

# Chapter 6

## Implementing Cloud Information Systems: SaaS Migration

**Kamran Janamian**

*Baha'i Institute for Higher Education (BIHE) University, Iran*

### ABSTRACT

*In today's competitive business environment, Information Systems are not a luxury; rather they are vital for survival. High costs of licensing, implementation issues, and missed opportunities in legacy systems led to the development of a new generation of Information System platforms called "Cloud" domain. However, Cloud, if not understood properly by managers, has many shortcomings. Moving toward Cloud is not the goal and even competitive advantage may suffer. Managers and change agents should undertake deep study over Cloud Information Systems and Software as a Service (SaaS) before deciding to move toward migration. In this chapter, the main elements and features in which CEOs and IT managers should consider in evaluating the SaaS migration option are provided, and enterprises may be acquainted with the concept, goals, and theoretical foundations of SaaS as a main Cloud-based service in the business environment.*

### INTRODUCTION

Information Systems (IS) as Carr (2004) states appear to be like electricity. Publicity and essentiality of electricity forced managers not to depend on electricity for their strategic decisions, and so is true for ISs. Carr argues, "When a resource becomes essential to competition but inconsequential to strategy, the risks it creates become more important than the advantages it provides" (2004, p.11). Traditional desktop ISs are more

or less known for more than three decades, and managers are following new routes to the quality, timeliness, and effectiveness of information flow for gaining competitive advantage. The main disadvantages of traditional desktop ISs are high costs, implementation difficulties, and information blockage. The arrival of the Internet has extended the way ISs can perform, however network-enabled Information Systems have been in use for more than two decades. Now there is no need to pay heavy costs for Information System implementation and

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license purchases. “Cloud Computing” emerged a new generation of ISs, i.e., “Cloud Information Systems (CISs)”. With this new phenomenon as Martin (cited by Geelan, 2009) explains, there is no need for new IT structures, user training, or licensing procedures; on the other hand and at the same time the company will benefit from increased IT capabilities and capacities.

NIST’s<sup>1</sup> definition of Cloud Computing (2011) implies that every application that uses the internet as a tool for enabling “ubiquitous, convenient, on-demand network access” (Mell & Grance, 2011) to shared computing resources, data, information or services, can be grouped in the Cloud Computing Model. To name a few Cloud Computing services offered since far, we can point to Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS). These so-called Cloud-models have moved business IT to a new era, which is based on hybrid and virtual worlds. This chapter attempted to guide managers and change agents through choosing and using the SaaS model in the new Cloud-era. Feasibility and suitability of SaaS and CIS will be studied in different circumstances, and SaaS business maturity models will be explained. Change as a vital element of implementing the SaaS model will be described and few delivery methods to SaaS implementation challenges will be offered as well. Thus, this chapter can be a guideline toward SaaS-migration.

## **Importance of SaaS**

SaaS has been modified, explained and defined by almost any expert in the field. However, the most known definition of SaaS explains that any application running on the cloud platform enabling consumers to run the program on a thin-client (Internet browser) or a program interface can be known as SaaS (D. C. Chou & Chou, 2008; Mell & Grance, 2011; SIIA, 2001). In SaaS, the operation is executed on the host’s server and databases

are saved on the virtual space owned by the SaaS provider. Application operation, safety, security and storage may not controlled by the consumer.

Rapid growth of IT technologies bring advantages for companies, although at the same time it creates certain risks and challenges. Reacting to these changes is paramount for the companies to take advantage and to counteract threads of this new digital-cloud-era (SIIA, 2001). SaaS mainly provides cost savings, resource utilization, application access scalability, and global outsourcing possibilities for the organization (D. C. Chou & Chou, 2008) along with many other advantages such as opening the global information flow to the company’s management layers, using up-to-date IT expertise, and bringing core competency to the enterprise. However, how would a manager understand the suitability of the SaaS model for business, and why should a change agent offer SaaS as a strategic movement?

## **SAAS MIGRATION**

Generally speaking, businesses cannot target their initial enterprise without proper outsourcing. Outsourcing IT is essential as outsourcing raw materials and resources. Software as a Service is in fact a motivation for enterprises to eliminate their hopeless effort on IT and target those essential goals in today’s competitive environment. But the main question remains why? when? what? and how? to implement this IT infrastructure. Is SaaS implementation procedure the same as those processes essential for traditional IT implementation? These questions will be discussed in following section.

## **Why Migrate to SaaS?**

Although the SaaS model may provide many advantages for businesses, but feasibility of migrating to SaaS should be studied in every specific

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