

APPLICATION OF THE AGILE – SCRUM METHODOLOGY TO REVAMP KPI (KEY PERFORMANCE INDEX) SYSTEM AT PT SOHO GLOBAL HEALTH

Wisnu Sukma Maulana

Faculty of Computer Science, Gunadarma University, Indonesia

Article History

Received : Feb 2023

Revised : Mar 2023

Accepted : Mar 2023

Published : Mar 2023

Corresponding author*:

wisnu_maulana@staff.gunadarma.ac.id

Cite This Article:

W. S. Maulana, "APPLICATION OF THE AGILE – SCRUM METHODOLOGY TO REVAMP KPI (KEY PERFORMANCE INDEX) SYSTEM AT PT SOHO GLOBAL HEALTH ", IJST, vol. 2, no. 1, pp. 21–26, Mar. 2023.

DOI:

<https://doi.org/10.56127/ijst.v2i1.562>

Abstract: PT. Soho Global Health (SOHO) is a provider of health products and supplements that has 2500 employees. The overall performance of these employees is assessed on an annual KPI (Key Performance Index). Problems arise due to technology systems that were previously perceived to be very slow for processing KPI data online. New system changes that are designed with faster performance need to be done or in other words revamp the system. Substitution of a whole new system or revamp system at Soho needs to use the Agile methodology approach. Agile methodology especially the Scrum model can overcome problems that arise in the system development process, especially in the speed of processing time, many modules and complex, and also involves many teams both the development team and many elements of related users. Given that, the KPI system at SOHO processes data from thousands of employees from many divisions as a whole.

Keywords: Methodology, Agile, Scrum, System, KPI

INTRODUCTION

SOHO Global Health is a leading healthcare provider with a history and competence of more than 70 years in the field of natural / herbal health care products and services. SOHO Global Health offers a unique and best in class platform in terms of branding, sales & marketing, manufacturing and distribution to support future growth in the Indonesian market. Supported by more than 2500 employees, SGH maintains ~90% coverage of targeted doctors, while distribution reaches more than 41000 outlets nationwide. [1-7]

As an evaluation tool to assess the performance of thousands of SOHO employees, KPI (Key Performance Index) is used. This KPI assessment is carried out for a year to assess each employee's good or bad performance category. Problems arise where so far the performance of information technology in the form of the SOHO online KPI system is felt to be very slow. Therefore, the SOHO HRD (Human Resource Department) team needs to do manual data processing as backup data. Another impact is the assessment results of 1 year data which are scheduled to be released at the beginning of the following year, always being pushed back from the schedule until the 2nd or 3rd month of the following year. This assessment results in the process of awarding annual bonuses, allowances, promotions, or even transfers and layoffs (termination of employment) due to decreased performance which can only be carried out in the 2nd (February) or 3rd (March) month of the following year.

The replacement of a new and comprehensive system cannot be avoided as a solution to the problem of slow processing of data from the previous system. However, further problems arise when the new system is expected to be completed in the shortest possible time. Because, the main problem of the overall system changes or system revamp is more towards re-socialization to all employees. Where, SOHO has thousands of employees and according to the estimation of the HRD team it takes months to re-socialize the new system. Meanwhile, the SOHO HRD team wants the system revamp and socialization to be carried out before the end of the year or the KPI data processing period for that year.

Based on the description of the background, it can be formulated a subject matter in this study as follows:

1. The very slow performance of the old system in processing thousands of SOHO employee KPI data needs to be overcome by a complete new system change or known as a system revamp
2. A complete replacement of the new system needs to be carried out in the shortest possible time, considering the length of time the socialization of the new system takes

The objectives of this research are as follows:

1. Replace a whole new system or revamp the system to support KPI data processing which is faster than the previous system
2. Using a system development approach with an Agile methodology, especially Scrum modeling for the sake of efficiency in developing the system.

RESEARCH METHOD

This research method was carried out by collecting data where the explanation is as follows:

1. Literature review
2. Looking for and getting information as data from books, and so on about KPIs and systems related to them.
3. Study of literature
4. Study books, journals and references related to the use of Scrum for research development.
5. Observation Method
6. In this observation method the researcher collects and examines the data obtained by directly observing the use of the system at PT SOHO Global Health
7. The system development method is carried out using the Agile SDLC methodology approach, especially the Scrum model.

RESULT AND DISCUSSION

Functional Requirements

Functional requirements are product features or functions that developers must implement to enable users to accomplish their tasks. So, it's important to make them clear both for the development team and the stakeholders. Generally, functional requirements describe system behavior under specific conditions. Centralized authentication and authorization for all users and all interrelated applications.

Portal KPIs

1. KPI module
 - Create KPI period for each division
 - Change KPI period for each division
 - Removing the KPI period for each division
2. KPI Item Module
 - Make points from each KPI period
 - Changing the points of each KPI period
 - Deleting points from each KPI period
3. KPI Score module
 - Download and upload KPI values
 - Approve or reject KPIs
 - View and search for submitted KPI values
4. KPI reports
 - See the average KPI value of each division
5. Web Admins
 - Create and Manage application users
 - Assign roles to each user according to the roles they must have
 - Set the communication rights of each application that are interrelated

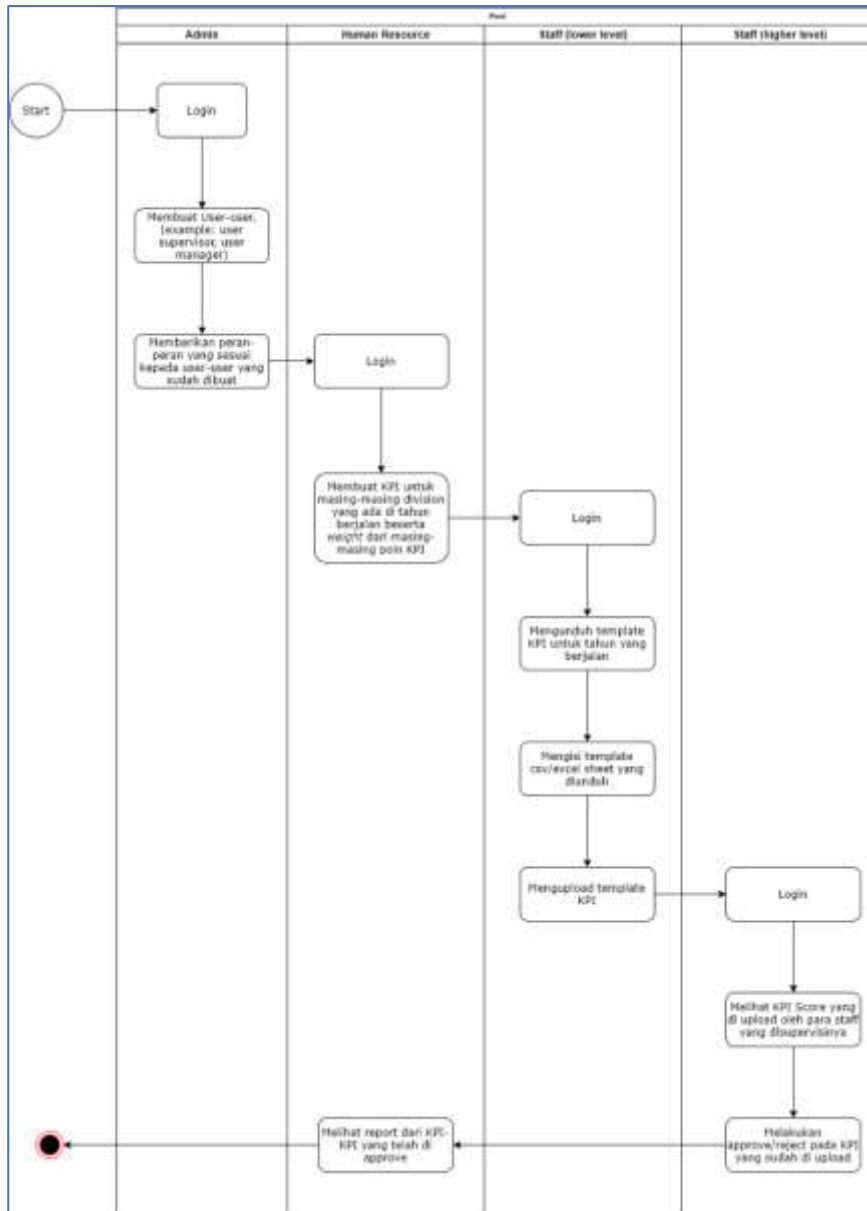


Figure 1. Soho KPI System Process Flow Definition

From these functional requirements, several Scrum components are formed, namely:

Scrum member

1. Product Owner consists of:
 - 1 Soho HRD manager
 - 2 Soho HRD staff
 - 1 Soho IT manager
2. The Scrum Master consists of 1 senior IT PM (Project Manager) from the system development team
3. The Development Team consists of:
 - 1 UI/UX Designer
 - 2 Senior .Net Programmers
 - 4 Junior .Net Programmers
 - 2 QA (Quality Assurance) Testers
 - 1 Technical Writer
4. Product Backlog
 - Security DB Setup

- Identity Server Setup
- Admin Identity Server Setup
- Setup KPI Project and its security
- CRUD KPI Points
- Export KPIs to Excel templates
- List of KPI Scores
- Input and Upload KPIs
- Approval Flow
- KPI Average Report

5. Sprints

Sprints are divided into 5 sprints with the duration of each sprint as follows:

- Sprint 1: Security Setup takes 4 working days
- Sprint 2: KPI Project Setup duration of 4 working days
- Sprint 3: KPI Configuration takes 4 working days
- Sprint 4: KPI Scoring duration of 11 working days
- Sprint 5: Report on the duration of 4 working days

Table 1. Sprint Revamp Stages of the Soho KPI System

Task Name	Responsible	Story Points	Start	Finish	Duration (Days)
Sprint 1: Security Setup	Scrum Master, Dev Team	3	6-Apr	10-Apr	4
Security DB Setup	Development Team	1	6-Apr	7-Apr	1
IdentityServer Setup	Development Team	3	6-Apr	10-Apr	4
Admin Identity Server Setup	Scrum Master, Dev Team	2	7-Apr	10-Apr	3
Sprint 2: KPI Project Setup	Scrum Master, Dev Team	3	13-Apr	17-Apr	4
Setup KPI Project and its security	Development Team	3	13-Apr	17-Apr	4
CRUD KPI Period for division	Development Team	3	13-Apr	17-Apr	4
Sprint 3: KPI Configuration	Scrum Master, Dev Team	3	20-Apr	24-Apr	4
CRUD KPI Poin	Development Team	2	20-Apr	22-Apr	2
Export KPI to Excel template	Development Team	3	20-Apr	24-Apr	4
List KPI Score	Development Team	2	22-Apr	24-Apr	2
Sprint 4: KPI Scoring	Scrum Master, Dev Team	5	27-Apr	8-May	11
Input and Upload KPI	Development Team	5	27-Apr	8-May	11

Task Name	Responsible	Story Points	Start	Finish	Duration (Days)
Approval Flow	Development Team	5	27-Apr	8-May	11
Sprint 5: Report	Scrum Master, Dev Team	3	11-May	15-May	4
KPI Average Repoert	Scrum Master, Dev Team	3	5/11/19	5/15/19	4

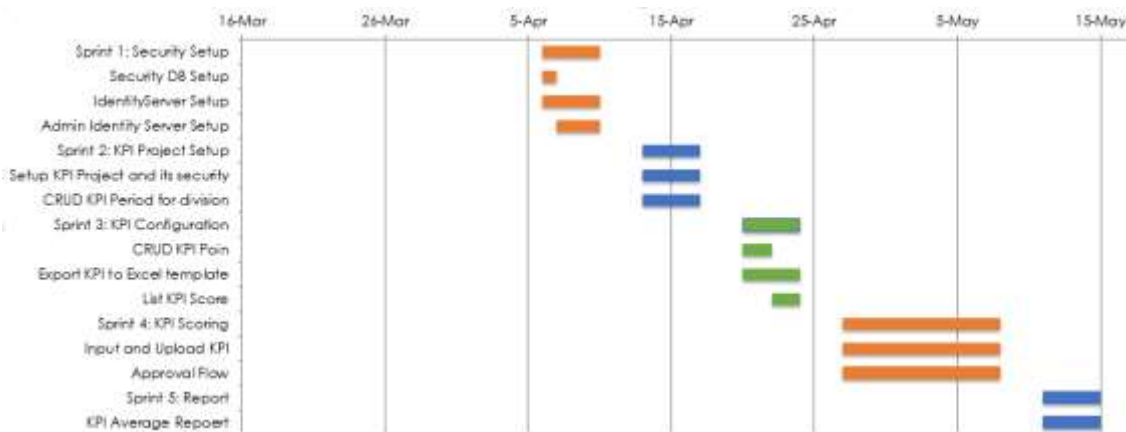


Figure 2. Ganttchart Timeline Sprint Revamp Soho KPI System

So, the total revamp of the Soho KPI system only takes 27 working days or 6 calendar weeks or 1.5 calendar months. The 1.5 calendar month figure is in a condition where the system can be used without error by the user, in this case, Soho.

CONCLUSION AND SUGGESTIONS

Conclusion

Based on the results and discussion, this research can conclude several things, namely:

1. A complete revamp of the new system needs to be done when the performance or function of the old system cannot meet the expectations of the user anymore.
2. The use of the Agile methodology, especially the Scrum model, can increase the efficiency of the duration of developing a system. Where the process of revamping the system can be done quite quickly, namely 1.5 calendar months.
3. The Scrum model in this study was only carried out with 5 sprints where the average sprint only takes 1 week or 4 working days.

Suggestion

Considering that there are still a number of things that need to be improved from this research, the researcher hopes that in the future this research can be improved. The researcher also suggests that this research can be tested for several case studies with system subjects other than KPIs, so that it is hoped that later there will be another study that can analyze the results of the overall comparison of these case studies against the use of the Scrum model.

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