

## Business Information Systems

## INTRODUCTION

Business Information System is a combination of interrelated processes that supports IT infrastructure by which an organization can generate desired data. This allows the enterprises to attain business objectives in an effective manner. It assists the companies to cope up the changes in external and internal business environment (Baskerville and Wood-Harper, 2016). The present report is based on Business Information Systems and to understand its significance in the industries, a case study is taking into the consideration. As per the given scenario, it has been identified that Zodiac cycle part manufacturer (ZCM) current in-house Information Technology (IT) infrastructure and Business Information Systems (BIS) has not able to cope up with the increase demand for accurate information and state of art technology from users. With this regard, company wants to improve its existing IT infrastructure of BIS to beat the tough competition and take right as well as appropriate investment decisions. This study will explain organisation, management and technology dimensions of Business Information Systems. It will create an argument in favour of cloud computing which is a feasible option for Small to Medium Enterprises (SMEs) as compared to the traditional in-house hosting.

## TASKS

### 1. Importance of information systems in today's businesses and determine the trends in the business environment that have made information systems so essential

There are several valid reasons that shows the importance of information system in present businesses like in ZCM and other organizations which are as follows:

***Operational excellence:*** Information system allows businesses to constantly enhance efficiency of operations to attain higher profitability. For example, with the help of this, ZMC can easily determine the correct amount of inventory in store so demand of cycle in customers can be fulfilled. So, this will help the organizations to achieve operational excellence (*6 reasons why information systems are important to business, 2017*).

***New product and business model:*** Generated information from Information system plays a significant role to develop new products and services. New business models can be developed by

the business on the basis of collected information by IS. For instance, if ZMC improve its IS then it will help the organization to define how cycles and its functions can be improved to meet the demand of the customers (Majchrzak, Beath, Lim and Chin, 2014).

**Customer and supplier bond:** To enhance the customer services and make them brand loyal, IS plays an important role in the businesses. By using this, ZMC and other organizations to determine the expectations of end users and suppliers and improve in services. This helps in creating a good relationship with both stakeholders.

**Improve decision making:** IS makes it possible for the companies such as ZMC and others to use real time information at the time of taking business decisions. This saves the time to search accurate data from different sources and integrate them in an effective manner (Stair and Reynolds, 2015).

Some major trends in the business environment that have made information systems so essential. These are growing emerging markets, shifts in demographics, innovation in technologies, communication, increase competition level etc.

## 2. Management challenges involved in building, operating, and maintaining information systems in Small to Medium Enterprises (SMEs)

SMEs such as ZMC etc management have faced different challenges at the time of building, operating, and maintaining information systems which are as follows:

**Operational challenges:** ZMC and other SMEs have faced this challenge because at time of IS development, operating and maintenance, the overall cost of project has increased. So, it has made this system less profitable for the organizations. It may be possible that during development of IS, requirements of ZMC and other SMEs have not clear. This can increase requirement of changes in project middle of it and this may create delay in implementation at the workplace (Alenizi, 2015).

**Technical challenges:** Less or limited knowledge of technical aspect to develop or operate IS then it can create a technical challenge for ZMC and this kind of SMEs. It designs by programming experts and in case, if employees have not sufficient knowledge to run the new

system than it will become difficult for organization to use IS effectively. Another technical challenge for ZMC and other SMEs has security. If management not ensure about proper safety and security of IS then it will become hard to secure the information (Alenizi, 2015).

**Usability challenge:** Usability is the major challenge for management of ZMC and other SMEs regarding building, operating, and maintaining information systems. It is a very powerful system of data transformation for the organizations can be go wasted if employees do not have sufficient knowledge to operate it. In SMEs, IS becomes fail because its interface with the other department system is too complex (Fichman, Dos Santos and Zhiqiang (Eric) Zheng, 2014).

### 3. Define what is Cloud computing, and different types of Cloud services, which can be used by ZCM

#### ***Definition of cloud computing:***

It is a kind of internet based computing that provide shared computing related processing resources. With the help of this, it becomes easy to access a shared pool of computing resources, storage data, server and applications on the basis of on-demand. Cloud computing facilitates the users along with several facilities to save and process their information either privately basis or taking the help of third party data centres (Rittinghouse and Ransome, 2016). This avoids the additional IT infrastructure costs of the companies so that firms can easily focus on their core business rather than spend funds and time on development of IT infrastructure.

#### ***Types of cloud computing***

There are three types of cloud computing that can be used by ZMC in its organization to enhance it IT and BIS to get the effective information for various decision making. Explanation of various types of cloud computing are as follows:

**Private cloud:** This cloud network only use by single user rather than sharing with others. It is remotely located where organizations have an option to select on premise private cloud so that they can easily control over the usage of the system. Although it is very expensive and generally use by large organizations to keep safe their information. Control and security level of private cloud is very high. Private cloud offers scalability, flexibility, monitoring, provisioning and automation facilities to its users (Almorsy Grundy and Müller, 2016).

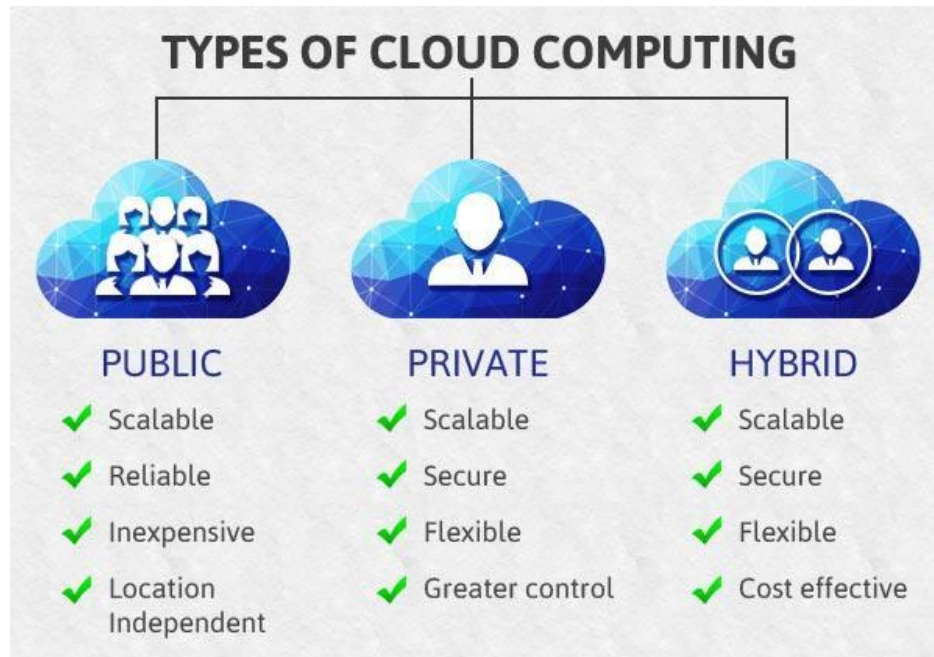


Figure 1 Types of cloud computing

(Source: *Types of Cloud Computing - Advantages and Disadvantages!*, 2017)

**Hybrid cloud:** It is a combination of both private and public cloud infrastructure. For example, to interact with the end users, company can use public cloud and to secure that data, private cloud system can be used at the same time. So application of it depends on purpose of the organizations. For many of the organizations, it becomes impossible to bear the cost associate with hybrid cloud system because the ability to maintain an off-premise disaster recovery site (Morris, 2011).

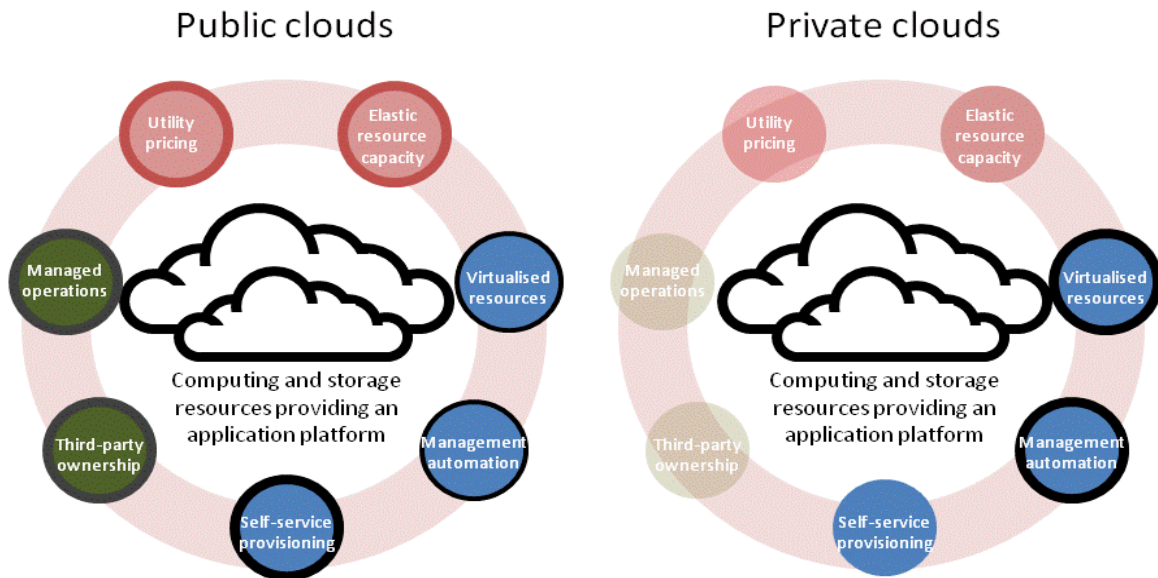


Figure 2 Private and public cloud computing system  
(Source: Čandrlić, 2013)

**Public cloud:** This is referred to internet where cloud service providers use internet to develop resources, store information. It is easily available to general public for the use (Hashem, Yaqoob and et.al., 2015). Some examples of public cloud are IBM’s Blue Cloud, Google AppEngine, Amazon Elastic Compute Cloud (EC2), Windows Azure Services Platform etc. On the basis of the need of the users, these clouds have deliver best economic of scale. Entire set-up of public cloud is very inexpensive because costing of hardware, bandwidth and application covers by service providers. The following system based on pay-per-usage model where incurred costing depends of capacity of system that is going to be used by the firms (Čandrlić, 2013).

In the case of ZMC, the suitable clouding system will be public cloud because it is very inexpensive. Utility price of this infrastructure will improve IS and BIS systems with the time. It will also offer greater elasticity to the ZMC because company cannot consume all the capacity of system within a small duration. Along with this, public cloud will assist the cited firm to achieve

economic of scale and safe the information by using updated and latest security technologies (McKendrick, 2013).

#### 4. Recommendations regarding implementation of successful Cloud computing for SMEs with example

Recommendations of successful implementation of successful cloud computing in ZMC and other SMEs are as follows:

***Determining how selected cloud service provides keep the users data safe:*** At the time of implementation of cloud computing within the organization, ZMC and other SMEs have to make sure that whether service providers able to keep safe and secure data from any external or internal threats. Along with this, companies should also make sure that cloud service provides have use high international security standards and also have dedicated and qualified employees for security management (*Five Best Practices for a Successful Cloud Computing Implementation, 2017*).

***Decide what and which type of data company wants to store on cloud:*** Before implementation of cloud computing at the workplace, ZMC and other SMEs have to make sure about which kind of information they want to save on cloud. By conducting internal review, firms will able to take decision of selection of right cloud systems as per the nature and type of data move on cloud (*Five Best Practices for a Successful Cloud Computing Implementation, 2017*).

**Example 1:** Etsy has used cloud computing to analyse data in order to understand the requirements of both suppliers and buyers. On the basis of this, company has produced product recommendations for the customers on website (McKendrick, 2012).

**Example 2:** Netflix has taken advantages of cloud computing to meet up and down demands regarding Internet subscription services for TV shows and movies. This step has assisted the organization to grow and increase their customer base without taking the help of big data centre.

**Example 3:** Active video company has used cloud computing services to amalgamate different forms of content such as video-on-demand, Web, mobile, television etc. This has expand the reach and availability of web based service users experiences (McKendrick, 2012).

## **CONCLUSION**

From the above research, it can be concluded that information system has important for the organizations in the present time. With the change or development of new trends in business environment has made IS become so essential. Cloud computing has for the delivery of hosted services over the internet. Public cloud system has assisted ZMC to effectively share the information and enhance IS and BIS systems to take appropriate business decisions.



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