

# Impact Web On Decision Support Systems On The Organizations

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**Abstract:** The purpose of this paper is to study decision support systems where information systems have become important to support the decision-making process in organizations and create an appropriate environment that has become more complex. The main objective of decision support systems is to develop techniques to support decision-making and use in all areas and organizations. The information age, rapid information dissemination and increased data flow have increased the competitive environment among organizations, so the use of decision support systems has become important for enterprises to increase their ability to adapt to the environment by making appropriate decisions accurately by relying on the Internet based on support systems. The study also demonstrated DSS components and types and Web impact on decision support systems, system features, and decision support across the web, comparison of traditional decision support systems and web-based decision support systems and advantages of web-based support systems. Decision support systems in organizations whose decision-making has become critical to the organizations' success, continuity or failure.

## 1. Introduction

One of the main objectives of the use of information systems is to assist in the improvement and development of decision-making and improvement, leading to a competitive advantage and the capacity of the organization to adapt. DSS is considered flexible and adaptable because it has become sophisticated to address problems by using databases using the user interface (Turban et al., 2011; Arnott and Pervan, 2014). Web Services is defined as a free platform with a host of technologies and services, such as Wikipedia (Wikipedia) or YouTube, that exploit open criteria, collaboration agreements, and partnership. The power is in the ideas, technologies and economic models that are very customisable and interoperable. The central principle at the core of Web 2.0 philosophy is that the service develops through the increased collaboration and users (Reilly, 2005). DSS definition is a computer application that works to improve and develop the ability of decision maker - individual or group - to make appropriate decision for organizations (Power, 2008; Bukharov, 2015). Decision Support Systems (DSS) are a set of different tools and techniques used by the computer, including conferences and analysis tools needed by organizations to improve decision-making performance. Decision support systems differ in terms of the appropriate technology adopted, the level of management, and the number of decision makers involved, because the systems have become different and different according to the nature of the work of the organization (Arnott and Pervan, 2014).

## 2. Types of decision support systems

### 2-1 Data-driven DSS

This system is based on old file-based technologies, which include many new technologies, such as decision support systems, data warehouse, and OLAP (Power 2008b; Bhargava et al., 2007). A computer-based program with characteristics between expert management systems and artificial intelligence technology as well as data search (Power, 2001).

### 2-2 Group DSS and communication-driven DSS:

Group DSS is a suite of advanced hardware and software that increases teamwork by supporting communications and meetings through video calls. The DSS Group and the DSS Group are telecommunication-based systems that are

connected to decision makers to create communications and data exchange among decision makers (Power and Bhargava, 2001).

### 2-3 Document-driven DSS

A system that mechanically retrieves and categorises giant amounts of unstructured info like document management systems and system info management. The document area unit is used to offer info for decision-making (Power, 2002 ; Zarate and Dargam, 2015).

### 2-4 Model-driven DSS:

According to Power and Sharda (2007), s a system based on precise programming models that can be used to support the decision making process through different models and language interfaces that are easy to handle in the information in these models. Another definition uses analytic analysis and analysis tools for decision making, optimization, simulation, statistics, sampling, and the use of formal representation of decision models (Srinivasan et al., 2011).

## 3. Components of DSS

### 3-1 Database management systems

are a set of programs responsible for managing, accepting, and processing external and legacy data stored in databases. Where they can be interconnected, with a repository of data for the organisation, and store relevant decision-making data. It saves the information by inserting it across a web server database (Turban et al., 2007)..

### 3-2 The Model Management System

Today, three additional complicated techniques are being employed to make model-driven for call analysis, simulation, and programming. Additionally they focus on the employment of contemporary techniques to support the decision-making method. Model Management System deals with data processing and analysis using mathematical models, logical strategies, and simulations to enhance the decision-making method (Zhang et al. 2015; Lei and Moon 2015; Power and Sharda; 2007)

### 3-3 The User interface:

DSS developers are constantly improving to ensure that the system interface of the program that uses the user interface

and the example of the Web site has improved the decision-making process with the interface used to facilitate the application (Gibson and Erle, 2006).

### 3-4 knowledge – management system.

,KMS defined as a system that has been designed to support organisational processes in a fundamental way and to work on the creation, preservation, retrieval, transfer and development of knowledge in enterprises (Alavi and Leidner, 2001). The web services share several aims with decision support systems (DSS), specifically, by being able to accurately represent data in order to deliver important, reliable, and accurate information to a user, while giving an enhanced experience to connect and automatically create the content of information developed across multiple pages or sites (Antunes et al., 2016). After studying the types and components of decision support systems, should be move to of the importance and impact the Web on DSS as the second axis of the paper

#### 1- Web base DSS:

With the advent and growth of the World Wide Web (WWW), the spread of information is so common that it is often used for presentation. With Web-DSS becoming a large part of the DOS class and its uses, the web can be seen as a large distribution. The information, distributed through the presence of a local browser component and a remote control, is embedded in the appearance of the server software through the use of web technology (Holsapple et al., 2000). Web-based DSS also includes decision support systems that the web-based DSS comprises computerised systems that give information to assist in the process of supporting decision-oriented support tools to managers or business analysts. The client uses a thin client web browser, such as Netscape Navigator, or Internet Explorer. Whereas the computer server that contains the DSS application is connected to the user's computer or decision-maker through a network using the transmission control protocol (IP) (TCP / IP) and the entire application is executed through web services. Examples of web technologies are HTML and JSP. These web applications support and implement any class or type of DSS communication system on the model, based on data and a sophisticated user interface with huge database applications connected to the web server (Power, 2002).

#### Impact web in DSS

- Reduce the cost of disseminating information through the use of the Internet by providing decision-making tools to decision-makers among managers and staff in various geographic locations (Power, 2002).
- Reduce the cost of implementing DSS because of the low cost of using the Internet and subscribing to and serving the Web service from a group of decision makers (Power, 2002).
- Through the use of the web in DSS, organisations can provide capabilities to managers across an internal network, to customers and suppliers via Extranet, or to any Internet stakeholders (Power, 2002).

- The Internet has increased access to DSS, resulting in an increase in DSS system usage due to good design in the company (Power, 2002).
- The use of the web infrastructure to build DSS improves rapid deployment of "best practice" analysis frameworks and decision-making frameworks (Power, 2002).

After studying the impact of the web on DSS, the comparison between the traditional DSS and the web-based DSS As shown in the following table

Table Differences between Web-Based DSS and Desktop DSS (Bernus et al., 2008)

Differences	Web-Based DSSs	Desktop DSSs
Platform	WB-DSS is available on the web using the Internet	Locally accessible through user application installed in the computer
Availability	Easy access to WB-DSS, where it is widely used and easy to use by decision-makers where the decision is collaborative	Limited deployment where they are in one place represented by the user's device
Training	Training is easy to use through an easy-to-use Ease of training on the user interface Thus systems should be designed with a structure that reduces cognitive loads for decision makers and guides them to use systems without prior training	Users have the opportunity to train and gain skills because of the limited users
Interactive	Lots of interactive dialogues between WB-DSS Decision-makers can be consumers of time and sometimes because of the ease of interaction among themselves	Limited interaction and dialogue between decision-makers

Table 1 Comparison between Web-Based DSSs and Desktop DSSs

#### Conclusion:

This study focused on decision support systems and the impact of the web on decision support systems and the comparison between traditional decision support systems and web-based decision support systems, thus make adding new contributions through the following research recommendations: The use of Web-based decision support systems by organizations makes it less costly to disseminate information by moving it in more than one place. It also saves the cost of purchasing these systems because of the low cost of the Internet. In addition, it is easy to use and does not require an infrastructure of hardware an advanced computer, in addition to giving the decision maker the ability to communicate with several people at the same time making the decision collective. Also Easy to modify and add information at any time and from any place and improve communication between managers and data and information links, in addition to easy analysis of data,

which makes the appropriate decisions ,As a result of easy access to analysis models that support decision-making

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