Zakat Management System: Designing Effective Approach Through Knowledge Management System

Muharman Lubis
School of Industrial Engineering
Telkom University, Jalan Telekomunikasi
Bandung, 40257, Indonesia
muharmanlubis@telkomuniversity.ac.id

ABSTRACT: *Zakat is the pivot approach in Islamic teachings to encounter social problem such as poverty in society by sharing the percentage of wealth to relevant recipients as the obligation to the person who affordable. The collaborative research conducted by Badan Amil Zakat Nasional (BAZNAS) and Institut Pertanian Bogor (IPB) estimated the potential of zakat collection in Indonesia could reach about Rp 217 trillion every year that has not been achieved yet. This study attempts to investigate the problem and challenge occurred in adopting knowledge management system based on KMSLC with addressing Indonesia issues. The purpose of the study is to discover conventional approach within zakat staff's institution and at the same time provide the other suggestion especially in KM in order to improve their task by the fastest and the smartest way. Since this paper is exploratory research to develop framework, thus it utilizes qualitative method as it employs empirical support within historical background and interview.*

Keywords: Zakat Management System, Knowledge Management, Effective Approach, Exploratory Approach

1. Introduction

Zakat literally has been derived from the Arabic root word that carries the meanings of "*that which purifies*", as well as "*that which fosters*", i.e. growth and increase. According to Ataina and Achmad [4], the meaning of growth of zakat means by paying zakat will help escalating prosperity towards the zakat receiver as obligation of zakat payers to increase the religious merit. Zakat has been divided into two main categories, which are zakat of *al-Fitr* and also zakat of wealth (mal). Zakat of *al-Fitr* is the zakat, which need to be paid by Muslims once a year during the month of Ramadan before the Muslims festive season celebration known as *Idul Fitri*. Zakat of *al-Fitr* is also being referred as a zakat of the body while Zakat mal is the 2.5% of the wealth that should be paid to required people once a year. There are eight groups of people who are qualified to receive zakat, as mentioned by Allah in His Holy Quran (QS: At-Tawbah: 60); *al-Fuqara'* (needy/strained), *al-Masakin* (poor/deficient/ lacking), *amil* (has right to collect zakat), *mualaf* (convert/reconciled to Islam), *al-Riqab* (slave), *al-Gharimin* (people in debt), *fi-sabililLah* (Allah's cause) and *Ibn as-Sabil* (traveler/wayfarer).

Zakat is one of the five pillars of Islam, which is not purely welfare-oriented that relies on the contribution of the giver but an obligation that must carried out to qualified recipients. According to the basic principles of zakat, the zakat institution has to be established first within Muslim society in a well-organized way [1, 4, 20]. The zakat institution should be under the responsibility of the Muslim Government or it also can be under the special Muslim supervisory body that has been appointed by that Government. Zakat is one instrument to support economic development by optimizing the collection of zakat as capital for list required people for their consumption and production as well. The required duty amounts to 2.5 percent of the asset from affordable Muslim annually can be utilized advantageously through proper zakat management system. Therefore, the indication from the society response depicted that zakat potency has not exploited optimally especially related to administration, collection and distribution whereas it could be as role for financial source to increase Indonesian society prosperity proportionally.

Indonesia is the largest Muslim populated country in the world., which 87% of 220 million people in Indonesia are Muslims. This comprised of about 191 million Muslims. From that figure, 40% (76.5 million) are subject to pay zakat, whereas the rest are entitled to receive zakat. Ideally, the rich Muslims can financially support the poor using the instrument of zakat. Thus, zakat, as an instrument of Islamic social welfare, should become a source to improve social-economic welfare for Muslim society in Indonesia. This means that zakat are very potential to alleviate poverty and promote social well-being if zakat can be organized effectively [31]. This study suggests the new technique or system that can enhance the existing system currently being used in Malaysia in distributing zakat funds more equally.

Through the new system proposed, it is hoped that it can increase the professionalism of zakat management, while increase the confidence of zakat payers, which later on might increase the zakat funds through Islamic financial system that eventually might increase the capability of asnaf (zakat receivers) to improve their life. Hopefully, it might eradicate poverty significantly while strengthen social assurance among Muslim society concurrently.

2. Literature Review

2.1 Knowledge Brokers
Working as knowledge brokers require to be able to response to whatever they perceive relevant and resourceful as quick decision even to the changing agenda but still depend complementarily with the mission and commitment [27]. To shape the human perception to meet the goal and expectation to have good quality of certain phase that have principle of transferability and readability; set of strategy should be developed and preferable environment should be prepared by the related institution [3]. Importantly by understanding the human factor within the framework, their perceptions of and motives for compliance in managementy can help the user to know the type of preventative actions taken and reduce the number of mismatch related incidents. Study investigated the productivity and efficiency of zakat institutions in Malaysia during the period of 2003-2007 suggest the increased at an average rate of 2.4 percent, attributed to technical progress (TECHCH) of 3.5% and efficiency change (EFFCH) with a negative change of -0.1%. Meanwhile, the result also indicated the technical efficiency at 80.6%, in which zakat institutions can increase the output by 19.4% based on existing level of inputs [37]. Parliament of Indonesia has been enacted Act No. 38/1999 to accommodate the role of BAZNAS (Badan Amil Zakat Nasional) and LAZNAS (Lembaga Amil Zakat Nasional) as the institution to manage zakat professionally. In addition, the regulation also introduce the use of zakat for deduction in taxable income, through article 13 subsection 3 of the Act. On the other hand, zakat as a deduction for taxable income is confirmed legally with establishment of Act No. 17/2000 on Income Taxes. Meanwhile, in chapter VIII explained the obligation to all zakat institution to keep the record accurately while the sanction has imposed reached Rp. 30 million as well as penalties if the institution does not perform its duties properly, aligned with UU KIP for the readiness to provide public data to social community. However, Saidurrahman [31] has been argued that zakat institutions in Indonesia needs to be managed properly without sacrificing the social capital such as the participation of private zakat management that has been neglected by the enactment of new Act no. 23/2011 to revise certain aspect.

2.2 Knowledge Repositories
In the context of repositories in the knowledge management, the organization should take the initiative to design a comprehensive policy for establishing the visibility and impact of the expected outcome by providing the interoperable preservation system and securing the assets from loss [7]. The principle represents a set of values that orientate and rule the conduct of a concrete society. Thus, the law establishes an obligation in the individual's conscience that belongs to the cultural field in which such values are accepted. It supposes the liberty of the individual as cause that acts without external coercion through a process of socialization although the importance of principle tends to be overlooked [21]. Arguably, the enforcement of

regulation is not necessary encourage punishment but it could focus more in the prevention action or deterrence by intervenes prior to the occurrence of safety offences (through training and education programs) and provides incentives (rewards, subsidiary, the use of a logo, relaxed inspections) to firms that participate in the program [30].

To align with presidential regulation no. 81/2010 about bureaucratic reform and PERMENPAN&RB no. 20/2010 about bereauatic roadmap stated the primary objective of development of human resources, which is handled by responsible ministry based on UU no. 5/2014 (State Civil Apparatus). Meanwhile, according to Act no. 14/2008 (Information Disclosure Act), public institutions should serve community by actualizing transparency and accountability in resource management and budget uses. However, despite all the controversy that accompanies Act No. 38/1999, after the enactment of the new Act, there are two major things that greatly influence the history of Islam Indonesia in managing social fund, mainly in zakat and other charitable funds. It was the end of the government exclusive authority in managing zakat, which as mentioned previously indeed is an absolute right and obligation of Umara (government) in Islam. The law also sanctioned the handing over of the authority to manage zakat fund to the part of community. Both government-backed BAZ and privately initiated LAZ have the same authority and role in collecting and distributing of zakat funds for Muslim community in Indonesia [31].

2.3 Knowledge Sharing
The practice of sharing the knowledge should consider the organizational culture that encourage favourable social environment such as trust, shared values and goodwill to facilitate the process, which is not susceptible to directive control in respect of intangible assets [32]. The efficiency of zakat institutions can be measured through unsatisfactory of both of those two parties towards zakat institutions services. Therefore, trust is based on interpersonal interaction among people and they are willing to share knowledge and provide assistance to one another in a crisis, in which need to reinforce the perception of employees' behavior [19]. In addition, individual, institutional and environment antecendent have positive impact toward user awareness to perceive compliance positively [4]. In addition, explicit knowledge transform into tacit knowledge that is easier when people trust each other and willing to contribute their own valuable knowledge [36].

To optimize the distribution, the institution should provide better strategy for collecting zakat for example, get direct involvement from zakat payers in order to facilitate zakat funds by providing various channel to improve efficiency in engaging the eligible recipients. The research done by Ahmad, Othman and Salleh [5] in Malaysia to assess satisfaction level found out that majority zakat recipient satisfy with service quality, though mostly relate to environment and disbursement. They added that poor and needy were not satisfied in regard to the waiting time and queue time. Interestingly, they also explained that majority zakat recipient obtained information regarding zakat disbursement from related friend (43%), followed by radio and television (23%), website and memo (20%) and newspaper (15%). After all, the ZMS carried out by zakat institutions appointed by government and zakat committee based at masjid has yet to be ran professionally, in which many of them are only part-time workers, burdened with huge responsibilities to handle cases such as; unbalanced disbursement which do not follow census result accordingly, lack of transparency regarding in and out of zakat flow, target specific group of people such as civil servants of municipality and the low capital support at only around half millions Rupiahs [1]. Government should utilize the function of masjid, not only as the place for religious ritual and educational activities, but also source to enhance the economic capability of the society.

2.4 Knowledge Acquisition
The strategies to acquire knowledge should involve the evaluation of evidence and inductive causal inference in attributing prominent roles both to prior expectation or theory and to the proof or rationale of covariation of the relevant factors in fostering inferences of causality [18]. It was reported by Bakar & Ghani [9] that according to Imam Nawawi (n.d.), the zakat proportion for the poor must take into account the recipient's occupation and living circumstances. If a person works as a mason, then the proportion of zakat given must be enough to cater for the recipient's necessities. Zakat fund given differs according to the recipients' job and current living expenses that they need to shoulder. For those who are physcially unable to work to support their lives, zakat fund given must be enough to cater the invalids for the rest of their lives. The proportion of zakat is also based on the average expenditure of present local society. Concerning this matter, al-Dusuqi (n.d..) from the Maliki school of thought and the majority of Islamic scholars from the Hanbali schoool of thought asserts that the zakat distribution for the poor and needy *asnaf* should be in the form of living support for one *Qamariyah* (*kifayah al-Sanah*) for the recipient and his dependents.

The recipient is entitled to be given zakat until he is freed from want. Among the form of aid that could be distributed are basic necessities such as food, clothing and shelter. Gifts in the form of capital for industry such as tools for the craft and others are also encouraged al-Syirazi (n.d.) from the Syafie school of thought, on the other hand, argues that sufficient zakat must be given

to the poor and needy as long long as the remain poor (*kifayah al-Umr*). KMS supports a collaborative environment which is in resonance with the collective environment in project management to address distribution issues of inefficient storage and retrieval, lack of real-time visibility, limited accessibility and limited collaborative environment within the use of application technology [15]. The redistributive economic impact of zakat depends on how it is administered, especially with regard to collection and distribution [23].

2.5 Knowledge Transformation

The knowledge transformation has been played out in two realms across and within specialization, which novelty is very low and dependencies between specialized domains remain stable or well defined boundaries or interfaces, if not, it will generate negative consequences that must be changed to jointly resolved [12]. According to activity theory, KMS paradigm is to create, share, store and disseminate knowledge and collaborate with each other and the expected result is to be a good learning system [10]. Researchers and practitioners have advised to implement a Knowledge Management System (KMS) to optimize performance and objectives of an organization with the objective of KMS is to support the creation, transfer and application of knowledge within organization effectively and requires a lot of literature [26]. Knowledge could lead gradually users to get the ultimate solution, in which expression and representation model of knowledge is the most important stage to influence reasoning efficiency, enriching knowledge and affect the intelligence level of the entire knowledge [38]. Users bound to compare the perceived performance vis-à-vis original expectation lead to continue or discontinue to use the system [25]. In general, information is defined from terminology of data, knowledge is defined from terminology of information and cultural (wisdom) is defined from terminology of knowledge [29].

In order to promote transparency, data that is stored in both trustee fund offices and the main zakat institution has to be consistent, verified and trustworthy. The information has to be secured in order to avoid fabrication and falsification of data. Hence, there is a need to establish an information security governance between the zakat institution and the zakat fund trustees in order to have precise information to be used for better decision making and zakat management [33]. Enterprises from creative industries can create spillovers through innovation collaboration, in which both internal and external collaboration significantly contribute to the creation of innovation, though internal has lesser extent [35]. Despite of the advantages of localization in zakat management, the function of government as regulator, coordinator and protector are required to prevent fraud and mismanagement. In addition, volunteer participation of local organizations and communities as social responsibility creates intimate relationship gradually, where people can directly measure the performance of trusted officer.

3. Research Methodology

This study use qualitative research by employing several stages, which are firstly, to identify the problem, needs and requirement, secondly, to design the process solution that focus on the implementation with suitable application and lastly, to specify the knowledge resources through embedded the solution into knowledge management life cycle (KMSLC). At first, researcher develop the knowledge mapping as a visual aid that shows what type and where knowledge can be found within a system and most appropriate expertise responsible for, which is based on systematic literature review and related researches. Those literature review was conducted to explore the conceptual theory related to KM model in the zakat management system (ZMS) by identifying the problem in five categorical issues, which are knowledge brokers, knowledge repositories, knowledge sharing, knowledge acquisition and knowledge transformation. After that, this study develop the knowledge process to provide solutions to the respected problems by creating the details of process solution through Unified Modelling Language (UML) in the form of system packages that consist of use case (5 summary and 6 narrative), 3 system scheme, 4 flow chart, 6 collaborative diagram, activity diagram, 3 class diagram, 6 sequence diagram, system scheme, 5 context diagram (monitoring process, zakat fund management, amil and asnaf information, asset management) and state chart diagram.

In this case, this study use distributed approach as the contextual setting for designing the appropriate application to be developed, which are web-based system. The connectivity of masjid as the center for zakat collection and distribution become critical in every phase of activity, which required the sophisticated relationship such as vision alignment and data quality improvement. Then, the last phases related to the evaluation stage to verify the appropriateness and preciseness of KM model to describe current problem and future challenges through Goal Question Metric (GQM) and knowledge activities. Each element should be measured based on KMSLC to generate the advantages and disadvantages on using KM in the ZMS. The process of verification consist of checking the objective, strength, weakness, opportunities, threats, scheme and barriers. Lastly, the researcher validate the framework by justifying the argument through evidence.

5. Knowledge Mapping and Process

To increase the efficiency of identification of needs and requirement, the first step is by explaining the association of knowledge bodies in the form hierarchical as structural model with the purpose of managing the knowledge area in the zakat management system with extracting the homogeneity attributes or similar content. In this case of knowledge mapping of ZMS, there are 5 level order that is indicated by different colors namely blue (1st order), red (2nd order), yellow and green (3rd order), grey (4th order) and white (5th order). Besides that, there are 7 high level association, which are derived from value extraction of zakat namely purposes, perspectives, barriers, motivation, obligation, type, recipients and phases. In many cases, the creation of knowledge maps also can reveal weak links, existing and potential gaps, deadlocks and bottlenecks in the flow of knowledge. By articulating exactly how knowledge moves through the system in the organizations, the respected person can identify the improvement opportunities and make targeted adjustments to ensure that the right knowledge reaches the right people at the right point in the process.

As a tactical practice for organization, the knowledge within the activities process should be guided by conceptual framework that represent the necessary knowledge association in the knowledge mapping to serve the purpose of translating the implementation. Meanwhile, the organization also require to understand the mechanics of the knowledge creation and maintenance, by bringing the clarity to knowledge enterprise that is so vital to effective and efficient management and future organizational decision to influence crucial assets in ZMS. The exploration of knowledge should sctrutinize the assets at the contextual level by allowing strategy analysis into the tacit and explicit knowledge as well to examines the steps currently employed in the utilization and containment of knowledge resources pertain to the function, coordination and understanding the capability and capacity.
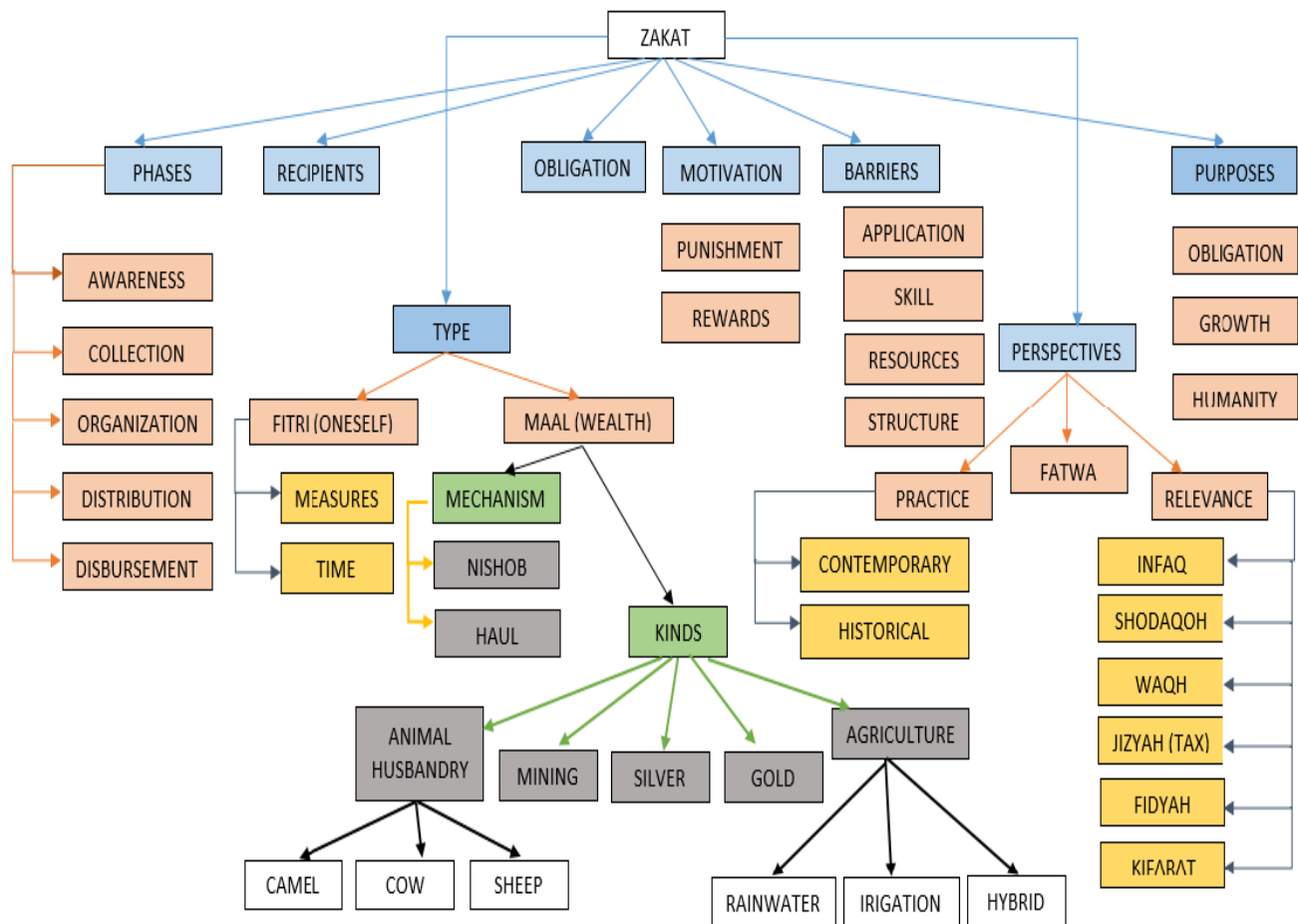

Figure 1. Knowledge Mapping of Zakat

Use case is generated to describe a set of actions in the system, which perform in collaboration with one or more external users of the actors. There are 6 primary factors involved in the ZMS, which are financial staff, administration staff, operational staff, director, zakat collector and zakat receiver. In this case, the study equate the role of zakat collector with zakat payer, donator, amil and promoters while administration staff have specific role in term of performing routine clerical organizational tasks such as managing files, draft messages, schedule appointments and support other staff. The important process is related to zakat fund management, which coordinated by financial staff with operational staff in term of data indexing and storing in the monitoring process of fund allocation disbursement and the process of coordinating activity with administrative staff. On the other hand, director focus on the strategy level with decision making in data visualization process, annual assessment, policy development and close meeting or post mortem. There some overlapping process identified such as process by zakat collector which are maintaining contract status with administration staff, maintaining transfer status and closing deal with operational staff. Those activities should be engaged in the quick response, so the coordination and validation become important aspects to conduct. Besides that, this study also develop use case summary to conduct requirement analysis for respected activity within the process and use case narrative to produce clarity in develop the application by identifying the scope, priority, primary actor and supporting actors, stakeholders, include and exclude activities with the precondition, trigger and its normal flow, sub flow, alternate flow, non-behavioral requirement and open issues.
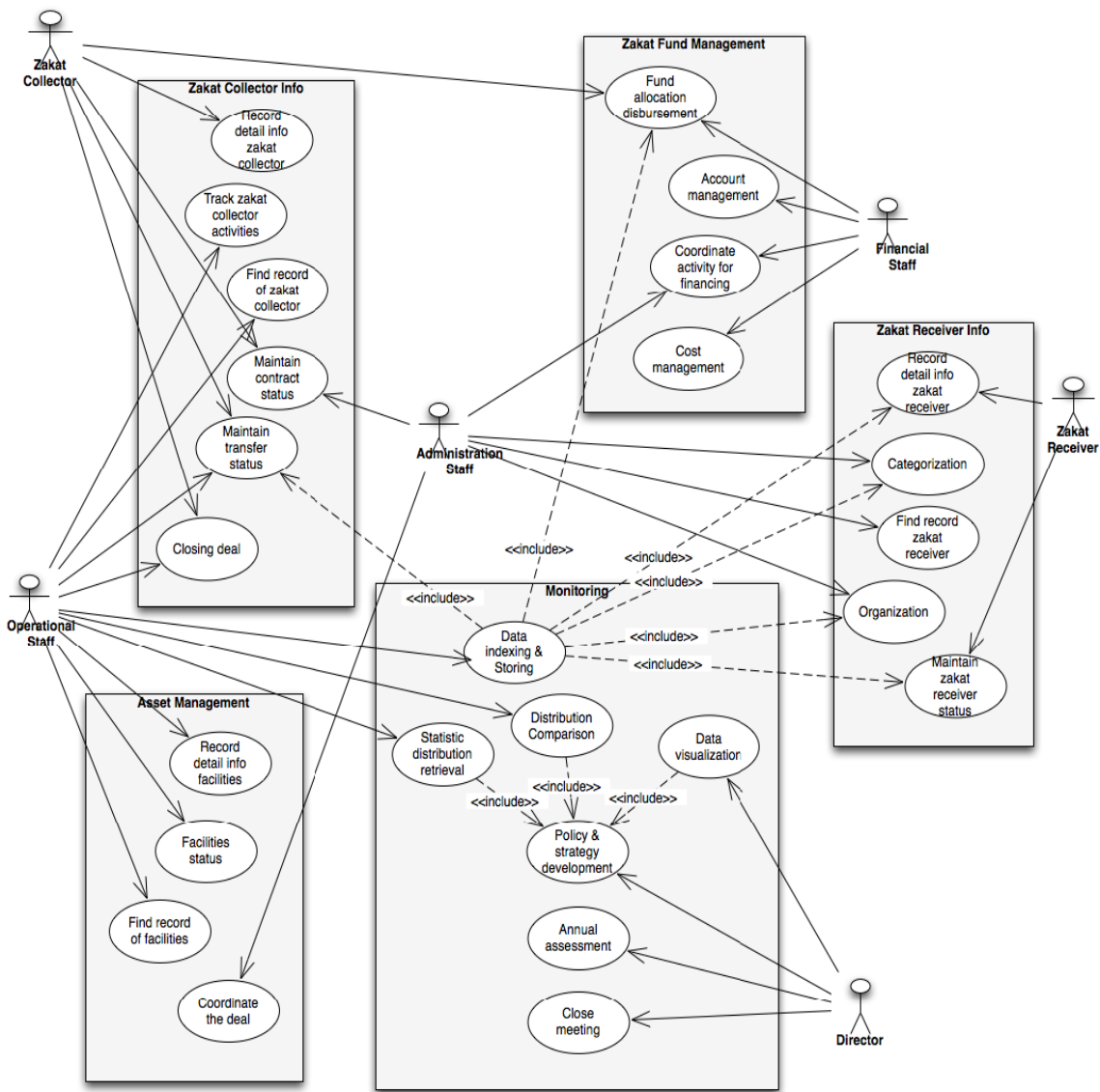

Figure 2. Use Case Diagram for Zakat Management System (ZMS)

Collaborative diagram have the function to communicate the interaction or relationship among related object, which in this case, the operational staff have 8 activities to SiZA (Zakat System), which are get list of data in term of asnaf information from the system to track the payment record from account management, then the process of categorization run accordingly. Besides that, there is also statistic distribution retrieval, maintain status asnaf and zakat distribution comparison by operational staff, which collaboratively monitored and verified by director. Furthermore, the sequence diagrams has a purpose to explain the dynamic event that is drawn from one operation to another. In this case, the process of maintaining transfer process involve operational staff, zakat collector, director and zakat receiver (asnaf). The sequence concern to get asnaf information, get available property and get zakat money to update status and asnaf data into the system before accepting the process of distributing the zakat.
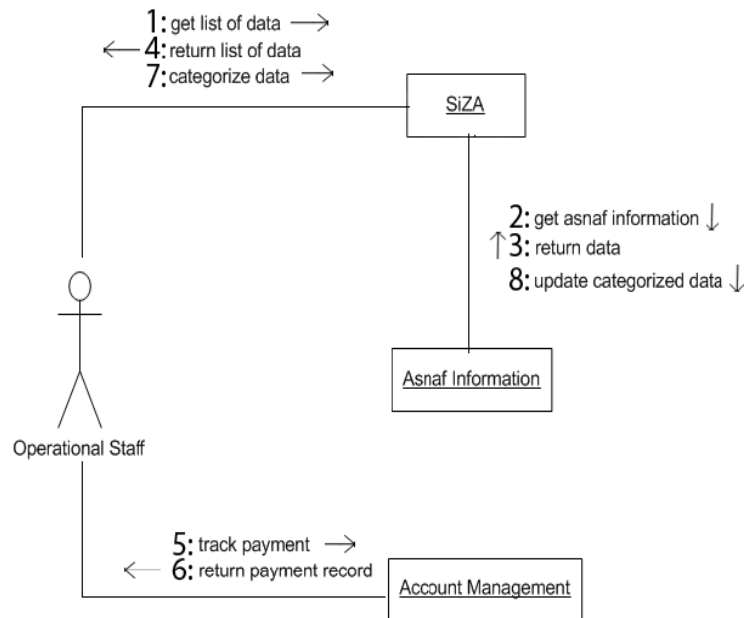
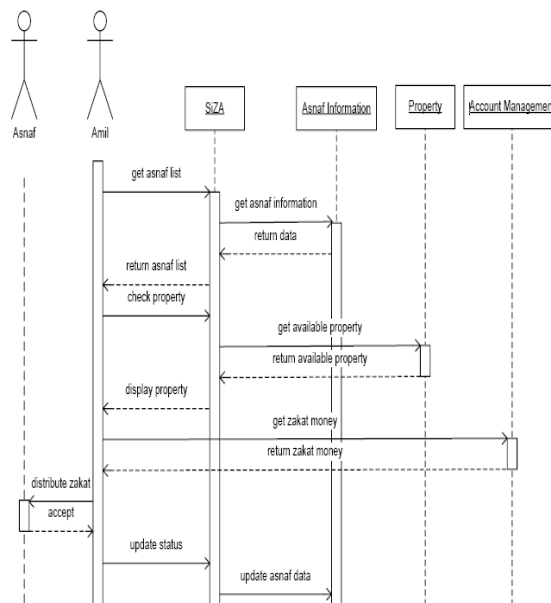Figure 3. Collaborative Diagram for Data Indexing and Storing

Figure 4. Sequence Diagram for Maintain Transfer Process Status
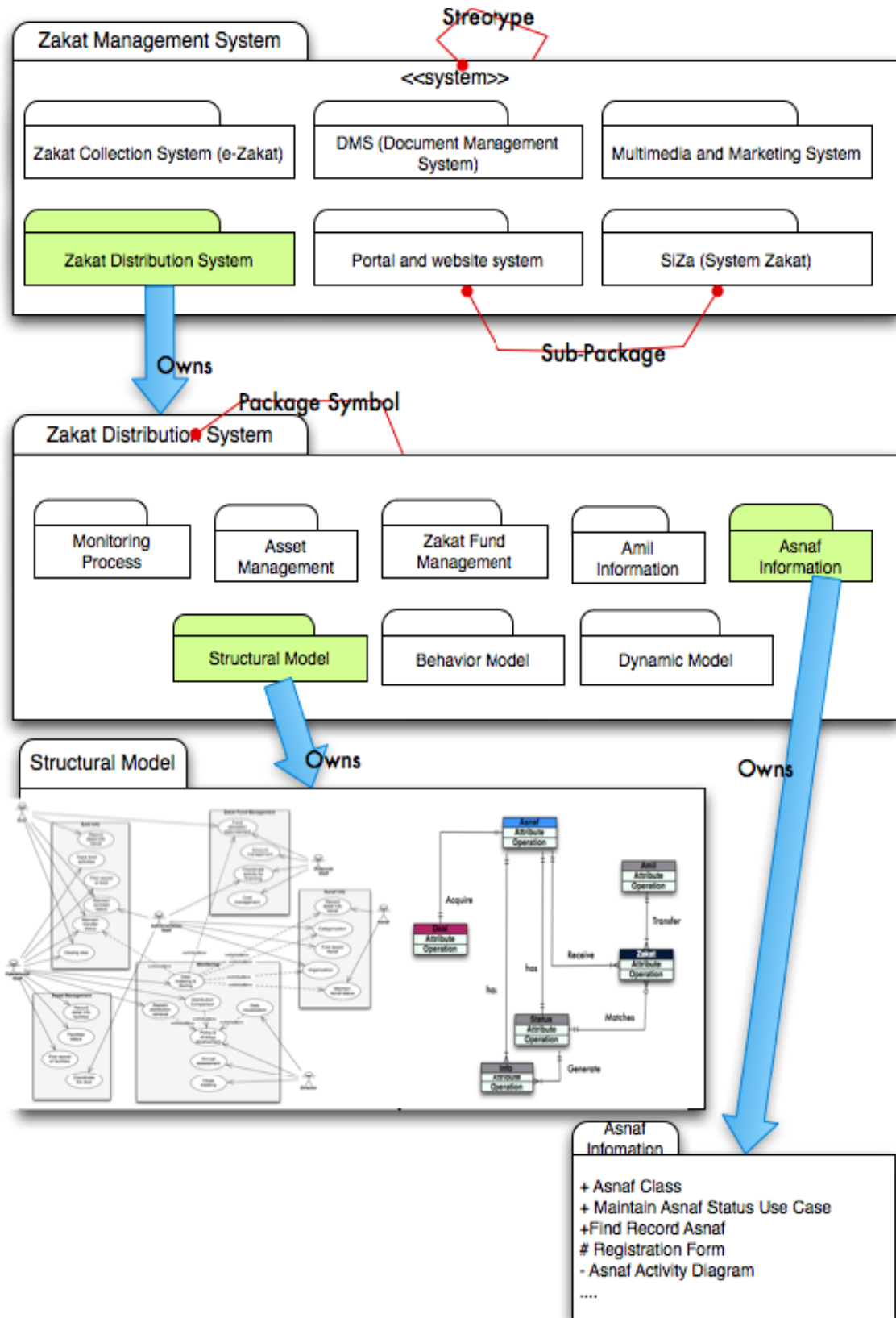
Figure 5. System and Sub Packages of Entire Zakat Management System

Through in depth analysis involving the overview of the system and relevant actor relevant to the process, the system packages have been built, which emphasize structural model and asnaf information besides other packages such as asset management, zakat fund management, amil information, behavior model and dynamic model. Those packages are not neglected but integrated to the zakat distribution system of ZMS as the logical model. To assure the process og zakat management run well and accordingly, the other sub system should be maintained with the regulatory compliance and policy procedure created through director instruction such as SiZa that have concern in the administration and operational level to provide the estimation of instrument and indicator of performance on staff. Besides that, multimedia and marketing system and DMS also critical in the process as they assure and guarantee the back and front work were conducted accordingly for the purpose of tracking and storing the historical event involving the modification or revision in the scale of promotion, segmentation, targeting, positioning and recoding. The other critical sub system involve zakat collection, which should be developed in the online approach to provide more availability and compatibility to the zakat payers. People tend to adopt the system in the long duration of time if they found out transparency and resourceful attribute within the system. After all, the system is developed to support and help the process of distributing wealth in the form of zakat to the person in needs, thus, all forms of ease and tolerance should be preceded rather than anything else.

5. Knowledge Metrics and Activities

To set objective and goal of KM implementation require the assessment of readiness in organization [32]. The core of the zakat management system is the collection procedure that was designed and customized through a computer system through the knowledge management principle. It relates to the internal process, which involved the zakat assessment form, coding, information collection, payment mechanism, check and balance, marketing process and reporting system. Thus, the software requirements for managing zakat management should be well defined through overall scope within the development framework. Although with the linear process but it demanded that the organization to provide a limited set of functionalities to keep business process stay on the right track. Actually, incremental iterative become suitable methodologies that combines element of direct and parallel process flows, which can be implemented in the high intense scale, where user usually give complaint about some features within planning phase and further. On the other hand, requirement analysis can be more complex due to the changes over time so the discussion and development should promote teamwork, coordination, collaboration and adaptability throughout the life cycle of the project. Actually, informational efficiency offered as major prerequisite for the project management and means eliminating inefficiencies in accessing, exchanging and disseminating all kinds of information that based on principles to enrich the customer, to develop change management to anticipate the uncertainty, to leverage resources and to co-operate within competition realm [8].

Incremental process deliver the project into small number of fragments or portions, which a slice of functionality is delivered through cross-discipline work from the requirements to the deployment while iterative process accommodate the product that evolve over the time that enables the programmer to develop increasingly more complete version through prototyping within repitition schedule. The unified process groups create various phases that includes inception, elaboration, construction and transition lead to effective and efficient zakat management process. The measurement through zakat payers and asnaf satisfaction could be regularly while system used could be more adaptive towards user requirement. Furthermore, the success of zakat management system depend on many critical factors that are needed to be full control and manage by the responsible organization, which related to the leadership, culture, IT infrastructure and measurement process. It can drive the strategy forward, it makes or breaks the success of the strategy, where the reason to choose certain organization can be answered accordingly.

Having goal analysis can show the importance of KM in catering the needs to provide solution for several problem that has been identified in every stages of ZMS namely planning, collecting, organizing, distributing and disbursing [20-23]. Therefore, person in charge in specific activity in ZMS should have good leadership skill that can accommodate the needs of various units and divisions with best culture of coordination and cooperation can enhance the performance of employee and volunteer respectively. On the other hand, IT infrastructure also support the success of ZMS where the process can be integrated and automated, which periodically measurement and assessment have been conducted to maintain the quality by identifying the status or level. Many problems happened in terms of zakat collection and distribution such as difficult process in administration, vague information, shortage of staff and experts, etc, so this limitation may lead to inefficiency and ineffectiveness of zakat management performed or under potential performance by the zakat institutions. This happened because of several problems including lack of management expertise, lack of commitment, lack of information and legal aspects [22].

The society want to look the efficient and effective ZMS that solve current issues and problem mentioned before, so good

Goal	Questions	Metrics
G1: Deconstruct and Raise Awareness	Q1: What are the KM serve to raise the citizen awareness? Q2: How does the KM help to assess the level of awareness in zakat recipients? Q3: Where does the proper place for KM to implement in term of improving awareness? Q4: Who does responsible to control KM in achieving goal in awareness?	M1: Individual, Institutional and Environmental Impact Analysis M2: Awareness Matrics M3: Retention Rates M4: Business Strategy and Rules M5: Fairly Distribution
G2: Increase Productivity and Effectiveness	Q1: How to deliver effective KM in zakat management system that fulfill the objective? Q2: How to improve efficiency in KM for zakat management system that match with the expectation? Q3: What is the method to achieve sufficient budgetary process through KM?	M1: Lead-to-Sales % M2: Average Conversion Time M3: Percentage of Errors and Unavailability M3: SWOT Analysis M4: Quality and Quantity Control
G3: Community Practice	Q1: What is the KM preferences of payers to fulfill their obligation in zakat? Q2: When the proper time to close the relationship with certain parties by using KM? Q3: How to facilitate the zakat report timely and periodically with KM?	M1: Index of satisfaction M2: Annual Zakat Report M3: Number of inter- organization projects M4: Number of requests, feedbacks and complaints M5: Number of asnaf and allocation
G4: Improve Collaborative Function	Q1: What is the measurement for satisfaction level in KM for ZMS? Q2: How to increase the channel for ZMS by KM? Q3: Why development of monitoring should provide quality assessment? Q4: Who is responsible to achieve well-established viable corporate management?	M1: Customer Behavior Analysis M2: Customer Life Time Value M3: Customer Churn Rates M4: Alternative Payment Methods M5: Development of Productive Type of Disbursement M6: Number of Media Coverage
G5: Maintain Trust & Partnership	Q1: How to maintain credibility in the process of disbursement through KM? Q2: What is the importance to improve staff responsibility,	M1: Comparison between Budget and Expense M2: Customer Profitability Analysis M3: Customer Intimacy and Participation M4: Talent Management

	competence and skill? Q3: What factors determined the reliability of certain joint corporation with KM? Q4: Which process in ZMS should be coordinated and collaborated with second or third party?	
G6: Sustain Institution Performance	Q1: How to support poverty reduction to improve economic development? Q2: What is the borderline that organization should deliver to the audience? Q3: What is the approach to improve continuously? Q4: Who have the authority to audit the achievement of organization?	M1: Comparison between Collection and Distribution M2: Business Strategic Rules M3: CRM Audit M4: Data Quality Assessment and Assurance M5: Performance Report M6: Plan-Do-Check-Act (PDCA)
G7: Better Quality of Networking & Resource Sharing	Q1: What is the business value offered to the stakeholders? Q2: How to encourage employee to proactively in commiting the task?	M1: PESTEL Analysis M2: Standard Operational Process M3: Corporate Social Responsibilities
G8: Appropriate Service Management	Q1: What is the proper preparation for the volunteer? Q2: How to conduct conducive work culture and positive behavior? Q3: How to maintain the service delivery in the periodical time manner?	M1 : Cobit Maturity Model M2: Utilization and Impact Analysis M3: Satisfaction Score M4: Staff Skill Enhancement Program
G9: Operational Cost Efficiency	Q1: How to allocate human resource management to provide operational excellency? Q2: How to utilize ICT effectively as enabler? Q3: What are the factors to determine success implementation of certain device? Q4: Why KM has critical function to create good IT governance?	M1: Balanced Scorecard M2: Boston Consulting Group (BCG) Analysis M3: Number of Costing and Budgeting M4: Operational Plan Approval
G10: Integrated Solution & S Appreciation	Q1: What is the effective user assistance in the process of zakat service? Q2: Why the assets and facilities are important? Q3: Who is responsible to provide clear navigation and accessibility to the system?	M1: Bounce and Visitation Rates M2: Number of Visitors or Engagement Metrics M3: Porter 5 Forces Analysis

Table 1. Goal Analysis

leadership, culture, IT infrastructure and measurement become the important points for the consideration. This critical success factor should synergize with KM in sharing and generating respectable knowledge of what the zakat payers want and expect to the current system. This can convince society through proper administration while the slow response by institution will only

raise negative impact on further development of ZMS. It is suggested that zakat institution use flexible IS to monitor the population of asnaf in particular area, so state zakat institution would be able to visualize and pinpoint them according to the respective database. This will help to monitor the distribution of zakat to them geographically and then will track the progress of eradication of poor people. The adopting of this kind of technology in the form of Geigraphical Information System (GIS) and the adoption of KM can be expanded the objective to the national level in the poverty reduction through understanding of proper poverty measurement and assessment to set specific priority.

KM Activities	Collecting (Stuff) & Codification	Connecting (People) & Personalization
Directed Information & Knowledge Search (Exploit)	Zakat Obligation Zakat Historical Practice Fatwa in Zakat Zakat Rates Zakat Categories Type Fair Allocation (Harvest)	Disbursement Type Vocational Skill Investment Process Information Gathering Administration Joint Collaboration (Harness)
Serendipty & Browsing (Explore)	Zakat Receivers Group Zakat Spread Assets and Facilities Information Tech. Information System (Hunting)	Service Maturity Level Productive Program Monitoring Process Quality of Life Poverty Reduction (Hypothesize)

Table 2. Balanced Scorecared (BSC)

Actually, zakat institution facing changes-increasing challenges that brought on by zakat payers expectation and satisfaction pressures externally or the nature of the workplace internally. Thus, the strategy developed must identify the key needs and issues within the organization at the first place before think next inter-organization partnership concept as the measurement for internal capability by providing a framework for addressing these kind of issues. Firstly, identification of the primary attributes should be done in ZMS such as objective, planning, design, process, target area, role, ontology and taxonomy Secondly, the creation of Information Zakat Center (IZC) through collaboration with private organization like public and private bank or post office under memo of understanding between them. Thirdly, pilot project for ZMS which include DMS (Document System Management) and Portal System to test user needs, awareness, readiness and requirement gaps through evidence. Fourthly, internal audit and competitive benchmarking should take place to investigate strength, weakness, opportunities, threats (SWOT) and risk management. Lastly, the zakat institution should have action plan that give details of deliverable in activity, timescales, resources and budgets required for all actions and to exploit the benefits to support the general strategy.

Typically, management and administration skill would control, encourage and preserve the following activities from the critical failure internal and external factor such complexity, disparate vision, less attention, lack of support and so on. Zakat payers' expectation and satisfaction are the domain focus that should be strengthened to deliver competitive advantages to the stakeholders especially zakat payers. By ensuring these things are optimized to produce further knowledge that can enhance collection and distribution solution through KM is the main objective should be achieved. Therefore, Information sharing relate to the procedure to participate in the zakat program, type of zakat, the payment rate and relevant information should be available in the interactive way, which facilitate the exchange process with intends to strengthen its relationship within networks. In doing so, the recognition of proper knowledge networks should be based on a clear understanding of the forms and functions to keep expected outcomes under track. In short, the action plan should be based on the principle of willingness to share and use knowledge for the benefit of teaching, learning, research and business goals, which allows organization to seamlessly and easily connect to the information, whenever they need it and wherever it is located [2].

Activity	Responsible	Resource	Indicator
Strengthen staff's skill, commitment and capability significantly	Operational Div.	The person capable of management and high motivation.	Number of training, workshop and seminar, involves of Islam, IT, social and business subject.
Building the partnership closely	Administration Div.	All potential and relevant organization in Indonesia from public until private.	Inter-organization communication through good cooperation and coordination.
Identify and introduced a computerized zakat collection system	OperationalDiv.	SiZa (System Zakat), DMS (Document Management System), Portal System and e-Zakat.	Latest technology implementation, updates and upgrade.
Zakat Fund Management.	Financial Div.	Private and public banking institution and Zakat	Coordination and monitoring business unit as well as social responsibility.
Educate Muslim communities about zakat obligation.	Operational Div.	Collection from Zakat payers. Expertise Staff and Multimedia presentation.	Zakat collection statistic from various method of payment.
Maintain the quality of service in Zakat collection and distribu-tion.	Administration Div.	Documentation, report and notes	Requirement analysis by Survey,
Geographical Information System (GIS) to monitoring the distribution.	Operational Div.	Research and development as well as the government support.	Questionnaires or observation to User. Implementation of GIS technology for decision- making purpose.
Annual report with media cooperation.	Financial Div.	Media Mass and Accumulation of financial report.	User trust by understanding the current status of their zakat.
Maintain and update Asnaf Status.	Administration Div.	Local committee, Amil and society.	The report on total population the Asnaf each category.
Assets and facilities management.	Administration Div.	Assets and facilities such as motor, car, properties, camera, etc.	Record and documentation of assets and facilities match with the actual data.
Educational program to Student and employee externally.	Operational Div.	School, University, Factory, Manufacturer, etc.	Number of program executed and implementation.
Benchmarking and study tour.	All Div.	Requirement Analysis and Planning.	Project implementation and execution meet the performance criteria.

Table 3. Balanced Scorecared (BSC)

The above balanced scorecard (BSC) derived on the platform of accessibility and flexibility towards the perspectives of the zakat function, which are user orientation, operational excellence, future orientation and business contribution, which aligned with the financial, customer, internal business and learning & growth perspective. It provides clear understanding on the mission, objective and measure that focus on the requirement analysis, evaluation criteria and target that zakat institution should achieved in timely manner. Therefore, BSC will connect IT and business in the form of ZMS with KM through contribution perspective in the dynamic measurement and management. On the other hand, the evaluation will be based on best practice in ZMS with the construction or implementation as the evolutionary approach that have specific aim of efficiency in the development and operation through benefit optimization. While the balanced scorecard cannot guarantee a recipe for correct decisions but it provides an integrated perspective on goals, targets, and measures of progress. The requirement for organizations to become more responsive to the needs of customers, the changing conditions of competition and increasing levels of environmental turbulence is driving interest in the concept of agility [28].

The main priorities in utilizing balanced scorecard pertain to translate on the vision, linking the vision to process and developing the plan to set the priorities and resources focus. At last, the evaluation from feedback and learning experience is required to measure the performance for the future function such as revise the plan and develop credible measure. BSC is an effective strategic management tool in nonprofit and public organizations together with intellectual capital (IC) concepts are two strategic management methods that help to identify and elevate organizations' intellectual resources in the knowledge economy [17]. However, KM can be utilized through creating and refining the repositories system, using repetable process, involving of commercial process, development of strategic knowledge capabilities and personalization in term of cartographic, organizational and social with utilization of creative process of knowledge transformation and inception [13-16].

6. Conclusions

KM is extremely critical in the case of improving the zakat management activities especially after the utilization process of technology in almost every turn. It can provide solution in the missing link and existing gap in the transition phase or handoff stage, which normally required longer time to be identified. In conclusion, ZMS through KM can obtain several benefits such as faster decision making, competititve advantage, maintain the innovation, best organization culture and unified management. Therefore, the action plan should be imposed at the planning stage to anticipate worst case scenario such as lack of understanding or exchange barrier when information should be shared immediately.

References

[1] Aedy, H. (2015). Measuring the Quality of Zakat Management of Government-Endorsed Bodies (A Case Study on National Zakat Agency and Zakat Committee of Mosque in the city of Kendari). *Int. Journal of Science and Research* (IJSR) 4 (8) 2047-2051.

[2] Agrawal, S., Sharma, P. B., Kumar, M. (2008). Knowledge Management Framework for Improving Curriculum Development Process in Technical Education. International Conference on Convergence and Hybrid Information Technology.

[3] Ahlan, A.R., Lubis, M., Lubis, A.R. (2015). Information security awareness at the knowledge-based institution: its antecedents and measures. *Procedia Computer Science*, 72, 361-373.

[4] Ataina, H., Achmad, T. (2010). Management of zakah: centralized vs decentralized approach. *Proceedings of Seventh International Conference – The Tawhidi Epistemology: Zakat and Waqf Economy*.

[5] Ahmad, R.A.R., Othman, A.M.A., Salleh, M. S. (2015). Assessing the satisfaction level of zakat recipients towards zakat management. *Procedia Economics and Finance*, 31, 140-151.

[6] Ahmad, R., Hussain, A., Baharom, F. (2016). Goal oriented measurement for software sustainable evaluation metric focused on environmental dimension. *Proceedings of 8th Knowledge Management International Conference,* 405-410.

[7] Ali, N., Iqbal, J. (2015). Knowledge Management in the Major Knowledge Repositories in India. *Int. J. of Knowledge Engineering*, 1 (1) June, 18-23.

[8] Bajgoric, N. (2000). Web-based Information Access for Agile Management. *International Journal of Agile Management Systems* 2 (2) p 121-129. resource management. *Journal of Knowledge Management*, 7 (1) 78-89.

[9] Bakar, M.H.A., Ghani, A.H.A. (2011). Towards achieving the quality of life in the management of zakat distribution to rightful recipients (the poor and needy). *International Journal of Business and Social Science*, 2 (4) 237-245, 2011.

[10] Berrel, G. . The dual paradigm nature of knowledge management: implications for achieving quality outcomes in human

[11] Cahyaningsih, E., Sensuse, .D.I., Arymurthy, A.M., Wibowo, W.C (2017). NUSANTARA: a new model of knowledge management in government human capital management. *Procedia Computer Science* 124, 61-68, 2017.

[12] Carlile, P.R., Rebentisch, E.S. (2003). Into the Black Box: The Knowledge Transformation Cycle. *Management Science* 49 (9) 1180-1195,

[13] Edosio, U.Z. (2014). Knowledge Management Concept. Knowledge Management Conference, vol. 1. University of Bradford, 2014.

[14] Gonzalez, R.V.D., and M.F. (2017). Martins. Knowledge Management Process: A Theoretical-Conceptual Research. *Gest. Prod., Sao Carlos* 24 (2) 248-265.

[15] Haron, H., Abbas, F., Rahman, L.A.A. (2016). Knowledge management system framwork to suppport information distribution in project management. *Information*, 19 (7B) 2925-2930.

[16] King, W. R. (2009). Knowledge Management and Organizational Learning. *Annals of Information System* 4, p 3-13, 2009.

[17] Kong, E. (2010). Analyzing BSC and IC's Usefulness in Nonprofit *Organizations*. *Journal of Intellectual Capital* 11 (3) 284-304.

[18] Kuhn, D., Garcia-Mila, M., Zohar, A., Andersen, C., White, S. H., Klahr, D., Carver, S.M. (1995). Strategies of Knowledge Acquisition. *Monographs of Society for Research in Child Development*, 60 (4) 1-157.

[19] Lee, H. H. (2016). The factors affecting knowledge sharing behavior within a case study Taiwanese small business. *In:* Proceedings of 8th Knowledge Management International Conference, 93-98, 2016.

[20] Lubis, M., Azizah, A. H. (2018). Towards Achieving the Efficiency in Zakat Management System: Interaction Design for Optimization in Indonesia. *User Science and Engineering*, p. 289-301.

[21] Lubis, M., Kartiwi, M., Zulhuda, S. (2017). Privacy and personal data protection in e-voting: factors and measures. *Telkomnika*, 15(1), 512-521.

[22] Lubis, M. (2012). *Optimization of Zakat Management System in Indonesia Using Geographic Information System (GIS)*. Selected Readings in Computing and Telecommunications, p. 229-313 IIUM Press.

[23] Lubis, M., Yacoob, N. I., Omar, Y., Dahlan, A.R.A. (2011). Enhancement Of Zakat Distribution Management System: Case Study In Malaysia. *In:* Proceedings International Management Conference 2011.

[24] Mcinerney, C.R., Koenig, M.E.D. (2011). Knowledge Management (KM) Processes in Organizations: Theoritical Foundations and Practice. *Synthesis Lecturers on Inf. Concepts Retrieval and Services* 3 (1) January.

[25] Muraina, I. D., Ibrahim, H. H. (2016). Student's perception to learning of innovative skill through multi-dimensional visualization system: reliability and validity test of some measurements, *c* Proceedings of 8th Knowledge Management International Conference, 162-167.

[26] Nasution, A. R., Hermadi, I., Ananta, W. K., Syauqi, I.B. (2014). Knowledge Management System for Zakat. *Telkomnika*, 12 (12) 8349-8356.

[27] Phipps, D., Morton, S. (2013). Qualities of Knowledge Brokers: Reflections from Practice. *The Policy Press*, 255-265.

[28] Power, D.J., Sohal, A. S. (2001). Critical Success Factors in Agile Supply Chain Management: AN Empirical Study. *International Journal of Physical Distribution & Logistics Management* 31 (4) 247-265. MCB University Press, 0960-0035.

[29] Rowley. (2007). The Wisdom Hierarchy: Representations Of The DIKW Hierarchy. *Journal of Information Science*, 33 (2) 163–180.

[30] Rouviere, E., Caswell, J.A. (2012). From punishment to prevention: A French case study of the introduction of co-regulation in enforcing food safety. *Food Policy*, 37. 246-254, 2012.

[31] Saidurrahman. (2013). The politics of zakat management in Indonesia: The tension between BAZ and LAZ. *Journal of Indonesian Islam* 7 (2) 366-382.

[32] Saufi, M., Tasmin, R. (2010). Knowledge Sharing Practice in Organization. *Int. Con. on Ethics and Professionalism*, pp. 797-803.

[33] Sulaiman, H., Jamil. N. (2014). Information security governance model to enhance zakat information management in Malaysian Zakat Institutions. *Proceedings of Int. Conf. on Information Technology and Multimedia (ICIMU)),* 200-205.

[34] Somsakit, N., Funilkul, S., Supasitthimethee, U. (2016). Importance fractors influencing the Thai doctors in rural area to use public social media for work-related use: a case study of LINE application. *Proceedings of 8th Knowledge Management International Conference,* 421-426.

[35] Stejskal, J., Hajek. P. (2016). Determinansts of collaboration and innovation in creative industries a case of the Czech Republic. *Proceedings of 8th Knowledge Management International Conference,* 116-121.

[36] Swift, P.E., Hwang, A. (2013).The impact of affective and cognitive trust on knowledge sharing and organizational learning. *The Learning Organization* 20: 20-37, 2013.

[37] Wahab, N.A., Rahman, A.R.A. (2013). Determinants of efficiency of zakat institutions in Malaysia: a non-parametric approach. *Asian Journal of Business and Accounting* 6 (2), 33-64. 2013.

[38] Xikui, L., Xiaoping, Z., Bin, H. (2014). Construction of geological knowledge-based systems of railway route selection. *Telkomnika*, 12(7) 5575-5584.