

Research Article

Expert System Development for Law Firm Using Information and Communication Technology in Indonesia

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Information technology has changed the order of business and industry, including the legal services industry. This change requires law firms to be more creative and innovative in implementing legal processes in the development of information and communications technologies. To survive, a law firm cannot rely on its strengths in reputation and service quality only but also needs to consider the strength in using technology tools. The purpose of this study is to map the need for expert system development in law firms as an effort to deliver an effective and efficient legal process. The method used in this research was the normative legal method with a statute approach and conceptual approach. The results of this study were expected to provide an overview of the modern law firm structure model based on information technology. The results of the study showed that to anticipate changes to the demand for efficiency and the encouragement of regulations related to the use of information technology a law firm must adapt and develop information technology as the basis for the legal process. The stages of development begin with the development of Knowledge Management Technology based on Knowledge Management Systems. The next stage is the development of expert systems in the form of diagnostic systems, planning systems, procedural systems, intelligent checklists, document modelling systems, and argument generation systems.

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1. Introduction

Law firms as legal service providers must strive to anticipate changes in the demand of the market, in this case, the users of legal services, according to Richard Susskind, there are two ways of changes: (1) New methods, system, and processes will emerge to reduce the cost of undertaking routine legal work. (2) By the market will be for clients, in various ways to share the costs of legal services[8]. By Richard Susskind, these changes are described as a legal paradigm. The legal paradigm is a revolution in law, after which many of the current features of contemporary legal systems which we now take for granted will be displaced by a new set of underlying premises and presuppositions [8].

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More concretely, he conveyed that the paradigm shift, especially in the legal process, would shift “From print base to IT-Based Legal Systems”. Which means, legal practice and administration of justice will no longer be dominated by print and paper in tomorrow’s legal paradigm. Instead, legal systems of the information society will evolve rapidly under the considerable influence of ever more powerful information technologies [8]. From Susskind’s view on the shift in the legal process, it shows that the change is no longer an option, but pressing matter that must be addressed by a law firm. This view is in line with Ethan Katsh who explained that “... key challenge of survival for legal expertise will depend on service quality and a capacity to use data and technology tools” [4].

Besides the awareness of the legal paradigm, in Indonesia legal practice, several regulations encourage law firms to immediately develop their information systems. First, in the field of litigation based on the Supreme Court of the Republic of Indonesia Regulation No. 1 of 2019 on Administration of Cases and Trials in the Electronic Court or known as e-court. With the implementation of e-court, the entire series of trial processes starting from accepting claims/requests, answers, replications, duplications, and conclusions, as well as managing and storing case documents are using an electronic system.

In the non-litigation legal services sectors, several policies have also implemented information systems, one of which is in the capital market. The Financial Services Authority Regulation Number 58 /POJK.04/2017 has been issued regarding the Submission of Registration Statements or Electronic Corporate Action. Based on this policy, all submissions of registration statements, both in the context of initial public offerings and corporate actions, must be done electronically through the Financial Services Authority’s licensing system. The submissions of Registration Statements include registration statements in the context of a public offering of debt securities and/or Sukuk, and a continuing public offering of debt securities and/or Sukuk, public company and rights issues. Registration statements are also made on several corporate actions, including registration statements for corporate mergers, consolidations, voluntary tender offers; and mandatory tender offer.

The use of information technology in legal practice is not a novel matter, even in some countries it is known as the new technologies on the legal process, where the developed information system is synchronized with the world of law as well as an alternative dispute resolution media. This is further explained in the study of The Law Society of Western Australia that “... new technologies available include cloud computing, electronic document management systems, artificial intelligence, virtual

law firms, online dispute resolution, electronic courts and electronic filing of the court document, use of social media and blockchain” [11].

2. Discussion

2.1. Legal Services Information System Development

At the planning stage of the information system application development, the information system architecture must be formulated first. The information system architecture is used as a reference for building a business model for legal services. Although in practice there is no standard legal service business model found, there are several business models that can be tailored to the needs and characteristics of legal services for each law firm as described by Bridgate Toy-Cronin: It is important to remember that no single model responds to all needs. Just as the current dominant model of hourly billing and full carriage of matters does not suit all clients needs, new business models will not be a one-size-fits-all[10]. Partially, the development of information technology can be done through the development of electronic document and records management systems (“EDRMS”).EDRMS is defined as “an automated software application designed to assist you with the creation, management, use, storage and disposal of information and records”[10]. In the development of EDRMS, several modules were created to support the performance of law firms, one of which is the client files. These client files, an important part of a law firm, are different from client files in the pre-digital era, in the era of lawyer mobility, client files must be in the form of digital files that aim to reduce or eliminate some recurring problems with hard copy files. The protability of digital files poses significant challenges to firms attempting to mitigate the effects of lawyer mobility[6].

However, this step has not shown a comprehensive information technology architecture design yet. To be able to build a comprehensive information system architecture design, Knowledge Management Systems must be compiled[2]. Knowledge Management Systems can be divided into several categories including administrative data, declarative knowledge, procedural knowledge, and analytical knowledge, which can be described as follows:

1. Administrative data includes all of the nuts and bolts information about firm operations, such as hourly billing rates for lawyers, client names and matters, staff payroll data, and client invoice data;

2. Declarative knowledge, is knowledge of the law, the legal principles contained in statutes, court opinions and other sources of primary legal authority, law students spend most of their law school careers acquiring this kind of knowledge;
3. Procedural Knowledge, “procedural” is knowledge of the mechanics of complying with the law’s requirements in a particular situation: what documents are necessary to transfer an asset from Company A to Company B, or what forms must be filed where to create a new corporation;
4. Analytical knowledge, is the conclusions reached about the course of action a particular client should follow in a particular situation. Analytical knowledge results from analyzing declarative knowledge (i.e. substantive law principles) as it applies to a particular fact setting[1].

It needs to be noted that in the preparation of Knowledge Management Systems, it cannot be generalized to every law office. It must consider the characteristics and be adapted to the needs of each law office. There are several characteristics of law offices, they at least can be grouped into 2 (two) types, litigation lawyer and corporate lawyer. Each of them has different characteristics and patterns. Thus, the information system developed is of course also different.

Based on the compiled Knowledge Management Systems, Knowledge Management Technology is further developed. In developing Knowledge Management Technology, the following development stages are required:

1. End-user tools are made available to knowledge workers. At the simplest stage, this means a capable networked PC on every desk or in every briefcase, with standardized personal productivity tools.
2. Information about who knows what is made available to all people in the firm and to selected outside partners. Search engine should enable work with a thesaurus, since the terminology in which expertise is sought may not always match the terms the expert uses to classify that expertise;
3. Information from knowledge workers is stored and made available to all people in the firm and to selected outside partners;
4. Information systems solving knowledge workers and solution seekers. Artificial intelligence is applied in these systems[2].

Of the four stages, information systems solving knowledge workers and solution seekers based on artificial intelligence will simplify the work for the lawyers in the current era of disruption.

2.2. Expert system development model at Law Firm

Conventionally, the strength of a law firm in providing legal services lies in its reputation, experience and integrity. Besides that, in providing legal services, the ability to conduct legal research is also required. Basically, in conducting legal practice, research carried out by a lawyer can be categorized as applied legal research[5]. Legal research in legal practice will produce legal arguments[5]. In conducting applied legal research, a lawyer needs legal sources as research material, both in the form of primary legal materials and secondary legal materials.

As a country that adheres to a civil law system, the primary legal material is authoritative, meaning that it has the authority[8]. This is different from countries that adhere to common law, where the primary legal material is in the form of judicial decisions or jurisprudence. Primary legal materials consist of legislation, official records, or minutes in the making of legislation and court decisions. Meanwhile, the secondary legal materials are in the form of publications on law that are not official documents i.e. textbooks, legal dictionaries, legal journals, and comments on court decisions[5]. In the future, the strength of legal materials in digital form is going to be one of the strengths of each law office. The strength of legal materials elaborated in information systems as solving knowledge workers and solution seekers is what is called an expert system.

In simple terms, Curtis and Cobham explain that an expert system is a computerized system that performs the role of an expert or carries out a task that requires expertise (Curtis and Cobham, 2002). According to Susskind, there are at least six types of expert systems that are important for future law firms to develop:

1. Diagnostic systems, those systems offer specific solutions to problems presented to them. From the facts of any particular case, as elicited by such a system, it will analyze the details and draw conclusions, usually after some kind of interactive consultation.
2. Planning systems, in a sense, planning systems reason in reserve. For these are instructed as to a desired solution or outcome and their purpose is to identify scenarios, involving both factual and legal premises, which justify the preferred conclusion.

3. Procedural guides, many complex tasks facing legal professionals require extensive expertise and knowledge that is in fact procedural in nature. Expert systems as procedural guides take their users through such complex and extended procedures, ensuring that all matters are attended to and done within any prescribed time periods.
4. Intelligent checklist, this category of system has most often been used to assist in auditing or reviewing compliance with legal regulations. Compliance reviews must be undertaken with relentless attention to detail and extensive reference to large bodies or regulations.
5. Document modelling systems. the systems also referred to as document assembly systems-store templates set up by legal expert; and
6. Argument generation system. It is envisaged that these systems are able to generate sets competing for legal arguments, in situations when legal resources do not provide definitive guidance. Rather than seeking to provide legal solutions (as diagnostic systems strive to do), argument generation systems will present sound lines of reasoning, backed both by legal authority and by proportions of principle and policy[9].

The lawyer advises the client on the likely outcome of litigation based on the facts of the particular case, an expert understanding of the law and knowledge of the way the courts work and interpret this law in practices. Likewise, for example, in the event that a client wishes to submit a registration statement at the Financial Services Authority, an expert system has been developed to provide instructions for the stages as well as the documents required in the application for a registration statement.

Expert system development does not have to be built simultaneously because it must take into account the capabilities or needs of each law office. Besides, it must also pay attention to the orientation of legal services as a priority for developing a law firm. For example, in a law office that is oriented towards litigation, the procedure for handling cases in court needs to be developed there. On the other hand, if it is oriented towards corporate lawyers in the capital market, the development of the corporate action procedures for companies in the capital market is prioritized.

3. Conclusions

The results of the study showed that to anticipate changes to demands for efficiency and the encouragement of regulations related to the use of information technology both in

the judicial system and in registration statement processing procedures a law firm must adopt and develop information technology as the basis for the legal process. The stages of development begin with the development of Knowledge Management Technology based on Knowledge Management Systems. The next stage is the development of expert systems in the form of diagnostic systems, planning systems, procedural systems, intelligent checklists, document modelling systems, and argument generation systems. Expert system development does not have to be built simultaneously because it must take into account the capabilities or needs of each law office. Besides, it must also pay attention to the orientation of legal services as a priority for developing a law firm.

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