



Future of Audit with Pro-Auditor With Data Analytics

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ABSTRACT

As there are hundreds of accounting firms in Malaysia, they all have the same practices. Based on a research done, most audit firms do not have an integrated and centralized system for the use of Financial Auditors and IT Auditors. By implementing this system, audit activities will be enhanced, and the work produced will reach its maximum quality. Evidences of audit will be selected at a more efficient manner. In addition to that, another function is being added to this software, whereby auditors will be able to view their productivity level. This will be done with the application of Data Analytics and several other key components in identifying the productivity of the auditors. This will benefit both auditors and the accounting firms as well. In Audit Processes, it is crucial to have a centralized system, whereby audit evidences and work papers are under one centralized system. However, if there isn't a platform, audit processes will be less effective. In conclusion, this report shall cover many aspects with a few evidences and appendices in support of the project executions as several key aspects of audit has been highlighted..

Key words : Data Analytics, executions

1. INTRODUCTION

With the existence of more than 350 audit firms in Malaysia today, it is proven that the process of auditing is extremely crucial in every organization regardless of the size or background of the company. However, most of the audit firms do not have an integrated and a centralized system for the Financial Auditors and IT Auditors. In addition, the current system being practiced does not comprise of certain functions that has to be automated and enhanced further.

1.1 Objective

- To study the importance of developing a centralized audit platform for internal audit parties and external audit firms regardless of size and volume of the firm.
- To develop a productivity monitoring system, which will enhance the audit processes being practiced in internal and external audit sectors.

- To execute a feature within the means of smaller accounting firms and the internal auditors of major corporations.

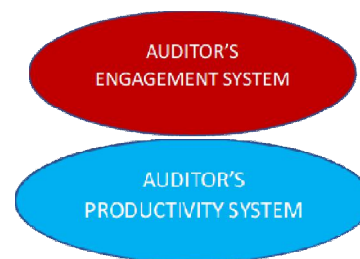


Figure 1: Auditor system

Table 1: Comparison for Department Requirements Among Audit Softwares

Administration
Planning & Risk
Workpapers
Reporting
Follow-Up

1.2 Future of Auditing

There is still a tendency for them to face conflicts and this might lead to them facing a negative impact for the whole audit process. Therefore, the future of audit would be affected if these standards of audit are not met. However, with proper implementation of audit software and platforms, auditors work would be carried out ethically and impartially.

All the big four firms rely on a developed platform and software to carry out several key functions that are required for audit purposes. Examples of those functions are evaluating risks, testing journal entries, and selecting transactions based on control risk samples.

Therefore, it is extremely crucial that the audit firms practice their daily tasks using a systematic and integrated platform carried out a thorough research on internal audit sectors and several audit firms in the country. Based on the findings of the research, by having a compatible technological platform, both

the client's Information System and the auditors would be able to test the accuracy of data in a more effective manner.

2. METHODOLOGY

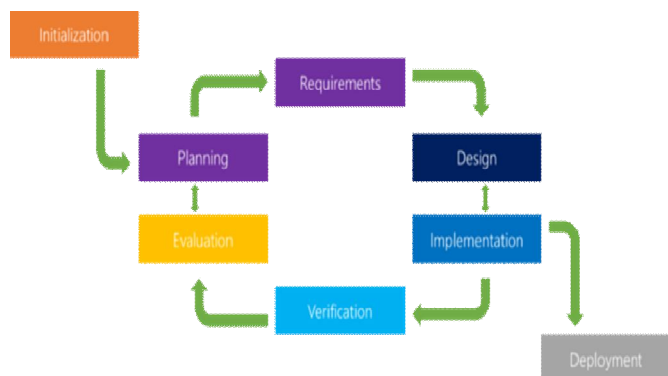


Figure 2: Methodology

Firstly, during initialization, the flaws of the current audit system were questioned. Multiple interviews and walkthrough sessions were being carried out to learn how crucial it is to have an efficient system for auditors. Based on the live testing sessions and the outcome of the interview, all the results were recorded and analyzed thoroughly.

The second phase begins with planning the project execution. At this stage, possible features and functionalities of the system were selected which will be analyzed and planned accordingly as it is important to fit the requirements of the audit procedures as well.

The third phase begins with identifying the requirements of the system by researching on several platforms including the Internet, audit reports and audit evidences.

The fourth phase begins with designing the software. At this stage, the prototype should be enhanced first, before beginning the process of developing the software that will be the final product.

The fifth phase begins with the implementation of the software. At this stage, the entire system should be functioning after continuous adjustments on the design of the software. To carry out live testing sessions, there are several platforms that can be used. Since audit-related software are client-based product, the implementation of this software would the targeted market segregated such as the small audit firms and internal audit sectors of major companies in the country

The sixth phase is known as the verification step. The verification of the software is extremely crucial as the results would impact the outcome of implementing the system in the targeted firms. This phase will be divided into two main parts; the first being the verification by audit firms and auditors and the second part would carried out by the supervisor.

The seventh phase is the evaluation process which is the final step of the second phase in developing the most suitable platform for auditors. During this process, results from the discussion will be analyzed in detail. Every change shall be recorded, and necessary actions will be made to fit the initial requests.

The last part in completing this system is the deployment phase which is expected to be done once the full system is functional. Once the whole system has been fully developed, the system can be implemented in the audit firms and the internal audit sectors. Demonstrations of the software will be carried out to convince clients on the efficiency and functions of the system.

3. LITERATURE REVIEW

3.1 Activities within the IT Auditing World

Incompetency of the current audit practice have caused many issues within the auditing world. According to [1], there are certain audit practices that should be embraced by auditors to support their tasks in retrieving information and analyzing data and the best platform to do so would be through (CAATTs) which stands for Computer Assisting Audit Tools and Techniques.

Through a constructed IT-assisting audit system, several components of audit shall be addressed and monitored, such as data analytical procedures, system functions and rate of final execution. Moreover, as agreed upon by [1], auditors need a centralized and systematic system to ensure that they could perform crucial tasks such as testing program controls. By having an integrated system like the Pro-Auditor Software, organizations in Malaysia can achieve their objective of reaching the levels of auditing procedures in more developed countries. According to [2], IT Based Auditing procedures is emerging in developed countries as it is extremely important for audit firms to deliver high-quality audit outcomes for clients.

3.2 Importance of Practicing an Integrated And Centralized Audit System – Objectives Of Monitoring The Productivity Of Auditors

A systematic audit platform for the use of IT Auditors and Financial Auditors determined the effectiveness of the audit activity carried out. According to research, a centralized database is extremely crucial in the hierarchy of audit procedures. According [7], crucial audit information that may be held by data providers should be stored in a database. A

centralized database is the backbone of an audit firm as mentioned by [6], the database of an audit firm should be a platform where information can be retrieved easily and since the database is centralized, it will improve the quality of audit.

The objective of the integrated software is to create and enhance the productivity monitoring feature, which will in turn enhance the audit process. A statement was made by [1]; a specialized and systematic software will enable both IT Auditors and Financial Auditors to automate all audit tasks. Today there are various platforms of audit software, but their common purpose would be to analyze the risk assessment of their respective clients. Therefore, the auditors would have to continuously track their audit work methodology as their performance will reflect on their respective firms.

This has been supported by [1], who claimed that even with the existence of some audit software today, the productivity of work by auditors remains quite low. Therefore, a productivity monitoring system will be able to track the audit work to determine the quality of audit reports produced. The integration between financial auditors and IT Auditors plays a huge role in terms of the productivity of the audit reports as well. According to [4], financial analysts and IT audit should have a monitoring system as both groups play a huge role to both the firm and their respective attributes. Therefore, it is crucial that they have a productivity monitoring mechanism in their daily work.

Moreover, having an affordable audit software for smaller accounting firms and internal auditors of major corporations should be focused on in today's auditing world as well. A statement was made by [4]; the role of financial reporting between public and private companies differ. However, due to the lack of resources, these companies, including the big four audit firms outsource external auditors. [4] says that based on previous incidences and studies, the use of external accountants and auditors has led to leakage of financial information.

Based on a research carried out in Europe, approximately 600 small firms were selected to test on whether they have any association with the big four auditing and accounting firms. [4], found that there were no associations between them due to several factors such as volume of clients and the maintenance of the software. With the advancements of technology, we have today, small firms would be able to enhance their audit structure especially in handling requirements such as IT Application and General IT Controls

3.3 Importance of having an integrated system between IT Auditors and Financial Auditors

According to [5], audit processes and audit reports are a set of attributes that are highly valued by both financial auditors and IT Auditors. By having a systematic process in place, it would ensure the quality of audit reports. [4] added by agreeing that audit services are differentiated by the values placed by Financial Auditors and IT Auditors and it is crucial that a systematic platform is integrated. This proves that the quality of an audit depends on the frequency and level of audit work

done by both auditors. Therefore, it is extremely crucial to have a systematic platform for the auditors to record their work to learn and improve upon and to further progress in the auditing world.

3.4 Future of Auditing Procedures

As mentioned by [3], even with the ethical and professional set of standards that will guide both IT Auditors and Financial Auditors, there is still a tendency for them to face conflicts and this might lead to them facing a negative impact for the whole audit process. Therefore, the future of audit would be affected if these standards of audit are not met. However, with proper implementation of audit software and platforms, auditors work would be carried out ethically and impartially.

According to [1], all the big four firms rely on a developed platform and software to carry out several key functions that are required for audit purposes. Examples of those functions are evaluating risks, testing journal entries, and selecting transactions based on control risk samples.

Therefore, it is extremely crucial that the audit firms practice their daily tasks using a systematic and integrated platform [1] carried out a thorough research on internal audit sectors and several audit firms in the country. Based on the findings of the research, by having a compatible technological platform, both the client's Information System and the auditors would be able to test the accuracy of data in a more effective manner.

By leading towards this method, the integrity of the audit firm itself shall be assured. Even smaller audit firms dealing with less sophisticated clients should practice their daily audit work using a proper system as they should adjust their technological competence using sophisticated IT platforms. Therefore, as technology advances day by day, the level of integrity in the audit world increases rapidly as well. Since all audit firms are leading towards achieving that particular goal, it is extremely crucial that they are in line with the enhancements of the procedures.

3.5 Misalignments of IT Applications with Accounting and Audit Procedures

According a statement by [8], there are many cases of misalignment in audit procedures as there are disintegrations between the Information Technology and the Finance sector. The knowledge and skills of both auditors have indeed supported the process of fulfilling the needs of audit, however, due to these issues, the audit process is being affected. Therefore, it is extremely crucial that these skills perceived by both financial and IT Auditors shall comply to the audit activities by these firms.

3.6 International Journal of Accounting & Information Management

As per research carried out, [9] made a statement agreeing to the importance of a systematic financial reporting handling. An audit example from China was selected and analyzed thoroughly. Besides, the integration between financial auditors and IT Auditors would ease the integration of audit

activities. This is crucial as audit procedures would have to comply to the governance requirements. Therefore, proper planning, reporting transparently, due diligence would ensure the avoidance of failures in the audit activities.

4. RESULTS AND DISCUSSION

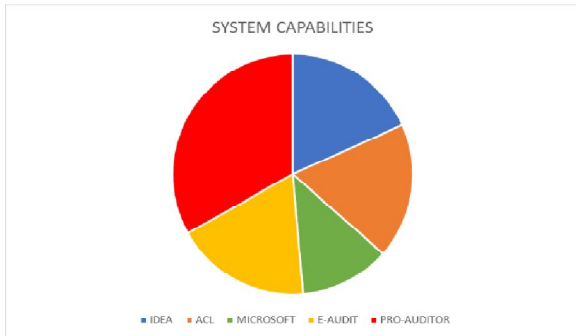


Figure 3: System Capabilities

Under the current practices of Audit, there are several key components of a system that plays a huge part in ensuring a proper flow of audit is being able to be practiced. Therefore, one of the key differences of all audit software would be the capabilities of those systems to provide certain functions. One of the main functions that all audit software has is that they are compatible with the Microsoft products such as Word and Excel. This function is extremely crucial in every audit practice.

Besides, all the other software has the ability to run the system on a standalone PC with the support of a network. Moreover, all the systems would also be able to resolve synchronization conflicts and dial in remotely and synchronize data.

However, there is an added value from the perspective of the Pro-Auditor Software, whereby as a software owner, source code shall be provided to the customer. The reason why the source code shall be provided to the customers is because, the customer themselves shall be able to change the requirements according to their needs. These changes of requirements must be under the compliance of the audit processes as well. Only then, the audit work shall be considered accountable and fulfilling the audit needs.

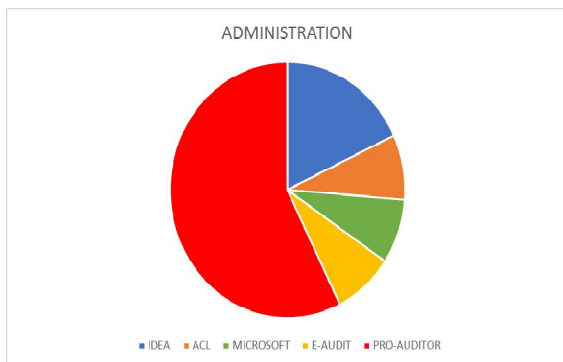


Figure 4: Administration

Under the administrative sector of an audit firms, the Pro-Auditor Software stands out among the other software. There are several key segments of the system that proves its ability to be one of the major platforms to carry out audit activities. One of the major functions of the system is that it shall be able to assign security permission levels. By doing so, each client being audited shall be handled according to their level of risk and this shall improve the audit results. Besides, the Pro-Auditor Software shall review and access multiple security level s with user identification for read, write and edit privilege according to staff status of engagements. This is probably one of the biggest contributor to the audit firm, as this feature. In addition, the Pro-Auditor Software has an added feature of tracking down the audit work being uploaded and edited by the previous auditor. This will not only improve the efficiency of the audit work, it shall sort the evidence accordingly and improves the integrity of the audit firm in the long run.



Figure 5: Planning and Risk

Planning and risk assessments are the two backbones of the audit firm. Therefore, the functionality of the risk assessment features determines the flow of the audit activities. Pro-Auditor Software stands out among the other platforms, as the risk factor was a major contributing factor in executing the system.

One of the characteristics of planning and risk is the application of the audit plan development with budgeting support and reporting of deviations to actual project time. This is extremely crucial as it integrates between IT Auditors and Financial Auditors.

In addition, the Pro-Auditor Software is to be considered accountable within the audit world as it has the ability to calculate the date an audit project should be next performed based on several designated criteria. This shall be engaged under the staff and auditors' engagement sector of the Pro-Auditor Software

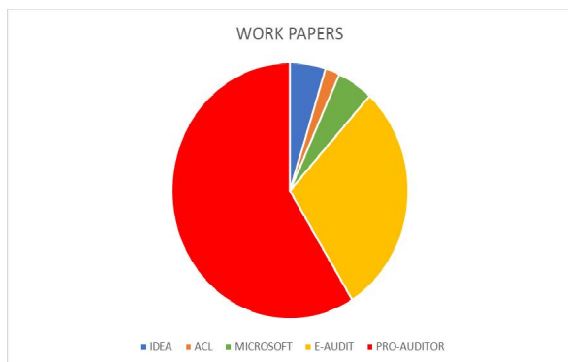


Figure 6: Work papers

Workpapers are the most crucial set of audit evidences to be reviewed by the managers and audit partners. After carrying out auditing procedures and functions, auditors will record the report in the working papers. This working paper will then be reviewed by the managers from the client and auditor's perspective. Based on the data collected after carrying out walkthrough session on each of the available audit platforms as above, Pro Auditor Software and E-Audit software stands out to support this function. By providing a platform for auditors to upload the working paper with accessibility to authorized personnel, it will improve the efficiency of the audit activities and the outcome produced shall ease the whole audit structure practiced. As for the other platforms, it has proven that it is not very compatible in terms of handling working papers. Therefore, it is extremely crucial that the audit firms have a suitable platform to ensure the audit procedures are not affected, especially in the long run.

4.1 Tools and Hardware

Hardware

1. Computer

Computer was needed for the execution of the final result. The system was developed in a windows 8 system, with a 64-bit version. All necessary software was downloaded as per the agreement with the requirements of the first phase of the software

2. Windows Server–Windows Server 2016

Windows Server 2016 is an operating system, which has been designed and created by Microsoft while being developed alongside Windows 10.

Software

1. Microsoft Visual Studio: Visual Basic

Microsoft Visual Studio is part of the Microsoft Environment, which can be implemented with many programming languages. I have used Visual Basic for the project, which is a part of the Visual Studio Development Languages.

2. Database for Visual Studio: MySQL

MySQL is a database system that was developed by one of the first IT based groups known as Oracle. This database will store every necessary data and will be managed by an SQL server. Since the computer used does not have the ability to store all the data, an integrated database is required to do so. For the data gathering and analysis, I had to understand each entity and the relationship and attributes each of them had as it eased my process of executing the database.

5. CONCLUSION

The reason why the source code shall be provided to the customers is because, the customer themselves shall be able to change the requirements according to their needs. These changes of requirements must be under the compliance of the audit processes as well. Only then, the audit work shall be considered accountable and fulfilling the audit needs. Therefore, it is extremely crucial that the audit firms have a suitable platform to ensure the audit procedures are not affected, especially in the long run

REFERENCES

1. Rindang Widuri, Brendan O'Connell, Prem W.S. Yapa, (2016) "*Adopting generalized audit software: an Indonesian perspective*", Managerial Auditing Journal, Vol. 31 Issue: 8/9, pp.821-847, <https://doi.org/10.1108/MAJ-10-2015-1247>.
2. Muhammad A. Razi, Haider H. Madani, (2013) "*An analysis of attributes that impact adoption of audit software: An empirical study in Saudi Arabia*", International Journal of Accounting & Information Management, Vol. 21 Issue: 2, pp.170-188, <https://doi.org/10.1108/>
3. J Imen Khelil, Khaled Hussainey, Hedi Noubbigh, (2016) "*Audit committee – internal audit interaction and moral courage*", Managerial Auditing Journal, Vol. 31 Issue: 4/5, pp.403-433, <https://doi.org/10.1108/MAJ-06-2015-1205>
4. Hannu Ojala, Mervi Niskanen, Jill Collis, Kati Pajunen, (2014) "*Audit quality and decision-making in small companies*", Managerial Auditing Journal, Vol. 29 Issue: 9, pp.800-817, <https://doi.org/10.1108/MAJ-08-2014-1063>
5. Ebraheem Saleem Salem Alzoubi, (2016) "*Audit quality and earnings management: evidence from Jordan*", Journal of Applied Accounting Research, Vol. 17 Issue: 2, pp.170-189, <https://doi.org/10.1108/JAAR-09-2014-0089>
6. Tatiana Mazza, Stefano Azzali, Luca Fornaciari, (2014) "*Audit quality of outsourced information technology controls*", Managerial Auditing Journal, Vol. 29 Issue: 9, pp.837-862, <https://doi.org/10.1108/MAJ-10-2013-0956>
7. Daniel Bachlechner, Stefan Thalmann, Markus Manhart, (2014) "*Auditing service providers: supporting auditors in cross-organizational settings*", Managerial Auditing

- Journal, Vol. 29 Issue: 4, pp.286-303 303,
<https://doi.org/10.1108/MAJ-05-2013-0861>
8. Ayman M. Sabry Nokhal, Noor Azizi Ismail, (2014) **"Mis-alignment between IT knowledge/skills importance and IT knowledge/skills integration level into the accounting curriculum in Egypt"**, Journal of Financial Reporting and Accounting, Vol. 12 Issue: 1, pp.45-61, <https://doi.org/10.1108/JFRA-03-2012-0008>
 9. Gin Chong, (2015) **"International insurance audits and governance"**, International Journal of Accounting & Information Management, Vol. 23 Issue: 2, pp.152-168, <https://doi.org/10.1108/IJAIM-04-2014-0028>
 10. Ella Desmedt, Danielle Morin, Valérie Pattyn, Marleen Brans, (2017) **"Impact of performance audit on the Administration: a Belgian study (2005-2010)"**, Managerial Auditing Journal, Vol. 32 Issue: 3, pp.251-275, <https://doi.org/10.1108/MAJ-04-2016-1368>