A Reflection on IT Implementation Challenges in State Institution: A Case Study on Development Projects at Indonesian Judiciary

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Abstract. There are two major challenges in implementing technological solutions as part of institutional reform in development project: the alignment issues with bigger – nationwide – agenda and addressing the resistance in – usually – corrupt environment. This paper aim to provide some reflections on the implementation of information technology to reform the Indonesian judiciaries. Lessons learned from past experiences are provided, as well as a proposal to modify the classic IT-business alignment model and the use of agent based approach to determine the information technology implementation roadmap.

Keywords: IT alignment, strategic alignment, resistance, corruption, rational choice, judiciary reform

1 Introduction

The Indonesian judiciary has been implementing various development projects with some information technology related components in the last 10 years. Some notable foreign aid projects that has IT elements are the USAID funded Indonesia Anti-Corruption and Commercial Court Enhancement Project, The Indonesia Threshold Program from the Millennium Challenge Corporation, The Indonesia Australia Legal Development Facility and the Australia Indonesia Partnerships for Justice from the Australian AID, The Change for Justice from USAID, EU-funded Support for Reform of the Justice Sector in Indonesia– managed by the UNDP, and the new USAID funded CEGAH Project.

Despite all of those initiatives and millions of dollars that has been invested in technology modernisation, the improvement on the quality and integrity of public services are still low or marginally improving. However there are some notable improvements

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in terms of accessibility to court information and better transparency in the court processes and the resulting court decisions as well [2][23].

This paper aim to provide a reflective view on various issues and challenges during the implementation of several information technology solutions to support the institutional reform at the Indonesian Judiciaries. The methodology is interpretive in nature, adopting the reflective writing approach as described by Jasper [27], by modifying it in the context of reflective writing for information systems domain. The discussion will be started with quick elaboration taken from reflections of the previous experience, followed by a higher level view in term of strategy to implement the technology. It will be followed by some initial ideas to improve the level of success on the information technology implementation at state institutions, especially to the initiatives that are supported by development projects. The ideas will be refined with some relevant literature reviews, followed by more detailed analysis and elaborations to conclude some possible approaches.

2 Reflections and Findings

Some of the identified challenges in regards to information technology implementation at Indonesian judiciaries are the IT literacy problems, resistance for change, funding availability as well as lack of the internal technical skill sets [2][3][9]. Looking at the lessons learned from failed implementations in the past, the tactical approach to address the challenges is to start simple and then gradually move into more complex implementation approach [2].

To address the resistance and the complexity to use the system, the Court deliberately request the user to input the main data only, like case registration number, common case identities (e.g. name of the parties), important processing dates (registration dates, decision dates, etc.), and the judgement itself. Those are kind of data have been used to manage the case administration. Hence it met their need as well as eliminating the issues of having no data to enter. It is also considered as common data that should be available, yet considered as the most traded information [8][9].

The goal is to establish the habit to use the electronic data among the users. The dependencies to use the electronic data will create a point of no return to use the manual process. This approach is aligned with the key principles in the rational choice theory [4]. Providing the tool with minimum data provision efforts is the sweetener that become the most rational options for the users. Gradually the Court increased the threshold to input more data. Currently all important data are required to be entered in the case management system. All court decisions are also need to be uploaded in the central repository, resulting a vast knowledge based for further operational and judicial knowledge development [8][10].

The information technology literacy issues is creating resistance (due to the difficulty to use the technology) and alienated feeling among the users. It was threatening for staffs that currently do the manual works. Technology also push and enforce the transparency and accountability of court processes that in the end will make it difficult to conduct the corruptive and manipulative behaviour on the case handling at the courts

[21]. This also became another threat for those who tend to get the benefits from it. Those interests are uniting in the resistance of change on the technology at work in the court. This also supported by the fact during information technology implementations, organisations sometime also fail to recognise that employee as the shareholder like to see the return of their personal investment [16]. Recognising the key actor's interest and providing them with the most rational choice to move forward is the key in the successful IT implementation at the Indonesian judiciary.

The resistance also got coincidence support with the fact that there was lack of the technical personnel. Some implementation failures and the inability of the courts to manage their own information technology facilities became the common reasons to resist. This also commemorates with the fact that the personnel recruitment is mostly focusing on the judicial staffs and general administration positions. Hence this also create the issue of the sustainability of various foreign assistance related with the technological solutions at the state institutions. The situation is not helped with the fact that the foreign assistance projects often not in-sync with the annual state budgeting process as well as some misalignment between the institutions' strategic plan, the government-wide mid-term development plan, and is not reflected in the annual budget plan.

Those two teething issues: addressing the misalignment and handling resistance are – in author's view – the two most strategic issues to be addressed in implementing technological solutions at state institutions.

3 Addressing the Misalignment Issue

To address the misalignment issue, the author proposed a revisit to the classic information technology and business alignment approach as elaborated by Henderson and Venkatraman [12]. However the approach needs to be taken into broader context by taking into account the structure of the mid-term planning that provide the underlying strategy for the annual state budget. The adaption could follow the idea on IT-business alignment in multi-business environment [26]. The proposed approach is using an "anchored alignment" of "stacked" alignment as multi-business alignment model [26].

In the context of Indonesia, the strategic alignment has been guided and described in the Nation-wide Mid Term Development Plan. The Mid Term Plan act as the anchor point to align the strategic fit and functional integrations between relevant state institutions. The adaptation of the approach is depicted in the Figure 1. The initial model consists of four main elements: business strategy, business infrastructure and processes, information technology strategy and information technology infrastructure and processes. The proposed alignment model is to add the nation-wide strategy into the alignment model. The rationale is that it will not only provide the necessary context for the institutional scope and mandate, but also providing clarity related to the resources and budget allocations as well as distribution of responsibilities among state institutions. The use of alignment measurement approach such as proposed by Luftman [17] could also be used to monitor and evaluate the implementation.

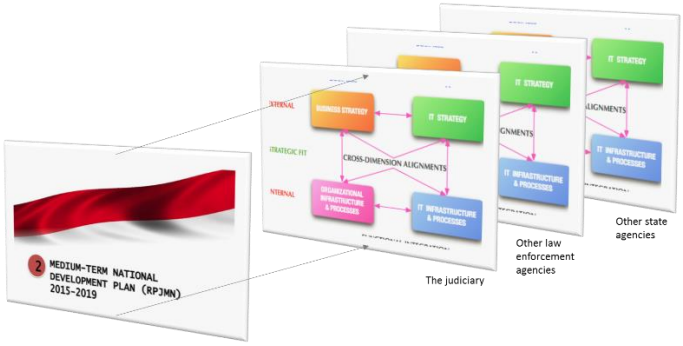

Fig. 1. Proposed IT – Business Alignment for State Institutions; adapted from the model as proposed by Henderson and Venkatraman [12]

4 Addressing the Resistance Issue

The second proposal is related with addressing the resistance issue, especially in corrupt environment. There is a strong believe that information technology will improve the organisational performance and address the corruptive behaviour, hence the resistance is expected [3][14][15][20][21][25]. However, the question will be how to conduct the information technology implementation in the corrupt environment?

To address that issue, the author propose the use of agent-based approach to select the most viable implementation path for the given information technology projects. The proposal based on the previously mentioned experience to use the rational choice theory [4]. The agent based model could be used to address the issue of information asymmetry in the market of lemon [1]. The goal is to drive the implementation toward sets of equilibrium condition as defined the Nash's equilibrium theory [18]. It is also related with the use of game theory to determine the rational economics behaviour [19].

The corrupt actors are basically working due to the information asymmetry. The use of agent-based model will help to address the dynamics and changes of the information and interests. The use of agent-based approach to address the corruption issues itself has been elaborated in various papers [5] [6] [7] [11] [22] [24].

The illustrative implementation of the agent based approach could be depicted in simple four-by-four Nash Equilibrium matrix. There are four options: win-win, win-lose, lose-win, and lose-lose. The rational choice theory and previous agent-based simulations suggest that any (corrupt) agent will seek a condition where at least there is a win. The determination of the win situation is largely determined by the information received by those agent. By playing with the asymmetry of information and multiple matrices, we could develop a viable implementation roadmap for corrupt environment.

5 Concluding Remarks and Way Forward

The adoption of strategic alignment model [12] may provide the framework to address the alignment issues in public sector IT implementation, especially those funded

by donor projects that has limited constraints and time frame to support. It is also possible to use the game theory approach to determine the most viable path for information technology implementation roadmap. It may help to address the resistance issues, since technology has its potential to address the corrupt behaviour.

One further potential research is about IT-business alignment not only within the organisation of the Indonesian judiciary but also within the framework of national strategy in reforming the law enforcement agencies. The high-level alignment is already established at the strategic level as elaborated in the Medium Term Development Plan. However it needs further elaboration related with the implementation of the technology itself. The theoretical framework could modify the IT-business alignment issues in multi-business organisations [26], since the organisation of the government and state institutions itself is a "multi-business" in nature.

The second potential research is developing or simulating the agent based behaviour based on sets of possible game and equilibrium situations. The agents are the actors involved and have interests in the technology implementation. It is not only the users or the organisations, but also the funding institutions or donor projects as mentioned in the beginning of the articles. International development projects have limited time frame and relatively tight constraints to implement the reform. Fostering the change by engineering the possible rational choice in corrupt and resistance environment has deliver the successful results in the past [2]. The establishment of certain agent-based interaction models will help further projects to learn and establish the environment to achieve successful IT implementations.

Further researches on those two topics and reflection reports on various challenges in implementing technological solutions in corrupt state institutions will enrich the discussion and may trigger the development of practical framework on information technology implementation in misaligned and corrupt environment.

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