Shkeda O.O.
PhD student, Specialty: Management
Academic supervisor: ***Chaikovska M.P.***
Doctor of economics, Professor,
Professor department Marketing and Business administration
Odesa I.I. Mechnikov National University,
Odesa

PRINCIPLES OF THE DATA GOVERNANCE CONCEPT AS AN ELEMENT OF THE INTERNAL BUSINESS ENVIRONMENT OF AN ENTERPRISE

Data is a strategic resource for an organization. The processes of collection, storage and analysis help the company identify key trends and opportunities, which allows it to develop long-term strategies and make more informed strategic decisions. Since data is an important source of information, organizational management uses it to analyze production processes, financial performance, market conditions and other aspects of the enterprise's business environment. This facilitates prompt decision making. From the point of view of optimization processes, data analysis makes it possible to identify bottlenecks and inefficiencies in business processes. The data is also used to analyze risks and develop risk management strategies. The resource property of data is converted into a competitive advantage for the organization which is speed of response to changes in market conditions and the provision of more accurate products and services to customers. Thus, from a management perspective, data is not only a tool, but also an important resource. Data management and the use of it require a strategic approach and investment. This leads to Big Data concept. It is a designation for structured and unstructured data of huge volumes and significant variety, efficiently processed by horizontally scalable software tools that appeared in the late 2000s, and alternatives to traditional database management systems and Business Intelligence solutions [1, p. 60; 2, p. 61]. Data Governance is a data management concept that addresses the capabilities that enable an organization to ensure high data quality throughout the data lifecycle and implement data management controls that support business goals [3, p. 36; 4; 5, p. 369; 6, p. 372; 7, p. 271].

The value of data is a complex indicator that is influenced by the scale of its use. Components that determine the value of data are: quality, usefulness, safety, availability.

The development of value components occurs simultaneously with the development of the project to which the data sets relate. While remaining critical to data management and the development of the Data Governance concept, the components of the data value tetrad determine the value of organizational capital in general and its informational component in particular (fig. 1).

The difference between Big Data and Data Governance lies in the vectors of the process approach to data as an object. Big Data is a resource component, while Data Governance performs communication functions. Data Governance provides the right

sets of data to the right people whenever the need arises, so that the right decisions can be made [8, p. 33]. In Data Governance concept, each data set corresponds to a data owner. It is important that data and its users are connected within the framework of Data Governance not only with a specific position, but also with a specific person – the manager.

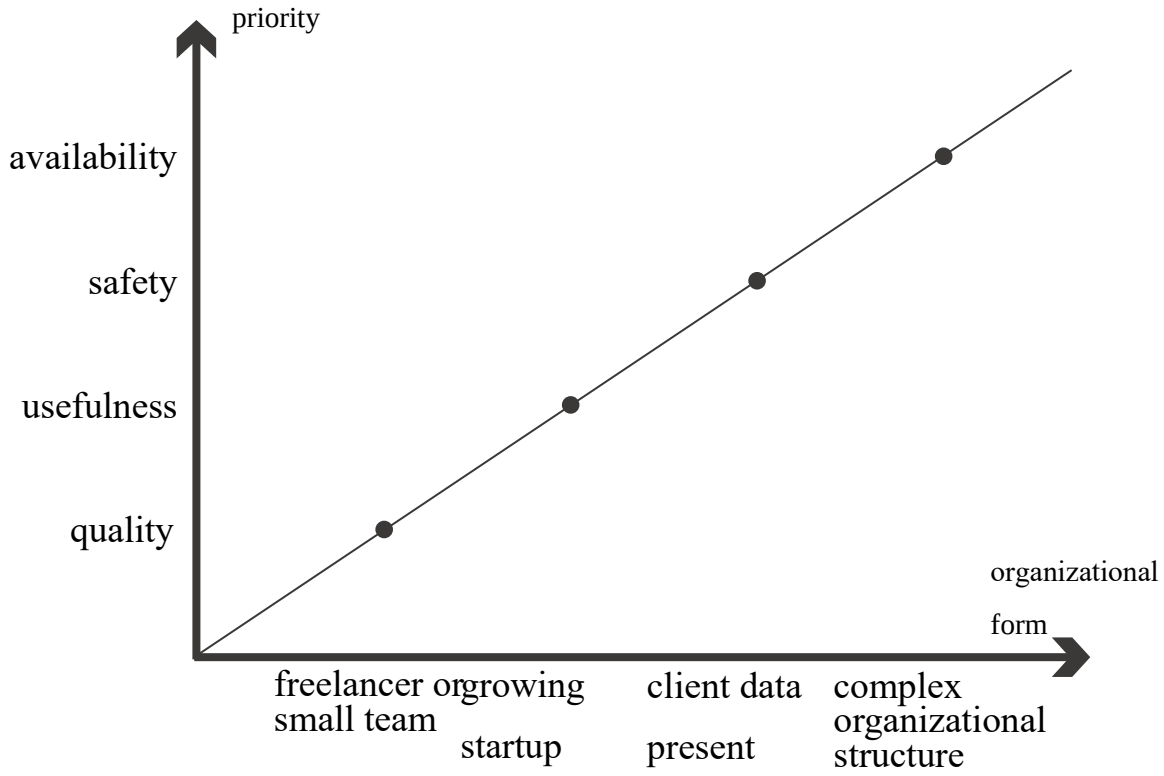

Fig. 1 Data value tetrad

Access to data is a catalyst for business processes. All data, regardless of whether it relates to the functionality of a specific department, executor or contractor, must be freely available without additional requests or confirmation. The speed of management technologies and changes in business processes is the cornerstone of modern competition [9]. The exception is confidential data. Data ethics is a dynamically evolving concept, just like Data Governance one. Information about gender, age, social status, etc. (both of consumers and employees of the organization) is a subject to a limited accessibility strategy and complies with the principles of corporate social responsibility.

The open source principle, which is to study, modify and distribute source code [10-11], is also applicable to corporate data. Data cataloging, inventory and archiving of changes made are insurance for preserving the value of data. This is achieved through the use of metadata. Metadata (or metainformation) is data that provides information about other data [12]. The optimal approach to the formation of metadata is to use the ternary description language, authored by the Odesa philosopher Avenir Uyomov [13]. Thus, the universal formula for generating metadata comes down to the following categories: object, feature and relations. This allows to optimize

informational processes not only at a certain stage of the enterprise life cycle, but also in the future of its scaling. Since enterprise data sets will constantly increase, the concept of scalability comes to the fore [14, p. 1].

Information about the relations of information to other information is no less important than information about the relations of data with its owner, user and other stakeholders. The tree of such connections endows the Data Governance concept with practically applicable characteristics that allow management decisions to be made with more predictable consequences.

List of references

1. Hilbert, Martin; Lopez, Priscila. (2011). The World's Technological Capacity to Store, Communicate, and Compute Information. *Science*, 332 (6025), 60-65.

2. Breur, Tom. (2016). Statistical Power Analysis and the contemporary "crisis" in social sciences. *Journal of Marketing Analytics*, 4 (2–3), 61-65.

3. Kim, H. Y. and Cho, J.-S. (2018). Data governance framework for big data implementation with NPS Case Analysis in Korea. *Journal of Business and Retail Management Research*, 12 (3), 36-46.

4. Bills, S. (2017). 5 Keys to Getting Your Big Data Transformation Back on Track. *Dell Blog*. Retrieved from https://infocus.dellemc.com/scott-bils/big-data-transformation-5-keys.

5. Munshi, A. A. and Yasser, A.-R. M. (2017). Big data framework for analytics in smart grids. *Electric Power Systems Research*, 151, 369-380.

6. Zhang, S., Gao, H., Yang, L. and Song, J. (2017). Research on big data governance based on actor-network theory and Petri nets. *The proceeding of Computer Supported Cooperative Work in Design (CSCWD), 2017 IEEE 21st International Conference*, 372-377

7. Ali Al-Badia, Ali Tarhinia, Asharul Islam Khana. (2018). Exploring Big Data Governance Frameworks. *The 9th International Conference on Emerging Ubiquitous Systems and Pervasive Networks. Procedia Computer Science 141 (2018)*, 271-277.

8. Riggins, F. J. and Klamm, B. K. (2017). Data governance case at Krause McMahon LLP in an era of self-service BI and Big Data. *Journal of Accounting Education*, 38, 23-36.

9. Chaikovska, M.P. (2021). Conceptual and methodological principles of management of marketing IT-projects in digitally transforming environment. Odesa: Odesa Mechnikov National University.

10. St. Laurent, Andrew M. (2004). Understanding Open Source and Free Software Licensing. California: O'Reilly Media.

11. Corbly, James Edward (2014). The Free Software Alternative: Freeware, Open Source Software, and Libraries. *Information Technology and Libraries*, 33 (3), 65.

12. *Merriam-Webster Dictionary*. Retrieved from https://www.merriam-webster.com/dictionary/metadata.

13. Цофнас А. Ю. Философ Уёмов (2008) Параметрическая общая теория систем и её применения: Сб. трудов, посвящённых 80-летию проф. А. И. Уёмова / Под ред. А. Ю. Цофнаса. Одесса: Астропринт, 2008.

14. Chaikovska, Maryna & Shkeda, Oleksandr. (2021). Skinner's box and AIDA marketing communication model as reflexive control tools. *Mind journal*, 12, 1-13.