

# *The Establishment of Data System for Law Firm under the Background of Big Data*

Wu Yanhong<sup>1</sup>, Bai Jianxia<sup>2\*</sup>

<sup>1</sup>Shandong Huayu University of Technology, Shandong, China;

<sup>2</sup>Tianjin university Renai College, Tianjin, China

**Keywords:** Big data; Law firm, data system, evaluation system

**Abstract:** The era of big data is characterized by informatization and intellectualization. It has brought both opportunities and unprecedented challenges to all walks of life. Law firm is an important institution dealing with legal disputes, it plays an extremely important role in social security and stability. Law firms generate a lot of useful data in their day-to-day operations. By analyzing the qualitative and quantitative relationships between these data, and using the analysis results to establish a reasonable data system which is suitable for the law firm's own development, the data system can provide services for lawyers and clients to solve problems more smoothly, and then the law firms can be adapt to the pace of the development of information technology.

## 1. Introduction

Big data means "a lot of data", "massive amounts of data". The amount of data is huge, even boundless. Such a large amount of data can no longer be processed, managed and sorted out manually within a certain time<sup>[1]</sup>. With the popularization of the Internet and the rapid development of information technology, the content and form of data are becoming richer and richer. There is more and more useful information, and the data processing speed is getting faster and faster. Data information has brought great benefits and convenience to people's life in all aspects.

In the era of big data, There is an infinite amount of information that fills with people's minds at any given moment and fills with all aspects of life. On the one hand, a large number of data information from all walks of life has brought opportunities for the development of society. Enterprises can make effective decision guidance by extracting valuable information from information. On the other hand, because the law cannot fully regulate the development of the Internet, it leads to some people using this data to do things that are bad for society, which has brought greater challenges for the development of big data era.

Law firms are an industry that deals with legal disputes, it is the escort for social stability. At present, many scholars have conducted in-depth studies on the connotation, characteristics and application of "big data" in various aspects<sup>[2][3][4]</sup>. But the applied research in law firm is less.

## 2. Challenges faced by law firms in the era of big data

(1) Every law firm produces a lot of data in the process of business handling and development,

most of this data is the information about various cases. This data information is very important for the development of law firms. At present, Every lawyer in most law firms handles his own case independently, and its data system is very imperfect. Some small law firms even don't have their own data systems. It can lead to a significant loss of law firm data, and it will also cause the lawyers in the process of handling the case can not form a virtuous cycle mechanism. In the era of rapid development of "intelligence", "big data" and "informatization". Only by mastering the methods of data processing can we seize the opportunities of development in the competitive society. Law firms face huge challenges in the era of big data.

(2) In the era of big data, people's understanding of data cannot only stay at the data itself, but must be multi-angle and all-directional. Data fusion and mining should be carried out in depth, and people must really dig out the effective information and value contained in the data. At the same time, the mined information is integrated for the development of enterprises. Law firms tend to operate relatively independently, but with the development of the Internet, if you want to develop rapidly, you can't do it by yourself. Various industries need cooperation and mutual assistance to achieve mutual development. Big data has challenged the development of law firms, and its future depends on whether it can be actively challenged.

### **3. The construction of data system for law firm under the background of big data**

#### **(1) Law firm data collection and database establishment**

In the usual operation process of law firms, their data are rather disordered and the types of cases are relatively complex. A large amount of data generated in the process of handling some legal disputes needs to be sorted out, and legal case consultation also needs to be classified and sorted out for future reference. It can extract all kinds of valuable data information contained in the business of law firms through data mining, which includes case consultation, case entrustment, case classification, various types of data formed by lawyers in the process of case handling, etc. At the end the information can be summarized and made into a data system, so that lawyers can analyze their own business through the data system and to develop their new business. The data of a law firm in Shandong is selected as the research object. First of all, because it usually involves a lot of case consultants, but many consultants do not entrust after the first consultation, and the case data and resources are wasted because they are not collected in time. If law firm has professional data collectors, relevant data information of the case can be collected for subsequent management after consulting the case. Secondly, because every lawyer's cases include all kinds of different types, many cases have a lot of relevance, and the data generated in the process of case handling will also have a lot of relevance, but many law firms lack the ability to reprocess and data analysis of the data. It leads to the case tracking process more trouble. Based on this, by collecting the data involved in its business, a database of different data types is established, and the collected data is stored for the convenience of case processing.

#### **(2) Law firm data analysis and data mining**

The storage of data is only the first step of the establishment of a data system, and it is the foundation of the establishment of a data system. Under the background of big data, data is worth far more than it is worth. There is more value in the relationship between the data. To obtain such useful information, it is necessary to select appropriate statistical software for in-depth analysis of stored data from multiple dimensions, and each case is analyzed and compared from the horizontal and vertical dimensions to find the best way to deal with the case. In the process of analysis, the corresponding statistical analysis model can be established according to the characteristics and development trend of different cases, so as to serve as a reference for lawyers in dealing with other cases. At the same time, it can find out the inadequacies in the process of analysis,

draw lessons from experience, and make the future case processing tend to be optimized. On the other hand, while analyzing the data, it should conduct in-depth mining of the data according to the analysis results to facilitate the use of existing data to make reform decisions, while facilitating the development of law firm business.

### (3) The construction of law firm data system

Data system plays a vital role in any enterprise. From the data system of the enterprise can be very clear analysis of an enterprise's operating status, development status and future development trend. In data analysis and data mining, it can build a relatively complete data system by combing all the analysis results obtained, the established statistical model, the useful information mined, and the established database. The system can facilitate lawyers to better handle their own cases, and can help lawyers to explore more sources of cases.

### (4) Update and maintain law firm data system

The establishment of the law firm's data system can bring convenience to the business management of the law firm. It is more conducive to the development of law firms and provides data support for the development of law firms. In the process of law firm development, new data information will appear at any time. Therefore, the data system should be updated regularly to keep pace with the development of the big data society. At the same time, it can do a good job in data system maintenance, which is a long-term work.

### (5) Establishment of law firm data system evaluation system

Whether a data system plays a positive or negative role in the development of a law firm depends on the authenticity and reliability of its data. Therefore, in order to make the obtained data play its due role, it is necessary to obtain the index system affecting its effectiveness through investigation, interview and other forms. By establishing a reasonable comprehensive evaluation model and constructing a comprehensive evaluation system, the data system is evaluated periodically and modified according to the evaluation results.

## **4. The market demand of the data system**

(1) The lawyer needs to know the data related to his own case through the data system. And in the process of handling the case to find and use for reference valuable data, help oneself improve oneself handle a case quality and handle a case efficiency.

(2) The parties need to track their own cases through the data system in a timely manner and understand the status of the case handling by lawyers, so as to better choose suitable lawyers for their own case handling.

## **5. Industrialization prospect of the data system**

In the era of big data, massive data contains infinite value. Every enterprise will generate a variety of data information in its own operation process. By establishing a data system, valuable information can be summarized, classified and utilized, which can provide certain help for the development of enterprises. In order to evaluate the authenticity and effectiveness of data, an appropriate evaluation system should be established to optimize data information through evaluation results and provide references for enterprises to develop in the right direction.

## **Acknowledgement**

Project supported by the National Natural Science Foundation of China (No.11732010, 11572221, 11872272), the Scientific Research Program Project of Tianjin Education Commission (No.2018KJ267), scientific research projects of Tianjin university Renai college(No.XX18002) and

Educational teaching and new engineering research project of 2018 of Shandong huayu university of technology(No.2018XGK02)

## References

- [1] *Opportunities and challenges in the era of big data*[J]. Wu hequan. *The truth*. 2013(04)
- [2] *China's government statistical management innovation mode under the background of big data* [J]. Yang meiyi, Lin yong. *Statistics and Decision*. 2015(20).
- [3] *Let the data speak: a perspective on the application of big data in the judicial field -- a simulation study based on credit card overdraft dispute cases*[J]. Guo yu. *Rule of law*. 2016(04).
- [4] *Government statistics platform construction based on cloud computing under the background of big data*[J]. Yang meiyi, Lin yong. *Statistics and Decision*. 2016(04).