AN ANALYSIS ON IMPLEMENTING “DEVOPS” IN SOFTWARE COMPANIES IN SRI LANKA

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Dissertation submitted in partial fulfillment of the requirements for the Master of Business Administration in Management of Technology

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January 2016
Declaration

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Name of the Supervisor: Dr. Indika Perera
Abstract

The purpose of this study is to conduct analysis on implement DevOps in Sri Lankan software companies. DevOps is extended of agile with mix of patterns intended to improve collaboration between development and operation teams. The main objective of this research is to identify whether there are relationships between quality, responsiveness to business needs and agility to new technologies with implementation of DevOps. Other objectives of this research are to identify barriers Sri Lankan Software companies faced and provide recommendations to overcome them. According to literature survey, research conceptual model has developed and three hypotheses have derived based on the conceptual model. First three research objectives have accomplished by testing hypotheses using Pearson correlation. Three linear models have derived based on multiple regression analysis. Recommendation has given based on interview feedback, hypotheses output and regression analysis. This study is conducted using deductive approach. Data has collected from IT professionals in Sri Lanka who have experience or knowledge about DevOps. According to hypotheses testing results it can be proved that IT professionals in Sri Lanka are in a perception which they think implementation of DevOps has a positive relationship with software Quality, Responsiveness to business needs and Agility to new technologies. According to the results of multiple regression analysis, it has proved that culture, automation, measurement, sharing and continuous deployment are important factors to consider when implement DevOps in Sri Lanka. In conclusion, when considering the result of research, it can be recommended to implement and practice DevOps to Software companies in Sri Lanka. So development and operation teams can work together as one team to reach business goals and provide a quality software to clients.

Keywords: DevOps, CAMS Framework, Quality, Agility, Responsiveness
Acknowledgement

First I would like to extend my sincere gratitude to my supervisor Dr. Indika Perera, Lecturer of Department of Computer Science and Engineering, University of Moratuwa for his precious support, advices and guidance given during the research.

I would like to express my gratitude to all academic and non-academic staff of Management of Technology Department in University of Moratuwa who helped in numerous ways during the academic period.

I sincerely thank all IT professionals for extending their support by sending responses for questionnaire and assistance to research exercise. Special thanks go to all interviewees who allocate time slot from their valuable time to conduct interviews and sharing their experiences.

I am thankful to MBA colleagues and friends who have given me tremendous support, continuous motivation and encouragement to make this success. Finally thank my parents for their patience, encouragements and assistance in making this success.
# Table of Contents

Declaration ................................................................................................................................. ii  
Abstract .................................................................................................................................. iii  
Acknowledgement ...................................................................................................................... iv  
List of Figures ............................................................................................................................. viii  
List of Tables ............................................................................................................................... ix  
List of Abbreviations ................................................................................................................. x  

Chapter 1: Introduction ............................................................................................................. 1  
  1.1. Background of the study ................................................................................................. 1  
  1.2. Problem statement ............................................................................................................ 3  
  1.3. Research Questions ........................................................................................................ 3  
  1.4. Objectives of the Study .................................................................................................. 4  
  1.5. Significance of the Study ............................................................................................... 4  
  1.6. Scope of the study .......................................................................................................... 5  

Chapter 2: Literature Review .................................................................................................... 6  
  2.1 Introduction ....................................................................................................................... 6  
  2.2 Software Development Life Cycle (SDLC) ....................................................................... 6  
  2.3 Waterfall Model ............................................................................................................... 6  
  2.4 Agile Software Methodologies ........................................................................................ 7  
  2.5. Lean Software Development .......................................................................................... 7  
  2.6 Continuous Deployment (CD) ........................................................................................ 8  
    2.6.1 Technical and Social Challenges on Continuous Deployment ............................... 9  
  2.7. Introduction to DevOps ................................................................................................ 12  
  2.8 DevOps Definition ........................................................................................................... 12  
  2.8.1 Harmonization of Development and Operation Teams ........................................... 13  
  2.9 Advantages of DevOps ................................................................................................... 13  
  2.10 Disadvantages of DevOps ............................................................................................ 14  
  2.11 Challenges in Implementing DevOps in IT Organizations .......................................... 15  
  2.12 SNAC Framework ........................................................................................................ 15
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.13 A Framework for Managing Mission Needs, Compliance and Trust in the DevOps Environment</td>
<td>18</td>
</tr>
<tr>
<td>2.14 CAMS Model</td>
<td>21</td>
</tr>
<tr>
<td>2.16 Measurement of Quality of the Software Development Process</td>
<td>26</td>
</tr>
<tr>
<td>2.17 Measurement of Responsiveness</td>
<td>27</td>
</tr>
<tr>
<td>2.18 Measurement of Agility</td>
<td>28</td>
</tr>
<tr>
<td>2.19 Conclusion</td>
<td>30</td>
</tr>
<tr>
<td>Chapter 3: Methodology of the Study</td>
<td>31</td>
</tr>
<tr>
<td>3.1. Introduction</td>
<td>31</td>
</tr>
<tr>
<td>3.2. Research Approach</td>
<td>31</td>
</tr>
<tr>
<td>3.3. Conceptual Model</td>
<td>31</td>
</tr>
<tr>
<td>3.4. Hypothesis Development</td>
<td>33</td>
</tr>
<tr>
<td>3.5. Operationalization of the Constructs</td>
<td>34</td>
</tr>
<tr>
<td>3.6 Target Population</td>
<td>37</td>
</tr>
<tr>
<td>3.7 Sampling method</td>
<td>38</td>
</tr>
<tr>
<td>3.8 Questionnaire Design</td>
<td>39</td>
</tr>
<tr>
<td>3.9 Method of Data Collection and Analysis</td>
<td>39</td>
</tr>
<tr>
<td>3.10 Summary</td>
<td>40</td>
</tr>
<tr>
<td>Chapter 4: Analysis and Discussion of Results</td>
<td>41</td>
</tr>
<tr>
<td>4.1 Introduction</td>
<td>41</td>
</tr>
<tr>
<td>4.2 Data Collection and Preparing Database</td>
<td>41</td>
</tr>
<tr>
<td>4.3 Demographic Factor Analysis</td>
<td>42</td>
</tr>
<tr>
<td>4.3.1 Designation track of Respondents</td>
<td>42</td>
</tr>
<tr>
<td>4.3.2 Industry Experience of respondents</td>
<td>43</td>
</tr>
<tr>
<td>4.3.3 Size of the company</td>
<td>44</td>
</tr>
<tr>
<td>4.3.4 Ownership of the company</td>
<td>45</td>
</tr>
<tr>
<td>4.3.5 Development Methodology</td>
<td>46</td>
</tr>
<tr>
<td>4.3.6 DevOps Experience users</td>
<td>47</td>
</tr>
<tr>
<td>4.3.7 Years of DevOps Experience</td>
<td>48</td>
</tr>
<tr>
<td>4.4 Reliability and Validity Analysis</td>
<td>49</td>
</tr>
<tr>
<td>4.4.1 Reliability and Validity of Product Quality</td>
<td>49</td>
</tr>
<tr>
<td>4.4.2 Reliability and Validity of Process Quality</td>
<td>50</td>
</tr>
</tbody>
</table>
List of Figures

Figure 2. 1 Continuous Deployment ................................................................. 8
Figure 2. 2: Challenges on Continuous Deployment ........................................ 9
Figure 2. 3: DevOps Cycle .............................................................................. 12
Figure 2. 4: DevOps Life Cycle ......................................................................... 13
Figure 2. 5: DevOps Multi Stage Testing ........................................................... 20
Figure 2. 6: ISO 9126 Model .......................................................................... 23
Figure 2. 7: Quality Characteristics ................................................................. 25

Figure 2. 1: Conceptual Framework .................................................................. 32

Figure 4. 1: Current Designation track .............................................................. 42
Figure 4. 2: Industry experience ....................................................................... 43
Figure 4. 3: Size of the Company ...................................................................... 44
Figure 4. 4: Ownership of Company ................................................................. 45
Figure 4. 5: Development Methodology ............................................................. 46
Figure 4. 6: DevOps Experience Users ............................................................... 47
Figure 4. 7: Years of DevOps Experience ........................................................... 48
Figure 4. 8: Box Plot - Implement DevOps ......................................................... 54
Figure 4. 9: Normal Plot - Implement DevOps .................................................. 55
Figure 4. 10: Box Plot - Quality ....................................................................... 55
Figure 4. 11: Normality Plot - Quality ............................................................... 56
Figure 4. 12: Box plot - Responsiveness ......................................................... 56
Figure 4. 13: Normality Plot - Responsiveness ................................................ 57
Figure 4. 14: Box plot - Agility ........................................................................ 57
Figure 4. 15: Normality Plot – Agility .............................................................. 58
Figure 4. 16: Scatter plot - Hypothesis 1 ............................................................ 60
Figure 4. 17: Scatter plot - Hypothesis 2 ............................................................ 64
Figure 4. 18: Scatter plot - Hypothesis 3 ............................................................ 68
Figure 4. 19: Hypothesis Summary ................................................................. 72
Figure 4. 20: Success of DevOps ...................................................................... 76
Figure 4. 21: Recommendations to Sri Lanka .................................................. 77

Figure 5. 1: Summary ..................................................................................... 81
List of Tables
Table 3. 1: Operationalization Table ...................................................................................... 35
Table 3. 2: Operational definition of Conceptual model variables ............................................... 37

Table 4. 1: Reliability Analysis Cronbach's Alpha -Product Quality ........................................... 49
Table 4. 2: Reliability Analysis Cronbach's Alpha -Process Quality ........................................... 50
Table 4. 3: Reliability Analysis Detailed -Process Quality ......................................................... 50
Table 4. 4: Reliability Analysis Detailed -Process Quality ......................................................... 50
Table 4. 5: Component Matrix - Process Quality ........................................................................ 51
Table 4. 6: Reliability Analysis Cronbach's Alpha -Responsiveness ........................................... 51
Table 4. 7: Reliability Analysis Cronbach's Alpha -Agility ........................................................... 52
Table 4. 8: Reliability Analysis Cronbach's Alpha -DevOps ......................................................... 52
Table 4. 9: Descriptive Analysis ................................................................................................. 53
Table 4. 10: Pearson correlation scale ........................................................................................ 59
Table 4. 11: Pearson Correlation - Hypothesis 1 ...................................................................... 61
Table 4. 12: ANOVA- Hypothesis 1 .......................................................................................... 62
Table 4. 13: Model Summary- Hypothesis 1 .............................................................................. 62
Table 4. 14: Coefficient- Hypothesis 1 ...................................................................................... 63
Table 4. 15: Pearson Correlation- Hypothesis 2 ........................................................................ 65
Table 4. 16: ANOVA- Hypothesis 2 .......................................................................................... 66
Table 4. 17: Model Summary- Hypothesis 2 .............................................................................. 66
Table 4. 18: Coefficient- Hypothesis 2 ...................................................................................... 67
Table 4. 19: Pearson Correlation -Hypothesis 3 ........................................................................ 69
Table 4. 20: ANOVA- Hypothesis 3 .......................................................................................... 70
Table 4. 21: Model Summary- Hypothesis 3 .............................................................................. 70
Table 4. 22: Coefficient- Hypothesis 3 ...................................................................................... 71
Table 4. 23: Summary Table ..................................................................................................... 72
List of Abbreviations

IT – Information technology

QA – Quality Assurance

Dev – Development

CAMS- Culture, Automation, Measurement Sharing

SDLC – Software Development Life Cycle

LSD – Lean Software Development

CD – Continues Deployment

SNAC – Stakeholders, Needs, Alterable and Constraints

SLA- Service Level Agreement

Ops – Operation team

KPI- Key Performance Index

ICTA- Information and Communication Technology Agency of Sri Lanka

SLASSCOM: Sri Lanka Association of Software Service Companies

SPSS - Statistical Software Package used for Statistical analysis

ANOVA- Analysis Of Variance