Modern Information Technology for Suitable Development in Small Business with Links to Agile Methodology and Swarm Intelligence

Milena Janakova
Silesian University in Opava, Czech Republic

INTRODUCTION

Information technology (IT) users apply various information systems for effective searching, processing and managing of stored information. This reality leads to the current need for implementing a volume of software in many companies, organizations and individuals. Large companies have resources leading to robust applications according to preferences with the support of specialists. The interest is oriented on communication with customers and clients, their preferences and seeking optimal offers with high adaptation value. The reason is that the best adapted entities will survive in the flood of information that is growing exponentially. (Petro, 2008) Difficult market conditions also force smaller companies to use adequate information systems for the support of realized activities. (Alleyne, 2011) This trend is standard in small and mid-sized companies, or individuals in small business activities. A good example of used systems in companies and organizations are Customer Relationship Management (CRM) and Business Intelligence (BI) products with links to database and operating systems. CRM systems collect relevant information about customers, such as information on sales, shopping preferences, contact information and other data in order to provide customers with better service. (Howson, 2013) BI products are oriented on the analysis of available information with an aim to convert the stored data into knowledge. It is usually necessary to follow a trend by using a variable and searching for hidden correlations between stored data. (Gomery, 2013)

The general principle is that information systems must respect actual user needs and societal conditions. Both needs and conditions are dynamically changed via preferences and understand ways of perceiving the world. (Mahoney, 2013) The good starting point brings CRM systems with defined paradigms on changes in the environment and relationships with customers. (CRM strategy implementation, 2013) Such changes are important for every business and also for small business. This approach is visible in the:

- Dynamic change in the thinking of small businesses that have an impact on contact with the customers, cyber-attacks and active innovations in business. (Ickert & McCracken, 2013)
- Changing view of business through a customer experience. Long-term relationships are preferred. (Oracle customer experience, 2013)

Under the first view, there is standard focus of interest about profitable customers, activities to increase the market share of a product, and activities to increase the share of purchasing volume of a customer. These competitive conditions make well-known success criteria, but also make a hard press on small business. Small business has specific conditions that create barriers and benefits. (Benefits and Barriers of Bringing a Small Business Online, 2013) Existing restrictions are linked with limited resources, but benefits are visible in flexible reactions to ongoing changes. Small business brings the ability for better cooperation and inspirational innovation to the resolution of existing problems. There is not a restriction in cooperating with a few users, customers or people. Everybody in world needs cooperation and sustainable development; therefore, mutual cooperation across continents, countries and peoples is useful and removes existing barriers. Small business must also know about customers and

repeat purchases with a link to the natural request "why." An adequate answer to this request needs variable information from stored data in database systems via BI or CRM products; therefore, the objective of this article is dedicated to searching for the optimal implementation of needed software with respect to the conditions of small business and dynamic changes in global society with the support of suitable development. This development is a natural necessity for the survival of all.

BACKGROUND

IT development trends are based on the fact that their users (also customers) have an important role, and customer relationships are linked through all resources that are in companies and organizations. (Roth III, 2013) The modern global and information society works with competitive advantage in the market economy based on functional integration and competition for customer resources. (Khan & Kalbande, 2013) This reality has positive and negative effects. Negative effects are visible in problems with unemployment, disparity in access to overall societal growth, loss of trust and confidence, or interest in natural resources and request for suitable development. (Walker, 2013; Unemployment in the EU once again breaking records) The resolution to these problems needs a global approach and high level of cooperation. Information technology creates tools for active support of realized activities in all fields of human business. The standard aim is to use the power of information technology in order to search for needed resolutions.

The article topic is oriented on the positive effect of globalization and competitive advantage in the IT field that brings a wider offering of software from general to specifically-focused applications for the industry. Such a spectrum of software and applications is suitable for immediate implementation in small business with minimal or zero cost. Intuitive installation, easy setup and user-friendly interfaces for initial implementation are standard. These standards cause that small business has a positive experience with UNIX operating systems (Stallings, 2011), the Oracle database system (Oracle Enterprise Manager, 2013) with links to CRM systems (Buttle, 2009) and BI products (IT@Intel White Paper, 2013) such as SugarCRM (SugarCRM, 2013)

or Jaspersoft Suite (Jaspersoft, 2013). UNIX operating systems are preferred on servers as an optimal environment for installed applications (Remr, 2007), Oracle database systems strongly influence of the market with database systems (Hess, 2010), and also products like SugarCRM and Jaspersoft Suite have an important place in the Top 10. (CRM Market Leaders, 2012)

The selection of a suitable information system for a business is an individual matter that depends on objective and subjective conditions. (Harizopoulos et al., 2006) IT users are also customers, customers of information technology. Such users have their preferences, needs about suitable customer experience, emotions and attractiveness of the selected solution. Another important aim during IT implementation is to support IT users in thinking and enthusiasm. The analogy approach is visible in CRM systems and works with customers. (CRM systems, 2013) An optimal relationship with customers brings unique benefits. (Customer care is a means to gain a competitive advantage, 2014) On the other hand, loss of customers brings loss of financial sources and a damaged reputation. (Handen, 2000) IT development and implementation also need correct cooperation with users (IT customers). This process is individual and different according to existing preferences. It is useful to know about preferences with links to good user products (Mazal, 2013) and levels of relationship with the customer. A unique benefit of small business is to find competitive advantages in the optimal relationship with the IT user (customer). Inspirational emulation of the given relationship is difficult; such a relationship is influenced by an implemented culture of business with creative invention. (Dewulf, 2007)

MAIN FOCUS ON IT IMPLEMENTATION FOR SUITABLE DEVELOPMENT

For effective support of IT users in all needs and preferences, IT development and implementation still requires systematic monitoring of the actual situation and ongoing changes according to societal priorities. The available application and software must mirror the actual trends and respect public relations that are placed on individual layers. These layers are suitable for better optimization of the implemented design.

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