Business Intelligence Application and Research on Small and Medium Enterprises Based on the SaaS Model

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Abstract: Business Intelligence (BI) is the key attention of in-depth application of enterprise information. This paper analyzes the difficulties in putting business intelligence into SMEs information, proposes small and medium enterprises BI application solutions in the use of SaaS software distribution method, and deploys on SMEs applied model and the value of management model through a comprehensive and open application services system.

Keywords: medium & small-sized enterprises, SaaS, Business Intelligence

1 Introduction

The need of SMEs informatization of the data analysis as a core is stronger and stronger informatization development of SMEs has gone through four main stages: the first, information publishing. Enterprises publish introduction and information of products With third-party e-commerce platform. The second, building an independent website, an independent domain can show the company's overall impression and strength, E-mail and instant messaging system are used as methods of internal interaction and external interaction. So the stage improves marketing and customer responsiveness of a enterprise. The third, SMEs participate in application services, build simple financial, marketing and administrative platform to achieve office automation.

With the Internet and e-commerce environment improving, the degree of SMEs information gradually increases. Simultaneously, the data of SMEs information is more and more, these data come from the following three aspects: Firstly, orders, inventory, capital transactions of the corporate business systems; Secondly, competitor and industry of enterprises which customers and suppliers work; Thirdly, other external environment of companies. How to extract information from a large number of data, such as the link between the characteristics of various types of customers and goods that they prefer to buy, can be found by the analysis of sales data. This would be a more accurate targeted promotions or provide more personalized services and so on, these methods make business executives and staff understand the performance of every minute of enterprises, help companies discover problems in time and improve the speed and accuracy of decision-making; How to make more effective use of information technology to organize complete business planning, decision making, planning, performing, to achieve the best process of company operations. These issues become bottleneck of in-depth application of SMEs information.

As the market competition environment getting further specific, lower revenue, higher costs and other issues, which are cause by extensive management, have prompted many SMEs to shift the focus from strategic planning to business intelligence, in order to cut expenditure and improve efficiency.

2 Issues of SMEs Introducing Business Intelligence (BI)

BI, which is the English abbreviation of Business Intelligence, is technical collection that make better use of data to improve the quality of enterprises decision, is tools that can help users to make scientific decision for own business operating. BI takes full advantage of existing business information, extracts and organizes useful information with modern information technology, helps users strengthening the management, promotion of marketing and business development to make timely and correct decisions, and to grasp, analyze and discover new business opportunities.
BI software has previously only been adopted by large companies, these companies have mature data analyzer and large data warehouses. Business Intelligence (BI) has been discouraged by SMEs, following main reasons:

2.1 High barriers to entry and maintenance costs
BI market is under control of the four suppliers, who are Microsoft, Oracle, SAP and IBM. BI software of the four suppliers is too expensive, SMEs can not afford the cost, so the ratio of performance and cost is relatively low for relatively less complex needs of SMEs. Actually, apart from buying the software, SMEs still need to configure a large database server and so on, such as facilities and technical support staff, result in continue d to increase usage cost

2.2 Poor software usability
Business Intelligence (BI) software is characterized by summary and analysis of various data sources. But more complex logic functions increase the operation difficulty for general staff of SMEs, the tremendous value which arises from the software itself can not fully exploit.

2.3 Lack of flexibility in service configuration
The BI needs of SMEs more simpler than that of large enterprise, but the market positioning of the mainstream products and services are aimed at large enterprises, the breadth and depth of functional design are higher, which are not application to a changed analysis of simple decision-making requirements, and the software lacks of flexibility in on-demand configuration.
All in all, there is the demand of data mining and analysis of SMEs customers too. But comparatively speaking, BI needs of low complexity, price and ease of use and the other are the focus of their consideration. From this perspective, the online software service model facilitates SMEs to introduce Business Intelligence (BI) applications.

3 Business Intelligence (BI) Applications of SEMs Based on SaaS Model
SaaS is a software distribution model, which is designed specifically for Web delivery, and is User-friendly by Internet hosting, deployment and access. SaaS providers build information platform for enterprises which needs of all network infrastructure and software, hardware, and is responsible for the implementation of all pre-maintenance, post-maintenance and a series of service, so enterprises do not need to purchase hardware and software, not need to build computer room and recruit IT staff, only need to pay a small rental management fees, then the user access operating platform via Internet, and can easily enjoy related facilities such as the online office management, customer relationship management, enterprise project management, financial management, e-commerce and other information technology, and other software and hardware investment is no longer required.
As SaaS is the integration applications of enterprise management which includes network technology, software technology, electronic technology, the advantages of which SMEs use such a solution is more obvious, such as the open service, the management of succinct setting, the deployment of low cost and so on. According to the survey of IDC on " whether applications ERP based on SaaS is willingness", 59% of small enterprises, 44% of medium-sized enterprises are currently considering SaaS.
Business Intelligence (BI) is a software(SaaS) of service, which can quickly provide a standardized analytical tool kit, and the majority of users can get services under not having time, costs and Business Intelligence (BI) infrastructure. The software can solve the difficulties of the initial introduction of SEMs BI, Specific advantages are:

3.1 Substantially Reduce Costs
Because SMEs only need a simple registration, They will be able to access web on the support of BI services, save the cost of software acquisition and ongoing maintenance costs. The method greatly reduces the barriers to get BI services for SMEs. In the case of SAP Business Objects BI On Demand, BI On Demand is divided into three versions: personal, basic and high edition. Personal edition is
completely free, the monthly fee of basic version is more than 20 euros per user, high version costs more than 60 euros per month. So performance-price ratio of the method is higher than that of Millions of investment.

3.2 Usability improvement
To SAP Business Objects BI On Demand solution as an example, User without relevant experience or training can get started, and they can access data from various sources and retrieve visually through the SAP Business Objects Explorer software. Even the most ordinary employees can also combine data by clicking the mouse, and then generate and analyze reports through a detailed user instructions.

3.3 Flexibility of multi-level service configuration improvement
Through the business requirements of SME taking hierarchically, standardized classification and tiered pricing, according to current requirements of enterprises, they may choose succinctly, so can provides a flexible configuration of cost and value.
The new IDC report shows: although the actual total revenue is still small in compare with BI applications of enterprises, BI market growth rate of the SaaS will triple, and the average growth rate can reach 22.4% by 2013.

4 Conclusion
Although SEMs Business Intelligence (BI) application based on the deployment of the SaaS model has a number of advantages, there are many difficulties and factors that can not be ignored in the actual deployment and application, such as quality of service providers, performance-price ratio of providing services, integration capabilities of SaaS platform, expansibility of individuation requirements customized, security system and so on.

References