Improving Enterprise Applications adoption by using Hook Framework: A Case Study

Srikant Suddekunte

PhD Scholar IIM Raipur

Abstract

Hook Frame [1] was proposed by Nir Eyal in 2013 and explains the massive rise in the usage of Social Media Sites. On the other hand, Internal Enterprise Applications (EA) [2] continue to be a familiar sad story of failed IT implementations, lower rates of end user adoption and continued financial investment. This article proposes an approach as to how certain aspects of Hook Framework can adopted to EA without making substantial changes in technology and architecture of these Internal Enterprise Applications. The focus is on usability and User Experience.

1. Introduction

With time, internet-based applications have become better in terms of usability and user experience, this can be seen in the huge adoption and usage of Social media. However internal enterprise application (EA) have not seen the same improvement [3]. Many of the EA are the disliked, non-functional and non-modern by any standards. It is akin to a farmer growing the healthiest produce for their customers and surviving on raw/ rotten produce. This is problem is further accentuated in today's world when the employees of a company use Smartphone and other modern application outside of work but at work they have to stare at decades old screens, sometime use mainframe application or work in eco systems where the application do not talk to each and users do not have reliable data across systems. When employees use EA, their experience is not positive [3]. This paper presents an approach by which the users are more likely to continue using the system and when there is a communication regarding the EA, the end user should have a positive response. Another goal is to recommend changes which can be implemented with minimal design or architectural changes. Solutions which are less technology intensive and a lower Cost have a better probability of adoption in the enterprise. Our approach is based on Hook Frame [1] which was proposed by Nir Eyal in 2013. Our approach is supported with a case study where the AS IS state before implementing is presented and then after applying the framework the benefits are presented as the TO BE state. In line with a famous anonymous quotation "A picture is worth a thousand words"- our case study has multiple pictures to exemplify the benefits of the framework.

In section 2 Hook Framework is explained and academic work which identifies the issues faced in EA are discussed. Section 3 to 6 describe the different components of our solution using case study and pictures. In Section 7 conclusion of this paper is presented.

2. Theoretical background

In this section, Hook framework is explained and then EA and some of the problems are discussed.

2.1. *Hook Framework in Brief*

Hook framework was presented by, Nir Eyal in 2013 [1] and is best explained in the Figure 1.

Figure 1: Hook Framework

One can think of your own interaction with Social Media sites as you read through the summary of each quadrant below.

    1. External Triggers. Commonplace functions such as email alerts, notifications and even app icons are all what Eyal calls "external triggers" that cue your mind to act. You may already be so accustomed to the experience of your favourite products that you overlook the hooks that first brought you in.

    2. Action. "If the user does not take action, the trigger is useless. Action must be easier than thinking." Triggers prompt the action but it's the (promise of) reward in step 3 that motivate users to act.

3. Variable Reward. Humans are rewards-driven, but Eyal flags a key principle: "Predictable loops don't create desire." As an example, the first time we discover the light turns on when we open our fridge door, we may feel a hit of excitement, but soon after the response becomes predictable and boring. By contrast, it's the promise of different treats waiting for us in the fridge that keeps us coming back. Anybody who has ever opened the fridge again and again even after knowing what's inside has demonstrated the habit-forming power of variable rewards.

4. Investment. Simply put, whenever a user invests time, data, effort, social capital or money, they are more likely to return.

5. Internal Triggers. Like word of mouth as a marketing channel, internal triggers are the hidden fifth step that habit-forming products successfully unlock, creating a forever loop back into the product. Unlike external triggers which are visual indicators, internal triggers fuse with our thoughts and feelings to synonymize certain products with certain emotions. An example Eyal describes is how Facebook photos trigger memories of social experiences and, over time, Facebook itself becomes a place for "having social feelings."

2.2. *EA and the problems*

EA is a broad term which describes the software used by organizations to execute their operations [2]. Such organizations include business, schools, hospitals etc. These operations are carried out to full fill their goals and objectives while following policies guidelines and norms. A different class of software caters to customer facing, internet enabled services. The focus of this paper is on EA. Jasper et al (2005) [4] define post-adoptive behavior as the mix of feature adoption decisions, feature use behavior and feature extension behavior made by users after IT applications have been installed and is usage in the enterprise. One of the key practical implications identified in the paper is to capture post adoptive user behavior at a feature level, analysis of such data will clearly identify the underutilized features of the application. **This recommendation has been adopted in our case study**

3. Solution

The proposed solution consists of changes which can be adopted in EA. Using each of the quadrant of Hook Framework, changes are suggested. Before suggesting an improvement, samples of AS IS states are provided and using the Hook Framework, TO BE improvements are presented.

4. Trigger

Triggers in an Organization can be classified into two types:
1. Event based- Many of the operations in organization require interactions between employees. This can be back and forth or sequential. Event based trigger occurs when an action performed by an employee which necessitates the work by another employee.
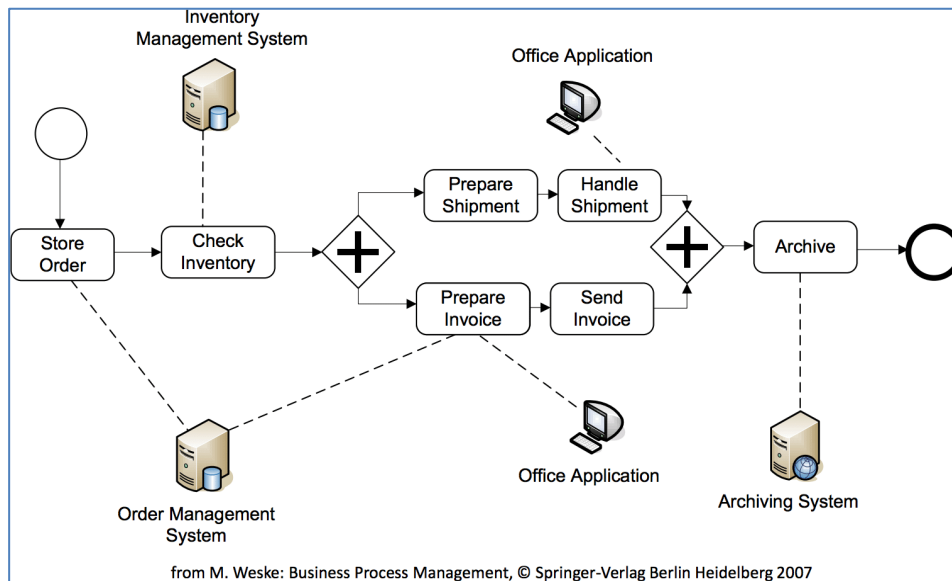
Refer to Figure 2 as an example

Figure 2: Event Based Trigger

Figure 2: Figure 2:

2. Time based- Organizations and individuals are bound by timelines. Everyone has tasks which needs to be completed by a certain time. Time based triggers is the second type of triggers. Common examples are tax filing deadline or weekly time sheets.

For both type of triggers, emails are a commonly used communication medium. These are system generated email(s) which require the employees to complete certain tasks. Figure 3. is an example of System generated email.

Figure 3: AS IS system generated email sample

In the sample email, there are multiple aspect which can be modified so that it works as an effective trigger. A trigger is effective if it makes the recipient take an action and access the EA. Let us look at the possible areas of improvement in the email:

1. How am I related to this? The connection between the email and the recipient is not evident right away. Employees could be working on multiple tasks and without a way to quickly identify the task, Employees may choose to ignore the email.

2. What is the deadline? The email does not show the due date for the task. Without the deadline, Employees would not be able to prioritize this task.

3. How do I view this task? There is an absence of guided navigation OR steps which will help the user view the task.

4.1. *Proposed Solution*

A quick win would be to modify the system emails so that once the Employees see such emails, they are more inclined to open the EA and work on the tasks. Emails should include one or more of the following information:
1. Relation to the task
2. Importance and Financial Impact of completing the task
3. Indication of complete rate like % complete.
4. System navigation help

As an example, refer to Figure 4, the below changes are quick wins which involve changing the system email format, without any technology changes.

Figure 4: TO BE system generated email sample

5. Action

After the users have connected to the EA, it is critical that their experience of using the system should be positive. At a minimum they should spend time on the system to complete the task and not having to re learn how to use the system and leave the task incomplete, in frustration. Incomplete task lead to unproductive work and no matter how good the triggers are, system usage will not increase. One response to this problem has been to provide trainings for the EA. While these are genuine attempts to address the problem, more needs to be done, before Trainings can be called as complete success [5]. Following are some of the reasons:

    1. Trainings are scheduled events but, in most cases, the users need help "at the moment" when they are using the EA.

    2. E learnings or recorded sessions allow for any time access by the end users. But the sessions can have multiple modules covering the entire EA, so the users must spend more time finding the exact EA feature where they need help. This again leads to delay in completing the task.

5.1. Proposed Solution

System navigation help should be available to the user at the same place where the user is facing the issue. User should not be required to open another EA or go through long trainings to get help in system usage. A "Help Me" icon or link can be made available to the user. The help link should contain features relevant to the specific screens. Refer to Figure 5 for an example
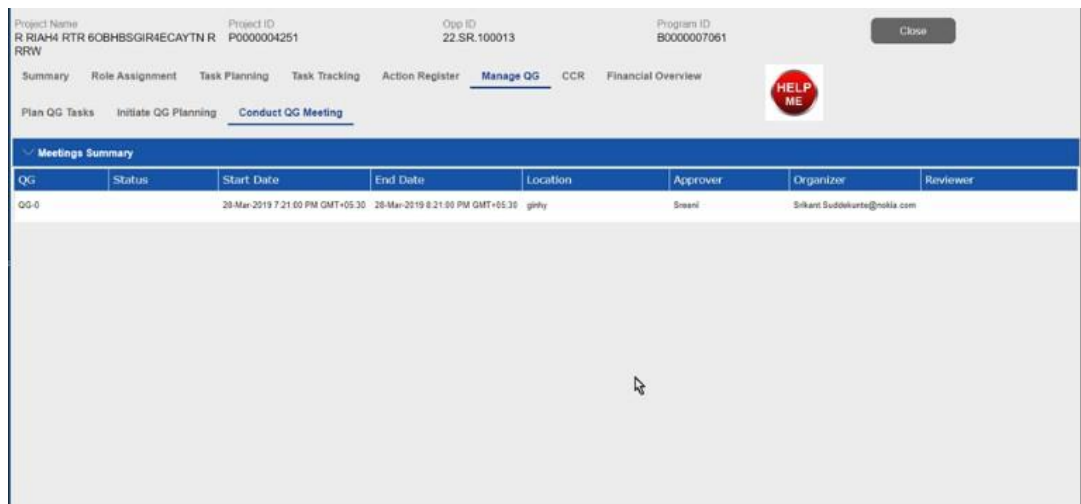
Figure 5: Help where it is needed

This solution when used in conjunction with navigation help in the email of the trigger will ensure that context specific help is readily available and thereby increase in EA usage.

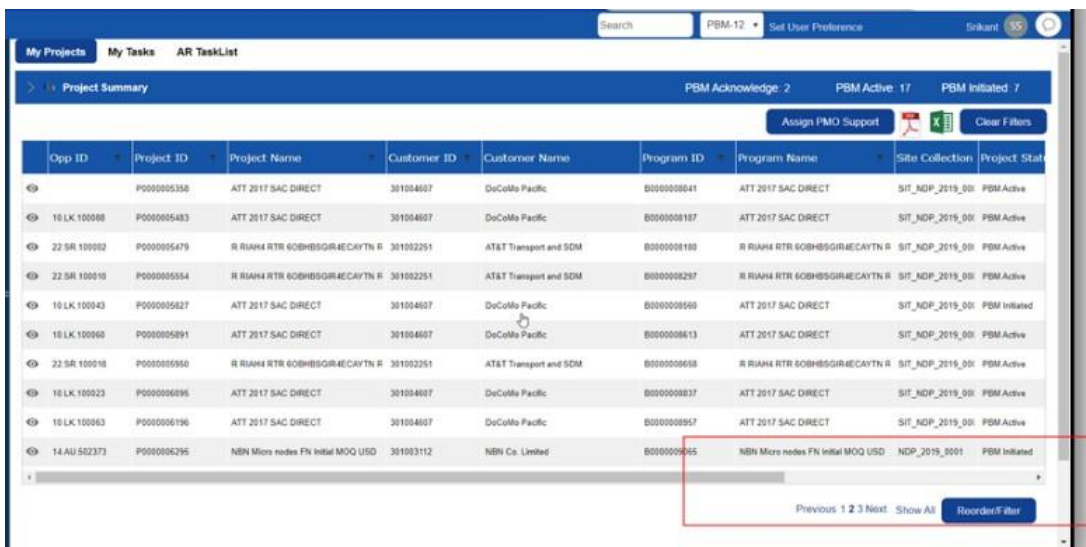## 5.2. Additional recommendations

1. Building context specific help should be started in a phased manner, one should start with areas of the Application which have a reported history of usability issues.
2. The context specific help could lead to an Increase in the maintenance cost. The email content and the Help Icon content must be updated with changes in the application.

6. Investment

Many of the EA allow user to setup specific features of the application as per their needs. These are called user specific settings. Some of the examples are as follows:
1. Time Zone
2. Currency
3. Columns and order of columns in grid
4. Axes and charts for dashboard or reports

In EA context, investment from users can be thought of the time and effort they would spend in configuring user specific settings. How much the user setting feature of an EA is used, is a good measure of application adoption. End users will only spend time on User Settings if they realize the benefits of using the applications. Refer to figures 6 for AS IS STATE sample

Larger number of columns, causes horizontal scroll

Figure 6: Example of Usability Problems which can be addressed by user Settings

Refer to figures 7 for User Setting sample
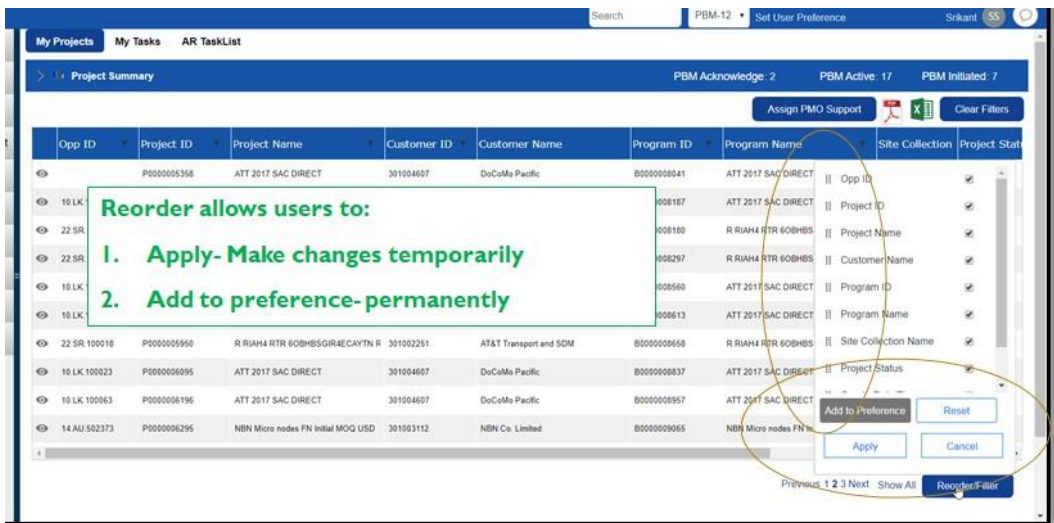
Figure 7: Example of User Setting features

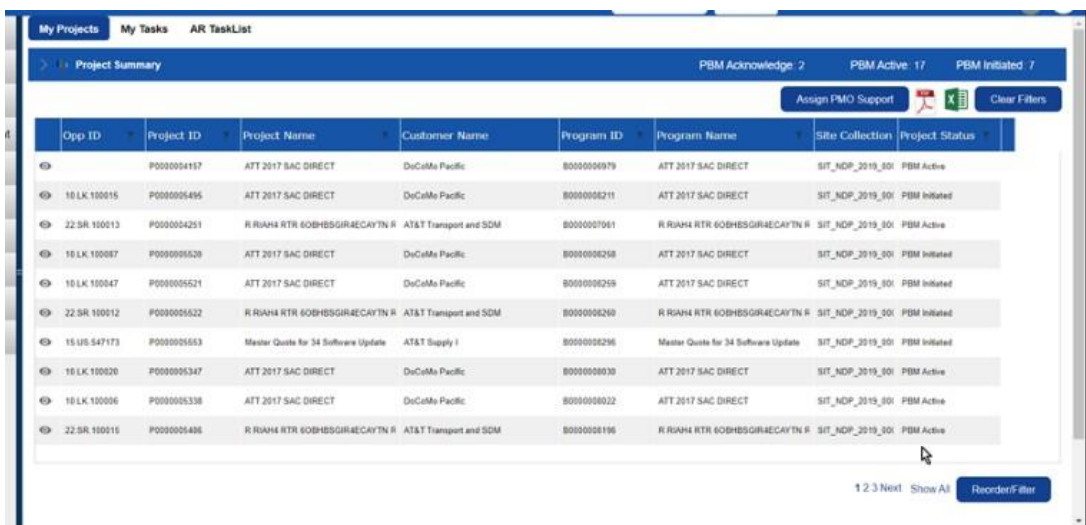Refer to figure 8 for TO BE STATE sample

Figure 8: Example of benefits from User Setting features

Conclusion

Adopting certain aspects of the Hook framework must be a joint exercise of Business and IT with active feedback from end users. If appropriate care is taken to identify quick wins and changes are made in Production regularly, one can hope to see an increase of the sage of Internal Applications thus providing ROI for Enterprises. Based on the underlying technology of EA, some changes may be quicker/easier than others.

References

[1] Hook Framework
https://university.hygger.io/en/articles/2443480-the-hook-framework
https://www.nirandfar.com/how-to-manufacture-desire/

[2] Enterprise Application definition
https://en.wikipedia.org/wiki/Enterprise_software

[3] Usability issues in EA
https://usabilitygeek.com/enterprise-software-how-to-improve-usability/

[4] Hook Framework brief
https://100productmanagers.com/articles/intro-to-hook-model

[5] Corporate Training
https://www.theibfr.com/download/gjbr/2014-gjbr/gjbr-v8n4-2014/GJBR-V8N4-2014-1.pdf

[6] Jasperson, J., Carter, P. E., & Zmud, R. W. (2005). A comprehensive conceptualization of post-adoptive behaviors associated with information technology enabled work systems. MIS quarterly, 525-557

"Proceedings of the Software Product Management Summit India 2021"