Impact of IT over business operations: Case of Moroccan Law firms

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Abstract: Due to the complexity of the business environment companies have delved into, several studies have been conducted in an attempt to determine the most effective combinations of operations improvements for organisations. This paper analyses one major factor that directly contributes to this end: the use of Information Technology. Our study focuses on the automation of business processes and the positive impacts it can have on organisations' operations. In order to illustrate our claim, we have decided to base our research on a real-life example related to Moroccan law firms. Indeed, throughout this paper, we are investigating the various benefits automation can have on processing clients' data and performing many other law-related tasks that are usually manually intensive. The results of our research show that, indeed, automation of lawyers' work is highly needed to help them better their performance and process clients' cases in a faster and more efficient manner.

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INRODUCTION

One of the most time-consuming hurdles Moroccan lawyers have to deal with on a daily basis is their manually intensive job nature. Indeed, they are often overloaded with the huge amount of paperwork they need to process every time they want to search for a client's case, schedule their appointments, or complete many other tasks related to their work. This traditional approach engenders significant latency in cases processing and consequently prevents lawyers from having an efficient and organized work style.

Lawyers' job requires processing a large quantity of folders and documents related to clients' cases. These documents tend to be of an utmost importance and any loss can lead to negative consequences such as delays of court sessions and thus clients' dissatisfaction. Due to this problem, we have decided to come up with anautomated way to manage the heavy work of Moroccan lawyers. After following a systematic process and experimenting with different alternatives, we finally developed a novel web application intended to help Moroccan lawyers achieve their duties in the mostefficient ways, thus appreciably enhancing the Moroccan Law industry.

E-Lawyer web application's major purpose was to automate lawyers' work by helping them take advantage of several features, such as knowing their agenda ahead of time(Including the whole week's activities). This innovative application would also allow them to access anddisplay information related to their clients and law cases and keep track of their evolution. Also, we made sure during the implementation of this platform to preserve lawyers' clients'confidentiality by strengthening the security features of the software, so that clients' data isnever compromised or divulged to any non-approved third party.

PROBLEMATIC

The primary drive behind starting our research project was to investigate the role and importance of technology in law firms' daily operations. Indeed, we have noticed a significant

increase in clients' complaints in the law industry, claiming that their cases are being delayed and that, sometimes, erroneous data is associated to them. After a thorough investigation, we were able to gather many ideas that all converged towards one conclusion: all these complaints are results of lawyers' manually intensive job nature, which naturally leads to human errors and claims processing delays.

Consequently, we set out to automate lawyers' work from the start of the claim to the final full service delivery.

METHODOLOGY

Achieving the accurate results we were seeking required us to undertake systematic approaches and a clear methodology, both before starting our project implementation and afterwards. Indeed, in the IT industry, being skilled at programming is usually insufficient to be able to develop a bespoke fully-functional platform that satisfies customers' needs and requirements. In our case, developing the E-lawyer web application required us to have thorough understanding of the Moroccan Law procedures, technical words and different field-specific concepts. To this end, we conducted extensive preliminary research in an attempt to have a clearer idea of the process we were seeking to automate.

Our first methodology consisted of researching into publicly available resources related to the Moroccan legal procedures; those included official documentation about the topic as well as the Moroccan constitution. Additionally, we set out to prepare a survey for numerous Moroccan lawyers to ensure our application conforms to their specific needs and resolves their work-related daily issues.

During the implementation phase of our novel platform, we decided to follow an incremental approach as a software engineering methodology. This meant that the application was broken down into increments in such a way that it was possible for us to go back to the code and make the necessary changes suggested by our customers.

RESULTS

After conducting a thorough investigative approach in an attempt to find the reason behind the several clients' complaints regarding their law cases, we finally came up with the conclusion that the primary issue lied in the huge load of data and paperwork that lawyers needed to manually process. To resolve this issue, we prepared a survey comprising several questions related to the different ways and methods that could make Moroccan lawyers' work easier and significantly more productive. For this purpose, we sent surveys to 80 lawyers located in different regions across the country, while focusing more on those based in Rabat (the capital city) and Casablanca (the industrial capital).

Processing lawyers' answers to the surveys led us to conclude that 96.25% of them agreed that an automation of their work would be the radical solution to the problems they encounter in their job. The remaining 3.75% claimed that such an approach would not be of significant help to them as the manually intensive tasks are usually done by their secretaries. However, they agreed that some aspects of their job are time-consuming hurdles and that automating them would help decrease the time spent on their successful achievement.

After proceeding to the requirements specification phase, we have been able to gather the different functionalities needed in our application and have successfully implemented and tested them. Those functionalities consisted of allowing lawyers to search for, add, update and delete their clients' information through a user-friendly interface. Similarly, they are now able to add, search for, view, update and delete cases, procedures as well as court sessions. The application also allows lawyers to upload, download and delete documents in various formats (.pdf, .docx). This is in addition to numerous other capabilities allowing for the full automation of lawyers' administrative work, such as appointment scheduling and contacts logging.

LITERATURE REVIEW

Information technology is of an utmost importance to organisations' operations. Indeed, it is blatant that enterprises of the 90s will be considerably different from those of the 21st century. While numerous other reasons have been argued to directly propel organisations' development, a primary factor lies in harnessing the capabilities provided by Information Technology. The importance of the use of IT as a major drive of business development is illustrated by its significant impact on organisations' operations. This is characterised by the creation of platforms having the capability to automate not only the administrative activities, but also the entire businessprocesses. [1]Effective and efficient organisations' performance is primarily driven by the business value that IT has to offer. Previous research has indeed demonstrated that IT is one of the major factors behind business operations and performance improvement [2]. Furthermore, the dimensions of IT business value are closely dependent on various factors, such asthe management practices, the type of IT, the organisational structure as well as the macro environment [3].

As part of the IT-related improvements, automation of business processes is considered to be an invigorating power behind more efficient and productive operations in today's fast paced environment.Indeed, "in the highly industrialised countries, process automation serves to enhance product quality, master the whole range of products, improve process safety and plant availability, efficiently utilise resources and lower emissions" [4]. In the past few decades, automation of business processes was deemed to enhance efficiency and effectiveness for achieving reliable production while ensuring lower costs. However, benefiting from these advantages necessitated standard product designs as well as big production runs. Consequently, the sole purpose behind automation was described as

fundamentally merely executing pre-defined operations in an efficient manner, rather than trying to modify them or offer new opportunities for the organisation [4].

However, as years went by, altering this passive and static view of automation has become a crucial need for enterprises due to the complexity of the business environment they have been submerged into. Introduction of computers and cloud computing in the automation process has radically changed this perception of technology by endowing it with novel capabilities in products' design and processing [5]. Through the significant optimization of the elapsed time between products'design and production, organisations are now able to perform more efficiently while maintaining the desired quality of products and services [6].

DISCUSSION

Based on the previously discussed studies in our literature review, it could be inferred that the automation of business processes is indeed a major factor behind the appreciable enhancement of organisations' operations.In fact, numerous companies throughout the world have started automating their processes in an attempt to increase their sales or fasten their production process, as a means to cater to customers' specific requirements and needs. Those companies have opted for several business process management software tools, such as Promap or Integrify.

Manually intensive processes are usually coupled with human errors throughout their achievement. Consequently, this leads to a significant decrease in products' and services' quality, which in turn engenders customers' dissatisfaction. This being said, companies' competitive advantage is also negatively affected by this lack of automation tools.

For our own study, we are aiming at widely spreading our novel application across Moroccan law firms so they can benefit from all the advantages it has to offer. Indeed, our automated solution would not only make lawyers' life easier and less tedious, but it would also provide a basis for better legal services to clients. This will be possible through a significant reduction in the time it takes lawyers to process their clients' data.

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