The role and importance of accounting information system in the context of digitalization

Information is an essential life resource that is practically understood as necessary and useful data presented in a convenient way, in accordance with the requirements of the user. An information system can be defined as a combination of information resources, processes, and people who collect, transform, and distribute information to organizations. There are many different types of information systems.

The accounting system is understood as a certain integrity or set of accounting elements that are in relationship with each other. This system includes a logical complex, which refers information aimed at the correct measurement of the final results of activities in order to ensure the interests of the economic entity and the state. The optimal accounting system will be one that meets the requirements of accuracy, timeliness, low cost and eliminates the possibility of theft or fraud, etc.

To date, primary accounting remains insufficiently orderly, time-consuming and poorly organized, and this hinders the development of integrated information processing systems. The main objective of primary accounting is not only to collect, measure and process information, but also to provide feedback in the preparation and decision-making. Increasing the level of automation and widespread use of various types of computer technology at all stages of the accounting process makes it possible to abandon the primary documents in the form of paper.

Key word: Information, primary accounting, accounting system, automation.
Роль и значение учетной информационной системы в условиях цифровизации

Информация является важнейшим жизненным ресурсом, который практически понимают как необходимые и полезные данные, представленные в удобном виде, в соответствии с требованиями пользователя. Информационную систему можно определить как соединение информационных ресурсов, процессов и людей, которые собирают, преобразуют и распространяют информацию в организации. Существует огромное количество различных типов информационных систем.

Под учетной системой понимается определенная целостность или множество элементов учета, находящаяся во взаимосвязи друг с другом. Это система включает в себя логический комплекс, в котором обращается информация, направленная на правильное измерение конечных результатов деятельности в целях обеспечения интересов экономического субъекта и государства. Оптимальной учетной системой будет та, которая отвечает требованиям точности, своевременности, низкой себестоимости и исключает возможность хищения или обмана и т.д.

На сегодняшний день первичный учет остается недостаточно упорядоченным, трудоемким и плохо организованным, а это сдерживает развитие интегрированных систем обработки информации. Основной задачей первичного учета заключается не только в сборе, измерении и обработке информации, но и в обеспечении обратной связи при подготовке и принятии решений. Повышение уровня автоматизации и широкое использование различных видов вычислительной техники на всех стадиях учетного процесса выдвигает возможность отказа от первичных документов в виде бумажных носителей.

Ключевые слова. Информация, первичный учет, учетная система, автоматизация.

Introduction. The modern economy is unthinkable without effective management. The success of management is largely determined by the effectiveness of integrated decisions that take into account the most diverse factors and trends in their development. An important category of integrated solutions is the enterprise information processing system. One of the main goals of data processing systems is to improve the efficiency of the company, institution or organization. Data processing system should: provide General or detailed data on the results of the work. To allow one to easily determine the trends of important indicators. Provide time-critical information without significant delay. Perform accurate and complete data analysis.

It is considered that rationalization of information process with distribution on it of elements of production activity (rationing, technology) has to increase efficiency of administrative work. One of the main indicators of the efficiency of the enterprise is its productivity: quality, quantity and speed of information processing.

Any organization processes information to produce two types of “products”: information (data, documents, speech information) and decisions (operational and strategic). The organization receives initial (incoming) information in various forms: documents that deliver information in the form of words and numbers; speech information on the phone; data from computers, often in electronic form. Final (outgoing) information is produced in the same forms.

Literature review. In the process of daily activities of companies there is a significant amount
of operational information. Information support of managers in making management decisions necessitates the creation of a database, which are integrated elements of the information system of companies. Kazakhstan scientist in the field of management accounting K. T. Higashikawa in his book “Managerial accounting” gives the following classification of information.

The role and importance of the accounting information system in terms of digitalization is well disclosed in their books Fedorova G. V., information technologies of accounting, analysis, and audit.

The sources of information and works of the following authors were useful in writing the article Information systems in Economics: Textbook for University students / ed. G. A. Titorenko. Lashina, Soloviev: Information systems and technologies in Economics and marketing (for bachelors).

To manage to write an article Law of the Republic of Kazakhstan «on accounting and financial reporting».

**Material and Methods.** In the course of writing the article was applied a systematic analysis of the main provisions of legal acts, as well as discussions of economists and practitioners in the field of accounting and auditing.

**Material characteristic.** Information is facts, data, observations and everything that somehow expands our knowledge. The number of 1,000, taken by itself, is not information, but the statement that the organization employs 1,000 people, can already be considered information (Fig. 1):

The basis of modern organization of accounting – processing of constantly circulating flow of accounting, and in some cases, and non-accounting information.

To accounting sources include: bookkeeping and accounting; statistical accounting; online accounting; selective credentials.

To Neuchatel sources include: materials, internal and external audit; the audit results of the tax service; print materials, explanatory notes and memoranda, correspondence with partners and others.

This information is the first stage of preparation of data for management decisions, the second stage – their analysis and evaluation. As a result, an accounting and analytical system is formed (K. Drury, 2005: 1071).

The basic concept of “system” is an abstract concept with many definitions. The system can be defined as a group of interrelated and interacting elements that form a single unit, or as a group of components acting together to achieve a common goal, performing input, output and conversion (information, material, substance).

An information system can be defined as a combination of information resources, processes, and people who collect, transform, and distribute.

![Figure 1. Classification of management information*](image-url)

*Note: developed by the author
information to organizations. There are many different types of information systems (hereinafter referred to as is) – from conventional (traditional), i.e. without the use of computers, to is based on the use of computers, software and IP specialists. The overall objective of IP is to transform “raw” data resources into information “products” needed by specific users (Titonenko, 2006: 253).

The information system is a more mobile system that allows managers to freely and quickly, at their workplace, use, depending on the situation, special means of designing alternative solutions. The special status of IP in management was realized in 1970, due to the emergence of the concept of decision support systems (DSS). The conceptual basis is the model of decision-making By G. Simon. (Law of the Republic of Kazakhstan, 2007:12)

The decision-making process for Simon has three stages: information, design, and selection stage. At the information stage, the environment is studied, the events and conditions that require decision-making are determined. At the project stage, possible activities (alternatives) are developed and evaluated. At the selection stage, justify and select a certain alternative, organizing monitoring (monitoring) of its implementation.

Results and Discussion. The modern concept of IP is due to the understanding of the roles of IP in organizations, analysis of the role of IP in promoting mass current operations, as well as the impact of IP on the achievement of strategic advantages in competition. From this point of view, G. M. Ustinov gives a conceptual scheme of IP levels in organizations where the highest level is the first: (Nurgazina Z, K, 201:240)

1. Providing strategic competitive advantages.
2. Ensuring management decision-making.
3. Ensuring ongoing business operations.

Under the accounting system (from Greek. systema – whole composed of parts, Union), writes F. S. Seidakhmetov, means a definite integrity or the set of elements of accounting while interacting with each other. Such a system includes a logical complex, which summarizes information aimed at the correct measurement of the final results of activities in order to ensure the interests of the economic entity and the state. (Seidakhmetova F.S., 2013:230 p).

Information on the size of the material and labor resources, how to Finance them and the results achieved is necessary for both employees of the organization for effective work and “external” persons to assess its activities. It is this information and provides accounting.

Accounting primarily provides quantitative information and is characterized by the fact that it usually operates with data expressed in monetary units. Management accounting is a process within an organization that provides the necessary information used to plan, manage and control the activities of the organization. The information system of accounting has certain features. Common to all information systems within an organization.

This: (Mustaev V, 2018:344).
– Recognition and collection of relevant information.
– Systematic recording of the collected information.
– Analysis and interpretation of the collected information.
– Reporting on available information in a form that meets the needs of users.

The relationship between these features can be represented as follows (Fig.2):

![Figure 2. Accounting information system*](image)
*Note: developed by the author

Central Asian Journal of Social Sciences and Humanities №1  (2019)
Figure 1 shows the four successive stages of the accounting information system. The first two stages are preparatory, and the last two involve the use of the information collected.

It is necessary to connect the process of information processing with the decision-making process. This will assess not only the results, but also the course of economic activity, economic processes and the possibility of influencing them by making the necessary management decisions. Depending on the information used and the tasks of analysis, the accounting and analytical system can be divided into three types: operational, tactical and strategic. (Lyubushin, 2014:304)

Operational – provides analysis and decision – making in the process of accounting for transactions, tactical – provides analysis and decision-making after transactions, strategic-provides retrospective analysis and decision-making on the basis of reporting and settlement data.

Management accounting is a part of accounting, which to some extent allows you to control and evaluate the financial and commodity flows of companies, calculating their effectiveness (Higashikawa K, 2008: 305).

In order to improve business efficiency, taking into account the growing competition, managers are required to carefully analyze the current activities of companies, plan the budget and control costs. In all of these cases, clear, standardized information is needed to enable the right management decisions to be made.

Increased attention to management information has an impact not only on the efficiency of production management, but also on the timely adoption of management decisions by managers for each process.

Information is needed to manage the production process. This information is obtained through accounting, which emerged as a function of production management. It is carried out by means of constant monitoring of economic processes, their quantitative measurement, registration and generalization. By considering business processes are characterized by quantitative and qualitative sides: is determined by the volume of goods produced and of goods sold, their cost, productivity, profits, profitability, etc.

Thus, economic accounting is a system of quantitative reflection and qualitative characteristics of economic phenomena and processes in order to control and better manage them.

Economic accounting consists of three different types of accounting: operational, statistical and accounting.

Operational accounting is a system of ongoing monitoring, control and management of individual business transactions in the course of their implementation. It is usually limited to the organization and is conducted at the places of economic operations (warehouse, shop, cash, etc.).

This type of accounting is the most simple in technique compared to other types of accounting and is carried out as necessary. Its data are not necessarily recorded in documents and can be obtained by oral conversation or by means of technical means and devices. Statistical accounting (statistics) is a system of registration, generalization and study of mass qualitatively homogeneous socio-economic phenomena (on the scale of industry, economic region, country).

Statistics collect and prepare information (on the population, number of employees, income, labor costs, etc.), which is used by the authorities and management to make management decisions at the state and regional levels.

Accounting is an ordered system of collecting, recording and summarizing information in monetary terms about the property, liabilities of organizations and their movement by continuous, continuous and documentary reflection of all business transactions (Simon G.A, 2015: 20).

For accounting is characterized by the use of special techniques and methods of processing of economic information: accounts, double entry business transactions in the accounts, balance sheet, etc.

Accounting as an information system performs measurement, registration, processing and transmission of financial information about a particular business entity in order to use this information to make informed management decisions and monitor their implementation.

Accounting is called the «language of business», because information about property accounting, business transactions, sources of formation of the organization’s property is necessary for many users of financial statements. Potential users of accounting information are divided into internal and external. For rice.3 shows users who use accounting information for decision – making, i.e. who manages economic activities, as well as stakeholders, including investors, employees, suppliers, buyers, the state and its agencies, the public, auditors, etc. Fig.3:
The composition for each representative of the administration is determined depending on the position and functions performed by him, for managers, the most important information is the amount and rate of profit, cash adequacy, cost of production and profitability. Owners and co-owners are most interested in the profitability and liquidity of the organization.

The management of the organization is also interested in the information provided to external users and in the variety of information required for planning, analysis and control. It is understood that information for external users is formed, including on the basis of information for internal users related to the financial position of the organization, the financial results of its activities, changes in its financial position.

External users have the following main interests in information generated in accounting:
1. investors and their representatives are interested in information about: the riskiness and profitability of the proposed or implemented investments; the ability of the organization to pay dividends;
2. lenders are interested in information that allows to determine whether the loans provided by them will be repaid in a timely manner and the corresponding interest will be paid;
3. suppliers and contractors are interested in information to determine whether the amounts due to them will be paid on time;
4. buyers and customers are interested in information about the continuation of the organization;
5. the authorities are interested in information for the implementation of their functions: the allocation of resources; regulation of the national economy; development and implementation of national policy; conducting statistical monitoring;
6. the General public is interested in information on the role and contribution of the organization to the well-being of society at the local and regional levels.

Two groups of users – owners and management personnel – have a well-justified priority in the organization of accounting and reporting of the organization, moreover, within the framework of the Anglo-American model, the idea of dividing the accounting system into two interrelated categories has been actively developing for many decades: financial accounting and management accounting. Despite the fact that the functions of financial accounting and management accounting are largely the same, these two categories can be distinguished by who are the main users of their information.

Management accounting provides information on financing, investment and operating activities to persons within the organization who make decisions and are responsible for achieving profitability and liquidity objectives. Managers and employees engaged in economic activities need information about the results of their activities in the past and in the future.

Financial accounting includes the preparation of reports and their transmission to external decision-making users, so that they can assess how the business objectives are achieved. These reports are referred to as financial statements for external users.

Tax accounting is one of the leading links in the information system of financial and economic activity of the organization, formed on the principles of accounting in order to determine the tax base.
There are four stages in the accounting process:
1. Registration and measurement of credentials;
2. Systematization and generalization in accounting documents;
3. Combining information together for reporting;
4. Data synthesis and analysis.

The source object of the accounting process organization is the accounting item. In accounting under the accounting nomenclature understand the composition of the names of economic facts (phenomena and processes) – is the characteristics of the state of objects of accounting, which should be reflected in the accounting system. Based on the theory Fabio Besta (1845-1923) you can bring the distinction into account at the time of the meeting (Seidakhmetova F.S, 2000: 336) – Fig.4:

![Figure 4. The movement of the accounting process in time*](image)

*Note: developed by the author

The composition of objects of accounting in each period of the accounting process is determined by the content of the economic activity of a particular company and the objects of information. The uniformity of many accounting procedures plays an important role in the organization of accounting.

The set of rules and techniques of accounting, by which the interaction of the main elements of the accounting system can be attributed:
– primary observation;
– cost measurement;
– current grouping;
– final summary.

The initial stage of the accounting process is called the primary accounting, which are monitored, measured and recorded results in the media accounting information. In General, it is a repetitive time-organized process of collecting, recording, storing and storing information, in the conditions of automation – its transfer to computer media and initial processing.

At the stage of primary observation, the accomplished facts of economic activity are analyzed and divided into separate economic operations. Business transaction shall be accounted for if determined at the time of the transaction, its content, the value of the dimension.

At the stage of documenting the operation-prepared or accepted from other organizations primary documents reflecting all committed Financial and economic operations and their results (receipts, invoices, etc.). Primary documents are checked in form and in essence and registered.

At the stage of the current grouping of facts of economic activity, information of primary documents on the relevant financial and economic operation is reflected in accordance with the system of accounts, the accounting record of the operation is determined by the method of double entry, which is recorded in the accounting documents according to the selected form of accounting.

At the stage of final generalization of the facts of economic activity on the basis of current accounting at the end of each reporting period by means of closing transactions temporary accounts are closed and balances on permanent accounts are defined, and financial statements on the recommended forms are made. Financial statements are a system of indicators characterizing the financial and economic activities of the organization, its property and financial position for a certain period (reporting year).

At the stage of analysis of the organization on the basis of accounting data and financial statements are calculated financial ratios and analysis of key indicators.

In most cases, the activity of the accountant is directly related to the office work, which covers the set of the following works:
– preparation of correspondence (correspondence);
– reception of incoming (incoming) documents;
– send outgoing documents;
– registration and control over the execution of documents;
– storage of waste documents in the current archive;
- termination of storage of documents in the current archive.

The list of names of cases for grouping and storage of documents of the subject is called the nomenclature of office work. It is drawn up by the staff of the office in consultation with all divisions. It specifies the list of cases required to store the correspondence of each Department.

According to generally accepted methodology of records management in modern conditions it is possible to identify three types of information flow: inbound, internal, outbound (Table 1):

### Table 1 – Structure of information exchange*

<table>
<thead>
<tr>
<th>The form of the document</th>
<th>Document flow</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>incoming</td>
</tr>
<tr>
<td>Electronic</td>
<td>Email message</td>
</tr>
<tr>
<td></td>
<td>Facsimile information</td>
</tr>
<tr>
<td>Paper</td>
<td>Letters, contracts.</td>
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<tr>
<td></td>
<td>Legislative act</td>
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<tr>
<td></td>
<td>Normative document</td>
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<tr>
<td></td>
<td>Periodicals</td>
</tr>
</tbody>
</table>

*Note-according to the literature 5

As you can see, the names of the documents may be different, but they ultimately indicate the nature of the facts reflected in them, which makes it easier to work with them. Important control and information value is the date, as economic facts can be the same type and repetitive. To prevent the possibility of re-use the same put them on the blanking dies.

The list of officials authorized to sign primary documents shall be approved by the head of the organization in coordination with the financial Director. “Electronic signatures”are being distributed.

The path that documents go from the moment of discharge to delivery to the archive is called document management. In this case, a hierarchy of signatures can be established depending on the position held, the amount of money, the scope and essence of the operation.

The movement of documents is regulated by the document flow schedule approved by the head of the organization. It can be issued in two versions – in the form of the scheme and in the form of the list of works on creation, check, processing of the documents performed by structural divisions of the organizations with indication of responsible executors and terms.

Document management systems include the following steps:

- drawing up the schedule of document flow in the enterprise;
- creation of accounting information processing technology;
- development of the nomenclature of cases and the order of the current storage of documents;
- examination of the value of documents and preparation of cases for long-term storage.

The document flow schedule should be linked to the job descriptions and accounting policies of the organization. Responsibility for compliance with the document flow schedule, as well as for the timely and good-quality creation of documents and their transfer for reflection in accounting and reporting, for the accuracy of the data contained in them are the persons who created and signed this document.

The automated form of accounting is a successful combination of professional qualities and functions of the user with intellectual possibilities of the computer equipment allowing to receive information necessary for management and operational control in the convenient form in the form of printouts on accounts.

Currently, accounting is ineffective without computer data processing. Now on the market there are many accounting programs that meet a variety of requirements for them. It is especially difficult to choose the right program for your company. Mechanization of accounting reduces the complexity of accounting, but does not allow to make it fully operational, reduce the time for the rest of the reporting. Most fully these issues are
solved in terms of automation of the whole complex of accounting works. Particular importance is attached to the development of application software packages that implement automated solutions to all typical accounting tasks. Standard projects of complex automation of accounting with application of various types of computers for the industry, agriculture, the centralized accounts departments, the organizations which are on the state budget, and other organizations are developed. Currently, automation of accounting with the help of a personal computer is not a difficult task for either the developer or the user of accounting software. Today the simple solutions computerization of accounting achieved the hard way: from the computerization of individual sections of accounting work to establish associated databases for the information of the balance sheet. The development of computers by accountants at the level of not only the user, but also programming (and today this is a qualification requirement) has allowed to radically revise the strategy of accounting programs. As it turned out, it is more effective to have a single database structure for all areas of accounting.

Thus, in real time simultaneously solved the problem of balance sheet at every moment. Registration of primary documents-making the content and amount of business transactions in a single database of the enterprise. Network versions of accounting have solved the problem of dependence of the sites on the time of access to a single database.

SAP and Oracle are the world leaders in the market of foreign software ERP-products (Enterprise Resource Planning) and systems. From the developers in the CIS can be identified firm “1C”, released on the market a new generation system – “1C:Enterprise 8. Production enterprise management”, which provides ample opportunities for solving problems of integrated management of the organization and process analysis. For the organization of Kazakhstan in 2007 was released a localized version of this product – “1C:Enterprise 8. Management of the production enterprise for Kazakhstan”.

Typically, the period of implementation of an ERP system can vary greatly from 6 months to several years. On average, the cost of implementing an ERP system of a Western developer is $ 500 thousand, and domestic software is about $50 thousand. The cost of one workplace on the basis of the product “1C:Enterprise 8. Management of production enterprise for Kazakhstan “ is an average of $ 2-3 thousand (Sultanova B.B, 2016:34)

The main features of automated data processing are:
- reflection of the economic activity of the organization in the form of accounting entries with the ability to conduct analytical accounting;
- keeping records of primary documents with the possibility of using standard operations;
- analytical and synthetic accounting of cash flow and material values on any accounts;
- consolidated and separate balance sheet for several divisions;
- accounting and revaluation of fixed assets, intangible assets, goods, materials, depreciation of fixed assets and intangible assets;
- mutual settlements with accountable persons;
- financial analysis and balance sheet modeling;
- maintenance amount and accrual accounting, balance sheet and off-balance sheet accounts;
- parallel maintenance of several cash registers and current accounts in rubles and currency, calculation of exchange rate and amount difference;
- accounting of cash transactions, maintaining the cash book, automatic export of data to The General Ledger;
- ability to view the register of transactions of documents-grounds;
- automatic generation of purchase Books and sales Books based on primary documents;
- automatic recalculation of the General Ledger and balances with turnover on accounts;
- ability to enter, adjust documents and transactions for any reporting period;
- flexible configuration of permissions (up to individual fields) and appearance of the module object lists;
- the formation of the main accounting reports;
- reporting to tax authorities and extra-budgetary funds.
- additional possibilities of automation of accounting:
- export data and generated reports in Word and Excel formats, obtaining information in graphical form.

Flexible universal module is the basis of the accounting complex. The problem of flexibility and customizability in modern systems of processing of accounting information can have two solutions: the use of a large number of user-defined parameters of the system, which in one way or another change the behavior of the system (full-featured systems), or the presence of a built-in language to describe the algorithms of the system in different situations (tool systems).
Conclusion

“1C: Accounting 8.3” successfully combines the adaptive properties of both instrumental and full-featured systems. On the one hand, the program comes with a standard configuration, which is a ready-made setup to automate the most important areas of accounting, i.e. the system initially has built-in support for solving accounting problems. At the same time, a typical configuration contains a number of parameters that allow you to control its behavior, which is typical for full-featured systems.

On the other hand, a typical configuration is open for change: a trained user can change the algorithms or add completely new functions to take into account the specifics of a particular organization. For this “1C: Accounting 8.3” contains advanced tools, which is typical for tool systems.

Such capabilities of “1C: Accounting 8.3” open a new, different from the traditional approach to the construction of an automated accounting system. It provides that the accounting complex is formed from flexible universal modules. The module is a shell that includes a set of specialized tools designed to create information objects, describe their properties, relationships and information processing algorithms, as well as a mechanism for interpreting these descriptions. functionally, the module itself is not specialized, but can be configured to perform accounting functions through built-in tools. At any time, the flexible universal module can be redesigned to perform other functions up to the complete restructuring of the module to the functions of a completely different accounting area. It is important that this setting (configuration) is not created at each workplace (not for each flexible universal module), and for the accounting complex (set of GUM) as a whole. Thus for each workplace (accounting worker) within the uniform configuration the individual user interface which includes the list of commands of management of accounting and reporting information available for this user is created. This approach allows to create complex complexes for automation of accounting of enterprises of different industry orientation on the basis of flexible universal modules.

Kazakhstan is in the process of changing and improving the legislation in the field of regulation of legal entities in this regard, regulatory reporting is regularly changing. When choosing any ERP system of Western or domestic production, it is necessary to look into the future and calculate all possible costs and consequences.

The selected system shall be supported by the developer and the cost of such support shall not exceed reasonable limits.

The right choice of system and supplier will allow you to maintain both business and market share, and in some cases, the level of profitability.