Overview of current state of information logistics in Russia

Abstract: This article contains an analytical overview of the current state of information logistics, use and implementation of information systems, an integrated logistics information tools for organizing the optimal flow of information on the economic entities of the Russian Federation. In the article the problems, as well as positive trends.

Keywords: information logistic, logistics, e-commerce, supply chain, information system, information technologies.

Content

For analyze and identify the current status of development and implementation of information logistics for the subjects of the Russian Federation entities, using of integrated tools for the organization of optimal information flows, it is necessary to answer the questions: How to evaluate and what are the criteria? What will be the source of the data for the evaluation criteria?

The answer to the first question can be obtained from previously received definitions of category information logistics [2; 4; 6; 7].

Taking into account the previously stated position of the term information it is metalogistics of Transport — and Logistics System material and financial flow management. The object of information control acts logistics of information flow and streaming processes of a business entity. Information management is provided by the management of the complex hardware, software and network facilities. The development, use and optimization of the architecture of the complex, is also a priority area of theoretical and applied research information logistics.

The goal of information logistics — minimizing the costs associated with the movement of logistics information flows, both directly and indirectly joined with all other flow processes of a business entity.

Information flows occur between nodes logistics information system. The nodes in the information logistics system are the hardware-technological technology, computer technology. Computer technologies create a net for a business subjects. Consequently, it is necessary to use criteria such as the communication speed, communication quality. Computer technologies are useless without the application software, integrated enterprise systems, covering the business processes of a business entity.

The answer to the second question, how to collect information that will serve as a source of data? Within the framework of the target program «Electronic Russia» were developed a variety of information resources, including electronic statistical resources. One of these resources, “The Federal State Statistics service” [5].

According to the data was got from the Federal State Statistics Service of the in 2013, economic entities of the Russian Federation, companies and organizations have the following indicators:

Denmark leads in the IDI, surpassing Republic Korea, which had first. Rest countries included in the top ten for the IDI, They are located mainly in Europe (Sweden, Iceland, United Kingdom, Norway, Netherlands, Finland and Luxembourg), as well as in the Asia-Pacific region (Hong Kong (China)). Among the top 30 countries by IDI appear above all the countries of Europe, a number of countries with a high level of income from the Asia-Pacific region (Japan, Australia, Sin-
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gapore, New Zealand and Macau (China)), The United States and Canada, as well as Bahrain, the only country from the region Arab States. All countries included in the first thirty have IDI value greater than seven. Leaders of the IDI have high levels of income, competitive markets and efficient population.

Table 1. – The costs of information and communication technologies in 2013 (million rubles)

| ICT costs | Including |
|-----------|-----------|
|          | for buying computers technologies | for buying software | for payment-services of telecommunications | for payment Internet access | for employee training | for services from third parties and specialists of ICT | other costs |
| Russian Federation | 1245705,1 | 322423,6 | 170111,9 | 405109,6 | 170769,4 | 4638,0 | 267706,4 | 75715,6 |

Interestingly, what a form a software component of economic entity has (information systems classes). The majority of organizations have a class ERP system.

Table 2. – The proportion of organizations used special software, the total number of organizations surveyed in 2012 (percentage)

| Organizations, which used special software all | Of them |
|-----------------------------------------------|---------|
| For scientific research | For projecting | for control of automated manufacturing or separate technical means and processes | for solving the organizational, managerial and economic problems | for financial calculations in electronic form | for providing access to databases via global information networks, including the Internet | publishing systems | etc |
| Russian Federation | 86.0 | 3.1 | 11.7 | 16.7 | 59.8 | 61.2 | 29.3 | 6.2 |

As well as the integration between various business entities (their information systems). Data for the assessment of this criterion can be used with some approximation as a percentage of the total number of surveyed organizations that are automatically exchange data with other organizations on the means of its information system.

Table 3. – Share of organizations which used flow of documents, the total number of organizations surveyed in 2012 (in percent)

| Organizations which use | electronic document management system | automatic data exchange between their and external information systems, according to the exchange formats |
|-------------------------|----------------------------------------|------------------------------------------------------|
| Russian Federation      | 60.4                                   | 24.3                                                 |
| Central Federal District | 58.8                                   | 23.3                                                 |
| Northwestern Federal District | 62.6                                | 26.9                                                 |
| Southern Federal District | 58.1                                   | 23.5                                                 |
| North Caucasian Federal District | 60.6                                 | 26.2                                                 |
| Volga Federal District | 62.7                                   | 24.4                                                 |
| Ural Federal District | 63.0                                   | 26.9                                                 |
| Siberian Federal District | 58.9                                   | 23.3                                                 |
| Far Eastern Federal District | 58.4                               | 23.2                                                 |

The next indicator — computing equipment, the organization of the automated workplaces (AWP) for business entities. Data for the assessment of this criterion can be used with some approximation as the number of PCs per 100 employees you can see in Table № 4. It is also important criterion for the organization is own web-site. Web — site as mentioned earlier, may be a prerequisite for the economic entity to e-commerce. From a simple site to a big portal with more functionality for users or existing customers (selling your own products or services through a global network, the support, call-center, etc.) (Table 5).
Table 4. – The number of PCs per 100 employees (units) in 2013 year

| District                              | Personal computers — in general | Including with Internet access |
|---------------------------------------|---------------------------------|--------------------------------|
| Russian Federation                    | 44                              | 26                             |
| Central Federal District              | 50                              | 31                             |
| Northwestern Federal District         | 48                              | 28                             |
| Southern Federal District             | 43                              | 26                             |
| North Caucasian Federal District      | 38                              | 21                             |
| Volga Federal District                | 41                              | 23                             |
| Ural Federal District                 | 40                              | 22                             |
| Siberian Federal District             | 42                              | 25                             |
| Far Eastern Federal District          | 43                              | 24                             |

It is obvious that there is a positive trend. Using the method of analytic alignment [3] and predict that the trends of the equation is a straight line, we get: y(t) = 31.42 + 2.64*t for the growth of the number of PCs per 100 employees in 2013, presumably 42 employees will be equipped with personal computers.

Table 5. – The share of organizations which have website, the total number of organizations surveyed (in percent)

| District                              | 2012 year |
|---------------------------------------|------------|
| Russian Federation                    | 37.8       |
| Central Federal District              | 41.3       |
| Northwestern Federal District         | 43.8       |
| Southern Federal District             | 32.7       |
| North Caucasian Federal District      | 36.4       |
| Volga Federal District                | 38.7       |
| Ural Federal District                 | 39.4       |
| Siberian Federal District             | 32.5       |
| Far Eastern Federal District          | 32.0       |

It remains to find out the quality of communication (Internet connection) and the cost of services, the factors hindering the use of the Internet connection. To do this, you must turn to other information resources «Statistical collections of Higher School of Economics» [1].
We can make the following conclusions:

1. The main trend — a shift to e-commerce (online logistics) [2], but according to statistics at the moment about 5 of the 10 companies in the Russian Federation have a “face” in the global network;
2. There is a positive trend in equipment of jobs by computers, including Internet access;
3. The quality of communication (the speed of access to the network) and the cost remains low in remote areas, far from big cities. Integration of various entities directly dependent on the quality of communication (video conferencing, work through VPN protocols, fast transfer of data);
4. ICT is not enough funded, primarily the purchase and implementation of new software, the Russian Federation has the low indicators on ICT in the economics entities in comparison with the leading countries.

References:

1. Indicators of the Information Society: – 2013. URL://http://www.hse.ru/primarydata/iio2013/(date of access: 08.09.2013).
2. Historical aspects of logistics information URL://http://www.uecs.ru/logistika/item/2800–2014–03–07–10–32–41/(date accessed: 08/03/2014).
3. Methods to identify the main trend (trend) in time series (RD) URL://http://abc.vvsu.ru/Books/statistika_up/page0017.asp/(date of access: 09.09.2013).
4. Regions of Russia. Socio-economic indicators URL://http://www.gks.ru/bgd/regl/b12_14p/Main.htm/(date of access: 09.09.2013).