Jacek Buko

Information management in the postal companies

Ekonomiczne Problemy Usług nr 105, 447-453

2013

MUZEUM HISTORII POLSKI

JACEK BUKO
Uniwersytet Szczeciński

INFORMATION MANAGEMENT IN THE POSTAL COMPANIES

Introduction

Modern information processing technology allows many postal companies to function on two levels: the real and the virtual. By combining them into one strategy, enterprises can come to prevail over the competition and establish technological dominance which allows them the following to communicate quickly, to react quickly in emergency situations and to provide higher standards of service.

With this technological edge, postal companies can show their customers that they are a well-managed, responsible and forward-thinking enterprise capable of satisfying their customers' needs in new and improved ways.

Individuals want to be able to choose how they receive important information. Less freedom of choice causes annoyance. In addition, the changing attitude to the increasing share of electronic communication in society shows that it's important to offer various options to meet the different needs of recipients[1].

1. Essence of information management

Information management (IM) is understood as the sum of various actions aimed towards discovering facts within the context of business functions and providing information to users. The phrase "Information Resource Management"

---

[1] *Survey of Postal Letter Habits*, Posten AB 2009 [Brevvanor – En rapport om svenska folkets vanor och attityder till fysisk och elektronisk kommunikation], p. 7; quoted in: *Evolution of the European Postal Market since 1997*, Study for the European Commission, DG Internal Market and Services, The WIK-Consult and ITA Consulting, August 2009, p. 57.

was first used in relation to Anglo-Saxon literature[2]. IM requires the management of information resources, such as getting, protecting, using, disseminating and promoting information.

The main areas in IM are:
- Information strategy,
- Information preparation,
- Potential of information to meet management needs,
- Technical aspects of information systems.

IM strategies directly involve the managers' work and related needs, and increase responsiveness to information demands. The IM strategy also gives a foundation for the creation of teleinformation strategies, including computer systems, the buying of equipment and software, and the modernization of infrastructure. The need for strategic thinking about information arises from the following facts:
- Information in the business' domain must be organized,
- Information sources can always be allocated effectively,
- An information strategy makes it easier to adapt to new situations,
- Information strategies help create and use information[3].

The creation of an information strategy helps process information to develop a knowledge base and to use information effectively in practice. An information strategy entails the creation of an information culture which maintains a high standard of resources and cultivates various abilities, including the ability to work together in groups, the ability to communicate, the ability to use computer resources, the ability to apply information in decision-making processes, and, of course, the ability to learn and integrate information from disparate disciplines and domains.

The strategic benefits obtained from IM vary depending on how the information is going to be used. Such benefits may include the following:
- Direct benefits, according to individual needs for additional information,
- Immediate or long-term benefits, as a result of using resources,
- Material and immaterial benefits, as a result of having and using information,
- Benefits from issuing information; e.g., public campaigning and providing disinformation to competitors.

From an economic point of view, in business it is necessary to optimize costs and maximize inequality between profits and costs. In this context, a very important problem is the calculation of IM costs before the utilization of resources to research its impact. The following components may be considered in such calculations:
- Resources collected in the information system,

- Human resources involved in the information system,
- Technological elements, including both software and hardware.

Because information is immaterial, it is difficult to quantify its effects. The most common method of measurement in the literature is ex post. In this method, the effects of using information are measured, or, if there are no effects, then analogous results are evaluated.

To properly plan, execute, and utilize information systems and processes, it is necessary to know the cost of information. The cost analysis with respect to information systems can be broken down as follows:
- The cost of generating, gathering, processing, spreading, disclosing, interpreting and using information,
- The cost of maintaining and updating system standards,
- The cost of maintaining the system's technical infrastructure,
- The cost of maintaining personnel,
- The cost of maintaining and conserving the system's information resources[4].

IM uses modern methods of gathering and processing data, and developing communication systems. Computer technology makes operations quicker, thus saving time, and, combined with information resources, knowledge and experience, creates new value added. Technology allow businesses to reduce the cost of lost opportunities which could arise from the waste of resources. Importantly, hidden costs may be reduced by more effectively accomplishing tasks and employing new communications methods.

The use of new information technologies is increasing the rate at which information is circulated within and through business management systems. It allows businesses to get the information they need to make important decisions, and also to analyze that information on different levels.

2. Information management systems

IM systems can support and be utilized by every level of business management. Among the types of IM systems, often used also by postal companies, there are:
- Systems to inform executives, which guaranty the availability of precise and current information, so that successful plans can be made, controlled and executed,
- Systems to support decision-making processes, based on computer programs for information and analysis in situations in which it is necessary to combine experience with computer simulations,

---

[4]   E. Skrzypek: *Asymetria informacji i jej wpływ na podejmowanie decyzji*, in: *Informacja – dobra lub zła nowina…*, p. 122.

- Expert systems, based on known facts and feedback; the main benefit of such systems is that they enable inferences when there is not enough data to solve a given problem,
- Document management systems, the basic function of which is the electronic storage, archiving, and sharing of documents,
- Systems to support teamwork, which allow work to be organized for many users interacting via a telecomputing network; these systems are based on the supposition that computer networks help increase effectiveness, thanks to cooperation and shared data resources,
- Corporation portals, which are the origin of up-to-date information and the platform for communication in the area of business resources available through internet browsers,
- Systems for the automation of business processes, where sub-processes can be automatically allocated, sent, updated, managed and monitored,
- Data warehouse systems, with bases of available data for long periods of time and multi-dimensional analytical configurations allowing highly efficient search capabilities,
- Communication support tools.

In postal business management, information systems cannot be treated only as origins of information and ways of using new technology to reach targets, but also as an area which requires active management and cultivation in the following ways:

- Long-term planning with consideration of the development of information systems with strategic solutions, and short-term planning to smoothly incorporate modern methodologies and communication solutions,
- Organizing, which provides a combination of measurements and actions with various performance criteria, including efficiency, taken into consideration,
- Constantly and periodically checking coordination of the information system,
- Activating personnel to work according to organization targets[5].

3. Security of information management

As the role of information is growing in determining the position of postal companies in the market, the issue of security for information resources is becoming more and more relevant. As mentioned earlier, information resources are stored in information systems more often and made available to more people and institu-

---

[5] See more: D.K. Barreau: *Context as a factor in personal information management systems*, "Journal of the American Society for Information Science", http://onlinelibrary.wiley.com (4 JAN 1999).

tions, which is why data is exposed to modifications and even loss. A high quantity of data makes postal companies dependent on technology, computer networks, and diffuse processes.

The implementation of new computer technology in data processing increases the possibility of introducing defects into an information system (including equipment as well as software). This is a danger for stored resources, and current protections may not be sufficient to secure new techniques for accessing data. The following potential effects must be considered:

- Material waste – information may be involuntarily made available to competitors,
- Costs of liability,
- Chaos within the organization,
- Incompatibility and contradictions within data, as a consequence of inconsistent functionality,
- Poor decisions.

As postal companies become increasingly dependent on higher quantities and standards of quality of information, so does the level of required protection of information systems and gathering of data increase. The most basic protection is connected to the accomplishment of the following parameters:

- Confidentiality of information – making information available only for authorized personnel,
- Integrity of information – protection from the modification or deformation of information resources by unauthorized personnel.

The protection of an information system must incorporate all operations connected with defining, reaching, and maintaining the necessary protection parameters. The level of protection required depends on the character of information to be protected. While some information must be protected because of enterprises specific needs, some must be protected because of legal demands.

The protection of information resources in an enterprise should be an ongoing and dynamic process, requiring constant control and adaptability to changing environmental conditions. In service-based enterprises, information protection is multifaceted, and involves the following:

- The point and purpose of the information,
- Personnel using the information systems,
- Systems where information is produced, processed and stored,
- Environment in which systems are working; for example, the workplace, wiring systems, and power supplies.

There are new dangers and challenges connected to technological development, and they require the constant monitoring and updating of information protection systems.

Information safety in teleinformation systems has both national and international rules and regulations. These regulations define not only concrete, technological solutions, but also organizational requirements and appropriate ways of behaving within the enterprise.

In addition to these standards, there are many recommendations for how to protect telecomputing systems and documents connected with their safety which indirectly touch on problems with information safety management.

Information safety management in the postal companies includes the following:
- Precise targets, strategies, and safety policies for information systems,
- Identification and analysis of risks to information resources,
- Identification and analysis of other risks,
- Description of adequate protection measures,
- Monitoring of the implementation and exploitation of safety precautions,
- Creating awareness training programs,
- Detecting and reacting to incidents in which safety is compromised.

To properly implement a safety management system in a business enterprise, precise IM procedures must be described and individual responsibilities must be clearly delineated. Service-based enterprises, such as postal companies, which use teleinformation techniques usually have a contingency plan in case of emergencies. For example, in case there is a complete or partial loss of information system functionality, including the loss of a back-up plan to recreate information in unpredictable circumstances, then enterprises should have a ready recovery scenario.

Conclusions

In the current economy, the meaning of information as a generative factor is decisive for social and economic development. At present, public information resources, and not natural resources, are most important for the national economy. The market positions of most business enterprises are determined by their access and approach to information, as well as their skill in using it.

To effectively manage information resources within an organization, it is necessary to have a long-term policy to optimize the gathering of information. Service-based enterprises should therefore know their information needs very well. It should be noted what information is accessible, and what is in short supply. Public resources should not have meta-information, useless information, or information which is not rich in meaning, because these make it difficult to use information and increase the cost of operations.

The improvement of information safety is in the interest of all postal companies and their customers. The fundamental and necessary steps to improve information safety in the serviced-based businesses should primarily include the improv-

ing control and supervision to better locate and analyze the organization's weak points.

Literature

1. Bytniewski A., Matouk K.: *Rola informacji we współczesnej organizacji*, w: *Informacja – dobra lub zła nowina*, Uniwersytet Szczeciński, 2004.
2. *Evolution of the European Postal Market since 1997*, Study for the European Commission, DG Internal Market and Services, The WIK-Consult and ITA Consulting, August 2009.
3. Skrzypek E.: *Asymetria informacji i jej wpływ na podejmowanie decyzji*, w: *Informacja – dobra lub zła nowina*, Uniwersytet Szczeciński, 2004.
4. Smith Z.A.N., Mendley D.B.: *Information Resource Management*, South-Western Publ., Cincinnati, 1987.
5. *Survey of Postal Letter Habits*, Posten AB 2009 [Brevvanor – En rapport om svenska folkets vanor och attityder till fysisk och elektronisk kommunikation].
6. Barreau D.K.: *Context as a factor in personal information management systems*, Journal of the American Society for Information Science, http://onlinelibrary.wiley.com

INFORMATION MANAGEMENT IN THE POSTAL COMPANIES

Summary

The improvement of information management is in the interest of postal companies and is compatible with its customers' needs and postal market regulators. Positive trends in the field of safety improvement will definitely influence their reliability in public opinion. To effectively protect information resources within an organization, it is necessary to have a long-term policy to optimize the gathering of information. Postal companies should therefore knows their information needs very well. It should be noted what information is accessible, and what is in short supply. Postal information resources should not have meta-information, useless information, or information which is not rich in meaning, because these make it difficult to use information and increase the cost of operations.

Translated by Jacek Buko