Abstract

Today Small Medium Enterprise (SME) in Indonesia increasingly growing, along with the growth of business done, of course must be offset by existing IT in the company, due to support the performance of the company. Who originally used it daily jobs done manually will be diverted to use software to help the work. But sometimes to develop the IT application, the obstacle typically encountered is about the budget for the investment of IT itself, therefore in this paper the authors compare the advantages and disadvantages between open source software and software Proprietary using VAL IT as a framework. For the result of the Open Source Software is low cost because the the code it is free but company should spend budget for the training and for the report the company need to learn to create the reporting. While for software Proprietary is high cost but support is conducted regularly for operational and for just ask the vendor to create report.

Keywords: Open Source, Proprietary Software, Micro Small Medium Enterprise, VAL IT Framework

1. Introduction

To get a good operational in the company can only be realized by the use of appropriate software, therefore, before the company implemented an application / software to support the day to day operational activities they have to do the analysis first. Often times when they want to develop a system that already exists in the company, the leaders would normally consider the software that will be use. whether will be using Proprietary software or open source software. beside that the leader should be thinking about their budget if they want to upgrade the system. moreover for SME they often have problematic about budget for implementation system. So they should be more detailing about the advantage and disadvantage if we using Proprietary software or open source software, in open source inspection process is managed by independent developers or user it’s different with proprietary software have sophisticated testing tools [1] [2].

This research is driven by the question of which type of software licensing is suitable for medium class enterprises, Open Source or Proprietary Software ? VAL-IT section Investment management is apply for comparison these software for a material consideration for management. Because it related to the cost of investment by management.

2. Open Source Definition

As we all know before there is different between Free Software and Open Source Software. According to OSI (Open Source Initiative) there area unit some criteria could be comply if the software want to call an “Open Source” [3].

1. Free distributor
2. Source Code
3. Derived Works (The license should permit the modification code)
4. Integrity of The Author's Source Code
5. No discriminate resist to person or groups
6. There is no discrimination against areas of business
7. Distribution of license (The rights attached to the program must apply to all to whom the program is redistributed while not the necessity for execution of an extra license by those parties.)
8. License Must Not Be Specific to a Product
9. License should not restrict another software (the license should not insist that every one alternative programs distributed on an equivalent medium should be open source software.)
10. License should be technology – neutral.

And today Open Source has flourished in many Category e.g operating systems, web servers, database [4].

2.1 Proprietary Software Definition

As we know that the opposite the open source is Proprietary software, which is to using the software we should buy the license first. And usually proprietary software owned by an individual or company. There are almost always on its use and for the source code it secret, according to [5] for proprietary software the e.g are Microsoft and child, adobe, Accpac (Accounting software), Symantec, Checkpoint etc. And Proprietary software development mostly the are using waterfall model, and have 5 phase [6], the first step is Requirement phase, the second phase is system and software design, third phase is implementation and unit testing phase, fourth phase integration and system-testing, and the last phase support and maintenance.

2.2 VAL-IT

Val IT Framework is Framework that focus on IT investment [7]. And because this paper related to investment on IT and to clarify the function of IT and Business functions. Author uses VAL-IT Framework for this paper to assist enterprises optimize the conclusion valuable from IT-enabled investments at an affordable cost, and with a better-known and acceptable level of risk, the Val IT initiative includes analysis activities, publication, and complementary resources, supporting its principal centerpiece [8], [9].

In the picture 1.0 [8] below shows Val-IT Domain and Processes:

![Val-IT Domain and Processes](image)

And as picture above we can sees there are 3 domains [7], [8]:

- Value Governance (VG) Value governance consists of 11 key management practices that cover the establishment of a governance, monitoring, and control framework, provides strategic direction for investments, and defines the investment portfolio characteristics
• Portfolio Management (PM) Portfolio management consists of 15 key management practices that cover the identification and maintenance of resource profiles; define investment thresholds; provide for the evaluation, prioritization and selection, deferral or rejection of investments; manage the overall portfolio; and monitor and reports on portfolio performance.

• Investment Management (IM) Investment management consists of 15 key management practices that cover the identification of business requirements; develop a key understanding of candidate investment programs; analyze alternatives; define and document detailed business cases for programs; assign clear accountability and ownership; manage programs through their full economic life cycle; and monitor and report on program performance.

2.3 COST

As we know that the one of advantage using open source is the open source approach strongly affects software distribution. People can try the software before buying it, having access to internal documentation and code [2], so we can modify the code to fit what the company need. and open source can achieve a high level of efficiency and the software patches or correction, is might be more faster then proprietary software because open source they have a one of big community [2], [6].

2.4 SECURITY

Besides the price issue of course to be considered from selecting a software is about security, because if the system are vulnerable to threats it can affect business continuity. For security open source software is not intrinsically more secure than proprietary code [10]. Maybe for some people open source security is not good because the code is open to everyone but it opposite with open source mania like Eric Raymon as he said “Given enough eyeballs, all bugs will feel shallow” [9], [11].

2.5 MSME Definition

According to UNDANG-UNDANG REPUBLIK INDONESIA NOMOR 20 TAHUN 2008 TENTANG USAHA MIKRO, KECIL, DAN MENENGAH.

This table show MSME describe the distribution of SME Category.

<table>
<thead>
<tr>
<th>Enterprise Category</th>
<th>Net Asset</th>
<th>Annual sales revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>Rp50.000.000.00</td>
<td>Rp 300.000.000.00</td>
</tr>
<tr>
<td>Small</td>
<td>&gt;Rp50.000.000.00-500.000.000.00</td>
<td>&gt; Rp300.000.000.00 - Rp2.500.000.000.00</td>
</tr>
<tr>
<td>Medium</td>
<td>&gt;Rp500.000.000.00- Rp10.000.000.000.00</td>
<td>&gt; Rp2.500.000.000.00 - Rp50.000.000.000.00</td>
</tr>
</tbody>
</table>

Table 1.0 Category of Micro Small Medium Enterprise

3. Methodology

For the methodology this paper will be analyzed with Investment Management module from Val IT Framework will be used to meet the company needs. Because this will relate to the investment of the company

3.1 IT Val - Investment management Procedure

The procedure of IT Val module there are 10 process as below [8]:

• Develop and assess the initial programme conception business case
• Understanding the candidate program and implementation options.
• Develop the program plan.
• Create full life-cycle costs and benefits.
• Create the detailed candidate program business case
• Launch and managing the program
• Enhance operational IT portfolios
• Update the business case
• Monitor and report on the program
• Retire the program

4. Result

PT.XYZ business is in outsourcing in Indonesia wants to develop the IT they had, because of the current IT system that they had not relevant to the business that has been developed at this time, there are many procedures are still do manually, which could be a possibility of error in jobs, Hence the company is currently wants to use the software for daily operations, to reduce the occurrence of Administrative mistakes in their daily work. There are several alternatives that are being considered and already can be classified in two types of open source software and software Proprietary. Where to evaluate both the author using Val IT Framework to analyze it. And of Val IT Framework authors chose Domain investment management procedures, relevant because this domain is relevant to the problem. And from the domain of the 10 existing processes, the author only took 4 process because the process that allows for compare. 4 process are:
• Understand the candidate programme and implementation options
• Develop full life-cycle costs and benefits.
• Update operational IT portfolios
• Monitor and report on the programme

1. Understand the candidate programme and implementation options
Based on the initial conversation with the CEO of PT. XYZ, The result are:
• using Proprietary software or open source software

2. Develop full life-cycle costs and benefits
For ERP Proprietary cost Efforts aimed at ongoing maintenance and enhancements cost approximately $1.5 million annually per ERP implementation [12]. In the picture 2.0 [13] below shows ERP Cost year to year:

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost</th>
<th>% of cost overruns</th>
<th>Duration</th>
<th>% of duration overruns</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>$7.1MM</td>
<td>53%</td>
<td>17.8 months</td>
<td>61%</td>
</tr>
<tr>
<td>2011</td>
<td>$10.5MM</td>
<td>56%</td>
<td>16 months</td>
<td>54%</td>
</tr>
<tr>
<td>2010</td>
<td>$5.5MM</td>
<td>74%</td>
<td>14.3 months</td>
<td>61%</td>
</tr>
<tr>
<td>2009</td>
<td>$6.2MM</td>
<td>51%</td>
<td>18.4 months</td>
<td>36%</td>
</tr>
</tbody>
</table>

Table 2.0 ERP Cost year to year from Panorama Consulting Group, and Open source cost is depend on company requirement. And some research said cost for Open Source is the training cost of people in the company who deploy the application.

For the Benefit
ERP Proprietary : Support and update program will be conducted regularly
ERP Open Source : Can modify the program until meet with company requirement

3. Update operational IT portfolios
For the reflect changes that result ether open source and Proprietary operational almost similar.

4. Monitor and report on the programme
Open Source : For reporting we should be learn for creating the report.
Proprietary : For reporting the will be easier than open source because we just ask the vendor to create the report.
5. Conclusion

Based on the research above, it is concluded that if Software Proprietary cost is high but the support is conducted regularly for operational, it can be delivered easier and the report delivering is also become easier. It is because if using the Software Proprietary, the owner or company just ask the vendor to create report. While for Open Source Software, the cost is more cheaper than Software Proprietary but the benefit is we can modify the program until meet with the company requirement for operational IT which similar to Software Proprietary. But for reporting, the company should be learn the application to create the report.

The results of this research will propose to the owner to be weighted and assessed in each variable and it is necessary to perform decision making process in the future research.

References