in real-time, while also delivering proactive alerts. As a result, users respond to trends and potential issues without delay, preventing performance issues and allowing better forward-planning. The wider community of information users can also benefit, through access to shared dashboards, enhancing collaboration and enabling the entire organisation to make faster, more accurate decisions resulting in optimised efficiencies, reduced costs and enhanced competitiveness.

¹ David Hatch, Aberdeen Vice President and Principal Analyst, Aberdeen Group

² <http://www.marketwatch.com/story/88-of-spreadsheets-have-errors-2013-04-17>

The art of knowing

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About Intuitive Business Intelligence

Intuitive Business Intelligence is the author of multi-award winning Intuitive Dashboards, an advanced business intelligence (BI) software solution which unites critical management information into a consolidated, customisable and interactive dashboard view. By harnessing the full power of an organisation's existing data, Intuitive Dashboards reveals invaluable insight and empowers business users to make faster, more accurate decisions to optimise efficiencies, reduce costs and enhance competitiveness. Completely Web-based, so it can be accessed on-premise, in the Cloud and via smartphones, tablets and other mobile devices, Intuitive Dashboards is easy to use, highly visual and ultra-fast to implement, delivering a rapid return on investment.