BUSINESS
INTELLIGENCE
for SMBs in 2020

Part 2: BI Technology Advances for Small and Midsized Business

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Audience: This paper is intended for small to midsized business leaders seeking information on the impact of Business Intelligence on their business in the emerging decade.

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Executive Summary

In the aftermath of the Great Recession, an economy that is growing but uncertain has lead to greater caution and thrift among consumers. As a result, even as many small-to-midsized businesses (SMBs) plan for growth, they continue to look for ways to improve efficiency and cut costs.

SMBs increasingly realize that having the right information and the tools to analyze that information are critical to making business decisions that can drive growth and improve productivity. Today, more information than ever is available about companies' internal operations. This information is a by-product of companies' successful efforts to automate their operations.

Business intelligence (BI) solutions provide a way to harness this ever-increasing information in a way that allows companies to make better, smarter decisions of all types and ultimately outpace their competition. As a result, BI has emerged as one of the top IT priorities for SMBs.

As BI solutions have evolved, they have become less expensive and easier to implement and deploy. Indeed, BI vendors today, facing stagnant and oversaturated enterprise markets, are increasingly shifting their focus to serving the SMB market. This is good news for SMBs looking for BI solutions. Yet challenges remain in terms of information accessibility, ease of use, and implementation.

This series of white papers looks at how the BI industry will evolve over the next decade to address these challenges and how emerging technology is likely to enable vendors to further improve BI capabilities. In this series of three papers, the following areas will be covered:

1. High-level trends that have led to SMBs' increasing adoption of BI and how enterprise and accounting software applications will need to change to provide better access to information

2. How BI technology and capabilities are likely to evolve over the coming decade to better address SMB's information requirements

3. How trends and advances outside the BI sphere will impact BI technology

This paper is the first in this series.

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The Evolution of BI for SMBs

Historically, SMBs had a choice of two types of BI solutions: Traditional high-end BI solutions or spreadsheets. Neither of these solutions was optimal.

High-end BI solutions were complex, multilayered applications that were expensive, not to mention difficult and time-consuming, to implement. These solutions often required companies to implement connectivity solutions and extract data from siloed business applications, normalize data from different systems so it could be stored in a consistent manner and compared in an "apples to apples" fashion, develop data warehouses to store data centrally where it could be accessed from throughout the organization, and then provide analysis tools to their end users. Because of the expense and complexity, the vast majority of SMBs were unable purchase and implement these high-end BI solutions.

As a result, most SMBs turned to spreadsheets to analyze their data. Yet spreadsheets presented major challenges as well. No reliable connection existed between the data source and the spreadsheet. That meant users exported data from their business systems (such as their ERP, accounting system, or CRM) and manually entered it into the spreadsheet—a time-consuming and error-prone process.

To make matters worse, these manual processes lead to "spreadsheet chaos." Because there was no real-time connection between the spreadsheet and the data source, companies would have many different spreadsheets containing many different versions of the data. It was difficult to keep track of which version contained the most recent information.

Recently, as the market growth for enterprise BI has slowed, a wave of consolidations has occurred within the industry. These newly formed companies are looking to develop BI products that will specifically address the needs of SMB companies.

Over the next decade, BI and spreadsheet applications will take advantage of a number of technological advances that will address many of the challenges SMBs face as they attempt to use BI to analyze their business information.

These advances will include:
- Better access to data.
- Faster queries and search

Better Access to Data

In the coming decade, SMBs will have access to solutions that will provide close integration between reporting and analysis tools and business data from their applications, providing real-time access to information and eliminating time-consuming and error-prone manual rekeying. These reporting and analysis tools, moreover, will become more intuitive and easier to use. In particular, SMBs will have a choice of better reporting and analysis tools within their integrated business applications (such as ERP, accounting system, CRM, or payroll applications) and better integration between business systems and spreadsheets.

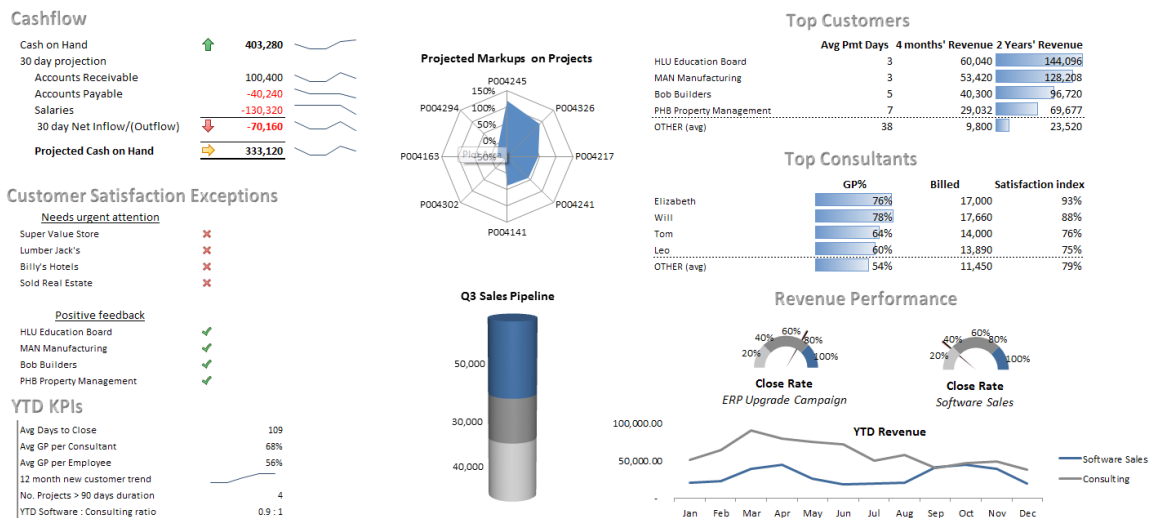## Adding BI to Business Applications

As business applications software vendors realize the importance of giving businesses visibility into their operational data to help them make better decisions, these vendors are increasingly integrating BI tools into their application suites. Since these applications provide central access to data input using any of the included modules, these integrated BI tools provide a simple way for users to access and analyze consolidated information created throughout their organization.

As applications software and BI vendors increasingly consolidate and target the SMB market, you can also expect them to make the BI tools included with these business applications more intuitive and easy to use. These companies will also offer customers an increasingly wide range of integrated BI tools, including sophisticated reporting tools, ad hoc query tools, predictive analysis tools, and dashboards chock-full of key performance indicators (KPIs) and much more.

Better Links Between Business Applications and Spreadsheets

A dearth of affordable, easy-to-implement BI tools has meant that SMBs have traditionally used spreadsheets, particularly Microsoft Excel®, to do their "what if" analysis. Yet because Excel is a stand-alone application, it does not offer a complete BI solution. Importing data into Excel and manually creating and maintaining spreadsheets are time-consuming and error prone. Sharing this information among colleagues is insecure. Control over spreadsheets—and the accuracy of data they contain—remains low, negatively impacting the quality of decision-making. Every business would like to control this situation, but many have no clear strategy for analyzing the alternatives and developing a solution.

Fig 1: Example of customized ERP dashboard

(continued from Better Access to Data)

As BI tools integrated into business applications and spreadsheet-based BI become more powerful, more integrated, and easier to use, SMBs will no longer require a programmer to use these solutions. In the next decade, the IT bottleneck will be further reduced as users are increasingly able to help themselves to standard BI reports on demand. Operational teams will be able to easily customize, manipulate, and distribute meaningful information using their familiar ERP, accounting system, or Excel interface while maintaining its accuracy, obtaining insight into trends, year-on-year analyses, and drill-down transactional details all in a meaningful format. Thus, users will no longer have to be BI experts to get decent information about their business.

Faster Queries and Reporting

Hardware and database technology advances promise to dramatically improve query and reporting capabilities for BI applications.

Take query speed. In the past, BI reporting could take hours due to hardware constraints that limited search speed. Luckily, Moore's law says that the number of transistors on an integrated circuit doubles approximately every two years. If this continues to hold true, processing speeds and memory capacity will continue to increase exponentially to make queries much faster. It is also fair to assume that database technology will also get smarter and query languages will become more efficient, which will further improve the speed of queries.

Another area that will improve is the amount of data available for reporting. In the past, storage constraints within database servers have limited the amount of data companies could access for their reporting. The increased adoption of cloud architectures, which make available virtually unlimited storage resources without the need to purchase and maintain storage resources on site, will enable companies to inexpensively store and access as much data as necessary.

These advances promise to dramatically decrease the time it takes to run reports and will overcome current limitations on the amount of data that can be accessed. As a result, users will be able to perform "real time" drill down on any depth or breadth of data volumes.

However, even on the latest technology in 2020, different organizations will have different size datasets, and speed will always be determined by the volumes (depth and breadth) of transactions as well as underlying hardware and software. The issues that improve speed is a subject for another white paper, but there is little doubt that reporting speed will improve in the next decade

Conclusion

In the past, technology limitations, high costs, and implementation complexity have prevented SMBs from implementing high-end BI solutions that could provide full visibility into data they could use to improve competitive advantages. Spreadsheets provided easy-to-use analysis capabilities but required time-consuming manual data entry and could lead to spreadsheet chaos as users created multiple spreadsheets with different versions of the company's data. Over the coming decade, these challenges should be ameliorated as new, easy-to-use technologies give end users point-and-click access to data from business applications throughout the organization. Faster query and search capabilities will also allow SMBs to report on more data more quickly.

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About the Author

Gary Boddington is a cofounder and CEO of Alchemex Pty Ltd, a software vendor specializing in easy and affordable integrated Business Intelligence solutions in Microsoft Excel® for the SMB market. Alchemex partners with OEM partners to deliver fully integrated solutions. Although this white paper is intended to be objective, it is recommended that readers form their own conclusions and that the observations contained herein are used together with (but not in place of) the readers' own good judgment and research.

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About ALCHEMEX

ALCHEMEX is a leading developer, enabler, and support provider of affordable Excel-based Business Intelligence software for small to midsized enterprises. For nearly 20,000 registered users in Africa, Asia, Australasia, Europe, and North America, ALCHEMEX's reporting software delivers automated financial, payroll, and other decision-support reports and analyses in Microsoft Excel at the click of a button, directly from a company's accounting or payroll system.

ALCHEMEX integrates with leading accounting and payroll packages, pulling real-time data directly from the database, thereby eliminating manual report preparation and repetitive data extracts. ALCHEMEX provides complete automation of ready-to-use Excel reports for MYOB Account Right, MYOB Exonet, Sage Pastel Accounting Evolution, Sage Pastel Accounting Partner, Sage Pastel Accounting Xpress, Sage Pastel Payroll, Sage ERP Accpac, Sage ERP MAS 90 and 200, Sage ERP MAS 500, Sage50, Sage Simply Accounting, Sage Peachtree, SAP Business One, Sybiz Vision, SYSPRO, and Sage VIP Payroll.

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