

# IT MANAGEMENT

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## Introduction

First we would like to ask - what is information technology? Many people who are involved with information technology implementation find these questions confusing. However, there is a less problem with definition of the "management" term. Take a look what the definition says:

*Information technology and management is a combination of two branches of study: information technology and management. This aims at achieving the goals and objectives of an organisation through computers.*

The questions are: what can it actually give to company where it is implemented? Why management by IT brings advantages, and who can have benefits from this? IT management is not for all. Company with financial problems or workers not educated in using computer will just not take an effect with IT. First of all, it will take a long time to practise it with all employees and take some money also. Apart from that, small business don't need IT management also. If there is one boss and few workers in one building, there is no sense in implementing IT infrastructure. Let's look what is the idea of this kind of management.

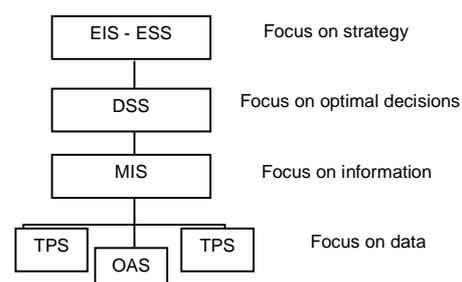
## Concepts

Information Technology (IT) is the technology required for information processing. Particularly the usage of computers and computer software includes 1) converting 2) storing 3) protecting 4) processing 5) transmitting and 6) retrieving information. All these processes are used in company's using IT. To make it easier to understand, let's see the example of Orbis travel agency. Orbis stores and protects it's client's data in database and manage them in the way that helps to keep efficiency. What is more, each agency can be monitored from the headquarter because all the computer's are connected in global network. Orbis also receives information about free rooms in hotel around the world and can place this information in data base automatically. It is all used to manage objectives and analyzing tendencies, which will be used in setting new goals.



Listing of categories:

- Transaction Processing Systems – TPS
- Office Automation Systems – OAS
- Management Information Systems – MIS
- Decision Support Systems – DSS
- Executive Information Systems – EIS
- Executive Support Systems – ESS
- Expert Systems



Graph on the left shows the relations between different types of decision and levels of management in the organizational structure of the company. Having analyzed it, we will have some following conclusions: all from the systems have their own typical features and play very important roles in management but nowadays there are more and more new systems which include all this systems in themselves (Management Support Systems – MSS). This integration tendencies make the borders between definition of this systems and this inevitable process are slowly disappearing. In the schedules are presented differences among information systems according to various criteria.

The lowest position in the hierarchy of computer supporting systems have the Transaction Processing Systems - TPS. Their job is usually limited to gathering and complex transformation of data (accumulate, storage, verification, modernization and send). Tps don't directly support the decision systems, but they are very helpful in the routine decisions. It is also hard to imagine operations of the more complex systems design to cooperation with decision-makers without using the data from TPS.

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Management Information Systems (MIS) is the formal study of the information systems within an organization. An information system is comprised of all the components that collect, manipulate, and disseminate data or information. It usually includes

hardware, software, people, communications systems, and the data itself. The activities involved include inputting data, processing of data into information, storage of data and information, and the production of outputs such as management reports.

Decision Support Systems (DSS) are interactive computer-based systems intended to help decision makers utilize data and models to identify and solve problems and make decisions. The "system must aid a decision maker in solving unprogrammed, unstructured (or "semistructured") problems...the system must possess an interactive query facility, with a query language that ...is ...easy to learn and use. DSS has four major characteristics:

- DSS incorporate both data and models
- they are designed to assist managers in their decision processes in semistructured (or unstructured) tasks;
- they support, rather than replace, managerial judgment
- their objective is to improve the effectiveness of the decisions, not the efficiency with which decisions are being made

Expert Systems are man-machine systems with specialized problem-solving expertise. The "expertise" consists of knowledge about a particular domain, understanding of problems within that domain, and "skill" at solving some of these problems.

Executive Information Systems (EIS) - A computerized system intended to provide current and appropriate information to support executive decision making for managers using a networked workstation. The emphasis is on graphical displays and an easy to use interface that present information from the corporate database. They are tools to provide canned reports or briefing books to top-level executives. They offer strong reporting and drill-down capabilities.

Executive Support Systems (ESS) - An executive information system (EIS) that includes specific decision aiding and/or analysis capabilities.

Office Automation Systems (OAS) Systems which take care of a variety of office operations, such as word processing, accounting, calculating and many other programs

DIS - Data Interpretation System is a computer software permitting decision-makers to generate from existing data bases new information for succour the decisions and simultaneous taking part of different decision-makers or interested persons. This is software based on Local Area Nets (LAN). DIS is equipped in tool set, which is full environment (in computer sense) for help with decisions permitting final users to create own applications. They are very useful in companies.

## Implementation

To explain implementation process we will take hardware dealer, 'Komputronik', as an example. If we want to use IT in our company, we should remember that some devices and specialists are needed.



1. First of all, we should access most of the workers with computer connected to local network with the internet. The network will work properly only if computers are connected with LAN cables or WI-FI devices, server and local internet provider.
2. Few computers should work as a servers and posses all data's and important information to share them wit the others
3. The proper workforce is needed, including specialist from IT technologies who will install needed software and hardware
4. Use experience and knowledge from other commercial companies that are providing full solutions and services.

During our research we have found several companies specialized in providing IT solutions for management This method are being used by one of Polish company, "Komputronik". "Komputronik" it is a computer hardware dealer, that use big databases with all data and information about their products. Each employer have an access to it and can manage, update or publicity them. It makes things easier for the managers because all changes are being seen in each department of the whole country and in global network on their website. IT makes that customers can watch and buy products being in home or ask consultant for any problem. The main problem of IT management in 'Komputronik' is stability and safety. Apart from that, when new systems are being implemented, sometimes there are problems with connection to their website. So it's normal, that in inside network such a problems are common. Anyway, 'Komputronik' can afford for new technologies and make all the best to have the best performance as possible.

If such a progress can be made now, what are predictions for the future? It is easy to notice that our life is gradually more and more influenced by computer, and so the business as well. Global network, computers, PDA, server with databases and other will soon be the standard of successful IT management. We can hope the social aspect will follow the development of IT management.

## Role of IT in management

The circulation of information in a company invokes making right decisions by management in the right time. It also invokes things like: good finance management, exploiting resources to the maximum, and quick detection of fraud. Company's IT system - built with the help of IT tools - is it's back. It's development is a hard and risky undertaking - it's not always proceeds smoothly and even sometimes fails. But one thing is certain: An efficient IT system gives company a huge advantage in the market.

### What does IT give to us?

- quick data exchange
- lack of unnecessary paper work
- no middle-men
- automatic data analysis and conclusion making
- quicker decision making and productive processes
- direct connection with suppliers and producers
- cheaper production cost , due to lower number of employers and automatization

However, IT bring us disadvantages and threats:

Psychological	Technical	Medical	Social
<ul style="list-style-type: none"> <li>• <i>addiction to the network makes people more withdraw</i></li> <li>• <i>escape to the virtual world cause losing contact with reality</i></li> <li>• <i>some people get lost in cyber-world and can't accommodate for new situations and problems using IT</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>viruses or hacker attack can cause some network problems or data deletion</i></li> <li>• <i>important or secret information can be stolen in hacker attack</i></li> <li>• <i>possibility of data loss because of error or damages of devices</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>can cause problem with health (sight and skeleton problems)</i></li> <li>• <i>radiation can cause cancer</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>not everybody can use computer</i></li> <li>• <i>employers may not know each other</i></li> </ul>

"Komputronik" – Polish internet re-seller - have developed all needed sections in IT what brings more flexibility in communication and making decisions on management level. Why? All the products in magazines or shop stores has own records in database what makes overall preview on the latest situations. Then, managers know where to fill lack of products in each department and what to order for future. All the statistic are being generated automatically after purchase via internet or cash transaction, so director know which on position are 'on the target' and make profits. The benefits are also for customers. Each department in city has own local coordinator who control everything. Customers can ask him for everything via instant messenger or e-mail. All information are placed on website, where also buying all the products is possible. What is more, each position have own page with description, foto and comments from the other customers.

### Goals condition

- *global database including all information (all about products, workers, statistics, customers)*
  - *access to network for each worker (they can search database, communicate, participate in virtual conferences)*
  - *on-line shop connected with products database (customers can order what they need clicking on screen)*
- The main goal is to integrate all the processes.*

Nowadays business environment and most organizations are driven by Information Technology (IT) systems. Few companies manage their data manually and most companies have moved to electronic management of data, documents, and key operational processes. Apparently, IT plays a vital role in internal control. "Komputronik", Polish company is a great example showing how management can be used with IT.

## Conclusion

To sum up, we can say that IT improves company's management. It makes easier storing all the data, monitoring each section of the department and simplify communication with other employers. Management by IT becomes gradually more popular, but it seems it is to be most efficient only in big or medium-sized corporation, that invest money on it. Not everyone can afford to invest money to computerize the whole company. Obviously, it has some advantages and disadvantages, bring benefits and threats as well. However, managing by IT becomes cheaper all the time, and it will be probably a standard in nearest future.

## Bibliography

- Information Technology [[http://en.wikipedia.org/wiki/Information\\_Technology](http://en.wikipedia.org/wiki/Information_Technology)]
- Information Technology Infrastructure Library [[http://en.wikipedia.org/wiki/Information\\_Technology\\_Infrastructure\\_Library](http://en.wikipedia.org/wiki/Information_Technology_Infrastructure_Library)]
- Information Technology Management - category of articles [[http://en.wikipedia.org/wiki/Category:Information\\_technology\\_management](http://en.wikipedia.org/wiki/Category:Information_technology_management)]
- Komputronik website [[www.komputronik.pl](http://www.komputronik.pl)]
- Słownik Wirtualnej Edukacji [<http://ttf.ieee.org/we/t018.html>]