

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)**ScienceDirect**

Procedia Economics and Finance 33 (2015) 461 – 467

---

---

**Procedia**  
Economics and Finance

---

---

[www.elsevier.com/locate/procedia](http://www.elsevier.com/locate/procedia)

7th International Conference, The Economies of Balkan and Eastern Europe Countries in the changed world, EBEEC 2015, Kavala, Greece

## Design and Implementation of Help Desk System on the Effective Focus of Information System

Serhat Serbest<sup>a</sup>, Yilmaz Goksen<sup>b</sup>, Onur Dogan<sup>c</sup>, Anil Tokdemir\*

<sup>a</sup>*Serdar Serbest, Dokuz Eylul University, Izmir, 35320, Turkey*

<sup>b</sup>*Yilmaz Goksen, Dokuz Eylul University, Izmir, 35320, Turkey*

<sup>c</sup>*Onur Doğan, Dokuz Eylul University, 35320, Turkey*

\**Anil Tokdemir, Dokuz Eylul University, 35320, Turkey*

### Abstract

Fast development and change in Information Technologies requires organizations use “Help Desk Systems” (FAQS). These systems make people learn the information about the system's overall structure after entering the system and with the help of this structure they can be told the process of the frequently asked questions step by step. The purpose of this study is to shorten the orientation time of the FAQS installed along with the increasing amount of countries that the Schneider Electric information technology department serves and to switch to a live system without reducing service quality and with minimal job loss. The aims of this project are as follows:

- To set up a web-based system which doesn't require installation,
- To make the Help Desk personnel utilize the pdf documents related to the works carried out in each factory of the company prepared by the department experts.
- To increase the satisfaction of the user they have served by responding to problems in the shortest time and
- To decrease the work load of the location experts in the factory in question.

Also, it enables experts who can enter the system in a different page and create categories with processes like adding, deleting and searching for documents, viewing current work orders. A program aiming to present values such as selecting files, category ratios, how often experts upload documents to department managers has been developed and presented to the company.

© 2015 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of Department of Accountancy and Finance, Eastern Macedonia and Thrace Institute of Technology

*Keywords:* FAQ system, Web Help Desk, IT, HTML 5, Php

## **1. Introduction**

Nowadays Help Desk systems take a large place along with developing Information Systems. These systems are usually, where internet users obtain information of the system's overall structure after entering the system and step by step solutions for frequently asked questions.

The purpose of this study is to shorten the orientation time of the Help Desk system installed along with the increasing amount of countries that the Schneider Electric information technology department serves and to switch to a live system without reducing service quality and with minimal job loss. The aim of this project is to reduce the work load of experts on location, increase the satisfaction of the user they have served by responding to problems in a short time, for the Help Desk workers to be informed of work done on all locations by using pdf documents prepared by location experts along with a web based system running on the company network that doesn't require installation. Also, it enables experts who can enter the system in a different page and create categories with processes like adding, deleting and searching for documents, viewing current work orders. A program aiming to present values such as selecting files, category ratios, how often experts upload documents to department managers has been developed and presented to the company.

## **2. Analyze of Key Term**

It is seen; information, data and knowledge are described in different dimensions when literature is searched. It is obviously important to understand key terms which is mentioned on dimension of implementing and processing information systems which are strategically important for organizations. The term Information means reducing ambiguity of a communication system for mathematicians and scientists. From this aspect any energy or material pattern in the nature includes information (Headrich, 2002:60). Widely meaning of information is a process that narrows border of ambiguity and indecision and supports to widen borders of knowledge (Gürdal, 2003: 2). Briefly we can call information as added meaning or loaded data (Yılmaz, 2009:98) The purpose of information is to change opinions for a topic, to leave an impression or make difference on a behavior or an evaluation of receiver. Data is result of observations on facts and the raw material that produces knowledge. It is facts and figures which has no meaning for users. In other words data is consisted of symbols which shows things and events and their specifications (Gökçen, 2011:19,20). The knowledge which is located onto base of life has always accepted a term which means power for all history. Value-added or power which is occurred from knowledge to be applied to products, services and processes is a guiding light for critical decisions to be taken (Altındış, 2009: 4). In the most general sense knowledge is defined as data. Also knowledge is described as a human talent which is gained in the end of integration of information communication systems and their implementation. It is related to interiorizing of information. Knowledge is accepted as the core input of organisation for information management and it is produced at either organisational or personal level, it is required to view the hierarchy of knowledge to explain what kind of steps knowledge has been passed through. In the Figure 1 it is shown the Hierarchy of Information as a summary.

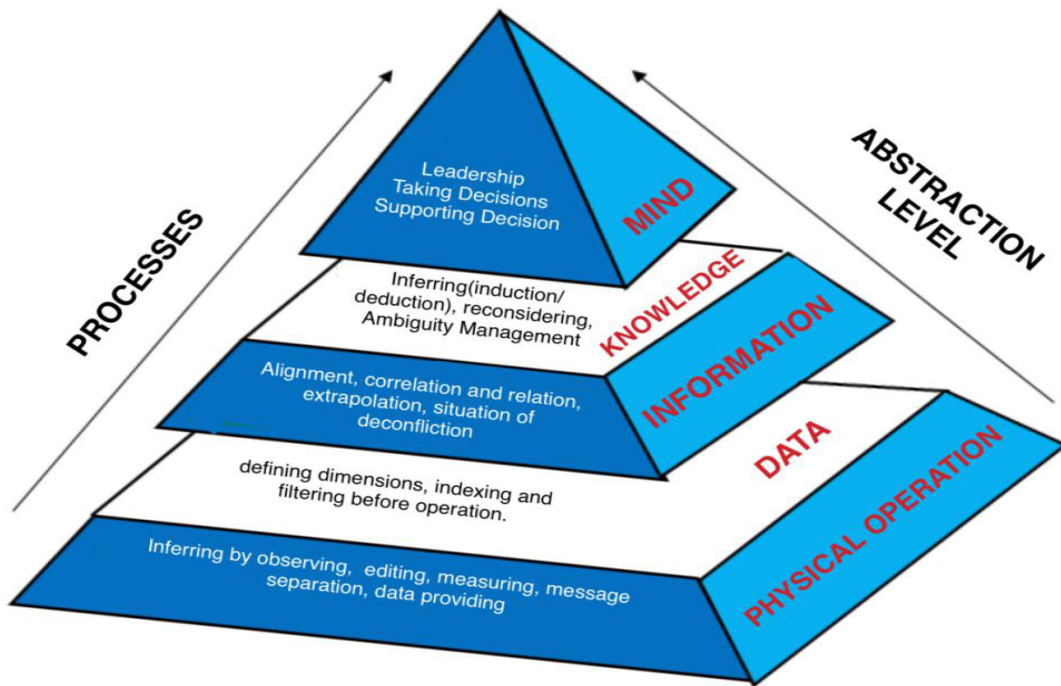


Fig 1. Hierarchy of Information (Sağsan, 2003: 249)

### 3. Importance of Knowledge and Information Management in Organizations

Nowadays because of the importance of knowledge of organization and information management has been very harsh competition, customers taste and choice is rapidly changing and due to technology customers awareness has been increased continuously, information has been playing vital role strategically.

From the beginning of the first era, information had been transferred with stories, fairy tales, epics and after 12th century, universities, madrasas and books have started to play major role for transferring information. However lately, the era that we entered is extremely easy to use technology for communication and collaboration so called "Information age" (Odabaş, 2005,2).

Before, investment profits had measured by hardware and physical products, now intellectual value becomes important and agreed on that intellectual values major source is knowledge (İraz, 2005: 246). From this point, easily saying that knowledge is the production element.

In order to be used with all its benefits and managers who decide the most rational way, it has to be managed to efficiently. Information management is aiming to unite information and communication technologies data and processing the information with creative power of human being capital together. Information management is a duration that increasingly continues the business and national economies current and potential competitors. The aim of knowledge information is to continuously increase the competitor power so that knowledge has to be actively defined, obtained and used strategically (Barquin, et al., 2001: 14). Also, the aim of knowledge has to be much more powerful, valuable and competitive than it has been created. Therefore, it can be existed to measure, stock, use and commerce the workers specialties and knowledge. Together with this aim, "the organization of learning" can be desired to be established. (Doğan and Kılıç, 2009: 94).

If its has been checked the feature of information management, the aim has to produce to make decision and

transfer the source, competition and improvements fast and to extend the knowledge in the foundation thus, efficiency of the organization can be increased. Besides information management, the culture of organization has significant role. Cooperativeness, and knowledge sharing is helping to progress individuals, so that culture is as important as knowledge and technology. Eventually information management endures, leadership, technology, sharing the knowledge, coming off the information, the measurement of presence of information, creating the information culture and knowledge technology (Çapar, 2003: 14).

#### 4. Information System

Information system, generally computer-based systems which are providing information by processing the data for decision-makers. Information systems are artificial systems and are designed to assist in the decision-making process. The purpose of the information system is where you need reliable information and is able to deliver on time. Figure 2 shows the elements and relationship of information systems.

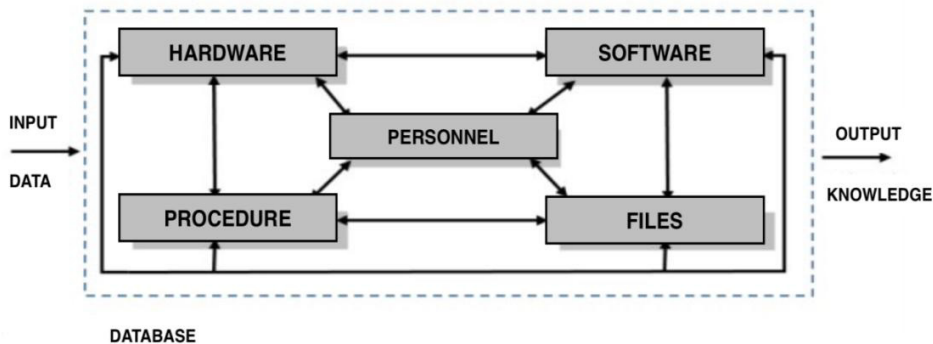


Fig 2. Units and Relations of Information Systems (Gökçen,2011:44)

A computer-based information system is a system which is consisted of software, hardware, personnel, files and procedures and it produces knowledge in the end of the interaction of these units.

#### 5. Importance of Making Decision in Organizations

The role of manager decisions is obviously important for success of companies. The most important duty of managers is making the most correct decision as soon as possible. And a good decision is related with information to be accurate, up-to-date and produced in a timely manner. The knowledge which is required in decision making process is produced by information systems (Gökçen et al, 2010:1). Managers keep existed resources, their activity areas and the effects on other person/units in view while making decisions. Nowadays the success of a company that is active in intensively competitive markets is widely related to decisions which managers will make and their precision. At this point it is necessary for managers to make decision; to store data which is used to produce information, classify, process, and report back when it is required. Concordantly information systems which are based on computers become forefront.

##### 5.1. Description and Importance of Management Information Systems (MIS)

The function and duty of a manager is ideally developing the existed resources to reach company to previously determined goals. A manager requires knowledge which comes from internal and external systems in decision making level. The system which is collecting this information, processing as a report and provides to manager is Management Information System (Yılmaz, 1988: 41).

Management information systems; In particular, planning, supervision and improved in order to take remedial action

and production, marketing, accounting, finance and information relating to business functions such as human resources, provides to managers through a system that has variety of tools. MIS is the next level after data processing system. The main difference between the two systems; the user's place in the data processing system is taken by manager in management information system (Hoşcan, 2003: 27).

Use of a company's information technology and business strategies is increasingly the issue of dependency between the application and the increasing realization of business objectives. Increased market share, high quality and low cost to the manufacturer, is based on the quality and type of new products to enhance and improve employee productivity, increasingly, information systems in organizations. (Laudon and Laudon, 2011:12)

MIS has 3 main functions in business: (Yılmaz: 2009, 23)

- To support business processes and operations,
- To support to make decisions of workers and managers,
- To support the development of strategies to create competitive advantage.



Fig 3. The Core Functions of MIS in Companies (Yılmaz, 2009:23)

Organizations, in order to obtain a competitive advantage in the industry should establish the most appropriate management information system and operate their own structure rationally.

## 6. Implementation

Implementation, 2929 Help Desk – FAQ- the name has been started to be created, reformed and processed as a project.

### 6.1. The Definition of Problem

Schneider Electric IPO (Information Process Organization) At the It department 1 person is working as User support specialist and 1 person is user support staff. Totally there are 5 locations in Turkey. However IPO department as globally decided to extend the provided service to whole Middle East and Turkey 6 months ago. With this project, people that are working has started to work more. Therefore, they agreed on a company from outside and set up 2929 help desk. Team is comprised with 4 people. The system will proceed as: User will request a ticket for all his problems. Specialist will put requests in an order related to volume of work and duration of supplements. With setting up this system, all problems will come to 2929 help desk, and the team will find a solution, if they cant they will transfer the issue to specialists. However since the project is being set up, no one could get any efficiency. Users complains has been increased. Problems such as resetting password, setting up Office, to make an archive in lotus program, identifying the printer in the network couldn't be solved and users started to have a negative opinion

about the system.

### *6.2. Purpose*

2929 Helpdesk the aim of the system has been issued above and as a solution an web based help desk project has been offered.

### *6.3. Scope*

Implementation contained the firm of Schneider-Electric and the IPO department of end user support unit. In the department there is 1 manager and 10 workers. Schneider Electric firm as an IPO department provide service as an end user support unit to 1200 user. After the designed of new web application, user satisfaction and 2929 team has been progressed by learning the work in a shorter period. Besides the work done in each location and be aware of all the computing department of the special program, department managers to play a major role in obtaining better health decisions by providing statistical reports. Together with new system help desk, it has been considered to give service in Middle East countries. With this study, all files can be found in order, easily to reach and increase the service quality.

### *6.4. Method*

When it is developed, generally PHP is used. The reason why PHP is chosen, because it has been used for many people, many code examples existed in the web and Is a scripting language that can be embedded into HTML. Together with PHP, HTML5, CSS3 and JQuery languages have been used for a program. In-house hosting and database services due to the specific information that have been provided with a server installed in the local WAMP Server program. The NetBeans IDE is writing code editor and Notepad ++ editor in certain places, as the database to MSSQL database is used in the future on the manager's request that he would appeal to a wider audience. The reason that HTML5 and CSS3 has used together, major code and design codes should be kept in different places so that codes complication should not exist. As a result, these four web using the programming language used more widely effective in the web environment and services that help desk system has been established. To ensure results and advantages against competitors Rating of Business are the executives in business must take accurate and consistent decisions .Therefore on hand resources can be used best , efficiency and quality will do increase. Increase productivity and satisfaction for a web-based information system has been established in this study. Thus, firms in the created all the documents the work done in the new structure and the department of the IPO department, allowing access over the web, 2929 help desk staff shared with faster adaptation time satisfaction from the system consisting of the user by providing increased.

### *6.5. Results*

In the end of the implementation results are efficient. A web based software implemented in order to communicate different locations and backgrounded technicians. Providing web solutions made an easiness to share all related documents with each related departments. Process fastened required solutions and provided user satisfaction. Internal menus, sub-menus, search bars etc. are optimised to give faster results. Especially “search bars” which are implemented on end-user screens eased searching and this features effected results of the Customer satisfaction surveys. Before the project, satisfaction rate about “Accessing to Help Desk team and solution quality” was %47 and became %97 with the second period of 2015.

Project is ready to be improved for the future. In a relation with the requirements which are going to be described by the organisation and departments will be analysed and easily implemented to system. In the near future, project team planned to improve system with language option, e-mail support, priority levels and quality analysis.

## **7. Conclusion and Evaluation**

In Information Age 21st century, utilising the up-to-date technology would take societies to further in all rows. Accessing information by classical ways is both expensive and time consuming for organisations which causes

losses materially, morally and by prestige. Easy access to knowledge is essential for today's competitive markets. Organisations aim to have faster Document Management Systems in order to have efficient decision making processes.

Information Systems are in use to have correct, coherent and reportable information in individual and organisational lives. On the other hand MIS is irreplaceable for managers who want to have further information about long-term. MIS is not elastic. MIS is used for basic sciences as summaries and comparisons instead of Mathematical models and Statistical techniques. All functions which are crucial to be associated, interpreted and made a decision by managerial perspective come true by increasing information systems by the power of decision support systems.

Making correct and coherent decisions by the managers will affect companies to over-tower their competitors. Thus existed resources are going to be used efficient and quality is going to be increased. In this paper a Decision Support System is set to increase efficiency and satisfaction. Thus Schneider Electric IPO department had a new system which includes sharing documents via internet with Help Desk System 2929 to provide faster adaptation period in order to have user satisfaction.

## References

- Altındış, S. 2009. A Study on the Effect of Information Management of Patient Safety Practices (Bilgi Yönetimi Uygulamalarının Hasta Güvenliğine Etkilerine İlişkin Bir Araştırma), Afyon Kocatepe University, PhD Thesis
- Barquin, R. C., Bennet, A. ve Remez S.G. (2001). Knowledge Management: The Catalyst for E-Government, Management Concepts. USA. 2001.
- Doğan, S., Kılıç, S., 2009. "A Conceptual Study on Information Management Leadership Role" (Bilgi Yönetiminde Liderliğin Rolü Üzerine Kavramsal Bir İnceleme), Süleyman Demirel University İktisadi ve İdari Bilimler Fakültesi Dergisi, Cilt:14, Sayı:2, Sayfa 87-111
- Çapar, B. (2003). Knowledge Management: Human Power, But How? (Bilgi Yönetimi: Nasıl bir insan gücü?). 11<sup>th</sup> National Knowledge Economy and Management Congress, Kocaeli
- Gökçen, H., Özkil, A., Yardımoğlu, H., Peker, D., 2010. "A Model of public use and the Decision Support System in Public Statements and a Model Proposal" (Kamuda Karar Destek Sistemlerinin Kullanımı ve Bir Model Önerisi), Türkiye Bilişim Derneği Kamu Bilgi İşlem Merkezleri Yöneticileri Birliği Kamu Bilişim Platformu XII.
- Gökçen, H., 2011. "Information Management / Information Systems: Analysis and Design" (Yönetim Bilgi/Bilişim Sistemleri: Analiz ve Tasarım), 2<sup>nd</sup> Press
- Gürdal, O. (2003). Accessing to Information on Internet and Information Access Sources (İnternet'te Bilgi Erişim ve Bilgi Erişim Kaynakları). Bulletin of Ankara University Library. November. (27): 2.
- Headrick, R. D., 2002. "Information Technologies in the Age of Information, Reason and Revolution 1700-1850" (Enformasyon Çağı Akıl ve Devrim Çağında Bilgi Teknolojileri 1700-1850).
- Iraz, R., 2005. "Impact on Innovation and Competitiveness of Enterprises in Knowledge Management" (İşletmelerde Bilgi Yönetiminin Yenilik ve Rekabet Gücü Üzerindeki Etkileri), Selçuk University İktisadi ve İdari Bilimler Dergisi, Cilt:19 Sayı:1.
- Laudon, K. C., LAUDON, J. P., 2011, "Management Information System Managing the Digital Firm", 12<sup>th</sup> Press
- Odabaş, H., 2005. "Information Management System, Information Management System, Information Age Management and Information Systems Bilgi Yönetimi Sistemi", (Bilgi Yönetimi Sistemi , Bilgi Çağı Yönetimi ve Bilgi Sistemleri). Ed.: Coşkun Can Aktan ve İstiklal Y. Vural. Konya: Çizgi Press
- Hoşcan, Y. (2003). Management Information Systems, (Yönetim Bilgi Sistemi). Ankara: Anadolu University Press.
- Sağsan, M., 2003. "Conceptual Framework of Information Management and the University of Baskent University Faculty of Communication Department of Information and Records Management" <http://kaynak.unak.org.tr/bildiri/unak03/u03-28.pdf>
- Yılmaz, C. (1988). Knowledge Operation and Management Information System (Bilgi İşlem ve Yönetim Bilgi Sistemi). Journal of Economic Literature. (8): 39-48.
- Yılmaz, M., 2009. "Concepts of Information and Knowledge Management in the Context of Information and Knowledge Management" (Enformasyon ve Bilgi Kavramları Bağlamında Enformasyon Yönetimi ve Bilgi Yönetimi), Journal of Ankara University Faculty of Language, History and Geography, v.49, pp. 95-118