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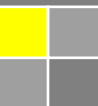
THE IMPORTANCE OF PROFOUND UAT MANAGEMENT

PROLOGIS

Experts in Aviation Consultancy

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INTRODUCTION

Most company processes nowadays are supported by IT systems. That goes especially for the airline industry, where extensive ticket distribution systems and complex passenger service systems (PSS) are required. The constant addition of new functionalities results in complex IT systems that are capable of managing companies' entire operations. Its importance for airlines goes without saying. To grant additional flexibility, the applications are regularly extended and need to be upgraded to newer versions at certain intervals. The last decade has seen the rising importance of these system migrations and upgrades.

For companies, migrating an IT system requires a lot of work, involving numerous departments. It could even involve enormous risks if the upgrade fails or the new system breaks down entirely. Nevertheless, every company reaches the point at which their current system environment's maintenance and procurement costs exceed the cost of a new system. One common example of that is the termination of Microsoft support for Windows XP. That is the very latest that companies whose systems were based on Windows XP needed to upgrade to Vista or a higher version of Windows. Other reasons for migrations could be ineffective infrastructure, the unification of system structures or simply a new functionality added to a newer version

of the current system that might provide competitive advantages for an early adopter.

For a new system that is indispensable for every day processes, it is essential to ensure that the objected system meets all functional requirements needed. This is where user acceptance testing (UAT) management becomes relevant.

UAT in a nutshell – A process of verifying that the new solution works for the user. A UAT done the right way often leads to reduced implementation time and cost along with increasing customer satisfaction. It is also known as system readiness or application testing and includes unit and functional testing as well as integration and system testing.

> ***UAT Management is a vital part of any system migration***

Once decided for system migration, the planning of UAT management begins, but the last phase of the process is most likely when the new software is developed. During UAT, actual users test the software to make sure it can handle required tasks in real-world scenarios according to specifications.

In order to conduct significant user acceptance testing, it is important to define all

relevant business operations that need to be tested in the new system.

In conclusion, UAT management is the process of planning, preparing and measuring with the objective of defining the characteristics of an IT system and presenting the difference between the actual and required condition.

PHASES OF UAT MANAGEMENT

There can be different approaches to carrying out UAT management. Companies either nominate a person within the company as the UAT manager or request external support for the role of the UAT manager. This decision definitely depends on various factors like the availability of qualified staff or the resources for outside counsel. Due to the fact that UAT management requires a lot of planning and coordination, an internally appointed UAT manager would face a great amount of additional workload. Hence, the advantages and disadvantages should be weighed thoroughly to make the best decision for the company.

> *Appointing an external UAT manager can have significant advantages for the project*

Especially for systems that are widely used within a company and numerous departments are linked to the application, their everyday functionalities require extensive testing once the system is set-up.

PROLOGIS has done numerous UAT management projects in the past. The importance of having external support with managing the user acceptance testing has been realized by various airlines.

An advantage could be that an internal UAT manager already understands all the functionalities as well as business processes, which is very important for executing test management as effectively as possible.

An external UAT manager on the other hand would have to do extensive workshops with all involved departments to understand all relevant business processes to be included in the company. Nevertheless, executing such workshops ensures that all information relevant to the company is collected and minimizes the risk of missing out on any important aspects.

An essential part of user acceptance testing is the creation of test cases. Once the UAT manager has collected all relevant information, this process begins. Test cases are scenarios of system functionalities that are

customized and adjusted with regard to the business processes / rules of the company.

It is recommended to go through the test cases with the actual key users in order to make sure that all functionalities are covered and the user understands what needs to be done. Most test cases follow a specific structure:

Test scenarios

- Reflecting different test scenarios of executing UAT key user and department (e.g. "Website – Create a booking")

Test case

- Specifies the test scenario on a more detailed level (e.g. "Create a booking for flight FRA-JFK in business class")

Expected result

- Reflecting all expected results (of executing UAT key user) of defined testcase ("Seat selection incl. in business class cabin, bag incl., meal incl." etc.)

Basically, all scenarios that can be executed in the system need to be tested during the UAT cycles. If there are different roles with different permissions configured within the system, these should be tested too. In general, the complexity of the system and the success of initial testing defines how many UAT cycles need to be executed during the migration project.

It is recommended to use web-based tools to facilitate the testing activities. The testers access their assigned test cases online and set the results of the test cases accordingly:

- Passed: A test cases matches exactly the expected result

- Failed: A test case does not match the expected result; it is important to give as detailed information as possible in order for the UAT manager to understand the problem and reproduce it to find a solution

- Blocked: The functionality required for the test case is not yet ready or a prior test case connected to that one failed

- Retest: Once a bug is fixed or failed/blocked test case is prepared for re-execution, the UAT manager sets the test cases to retest

> *In order to achieve successful User Acceptance Testing, all essential functionalities and departments should be involved*

With that overview, the UAT manager can comprehend the reason for failed test cases, try to readjust the case and if needed report it as a bug so the software can be fixed. In a second cycle, all test cases can be executed again to make sure detected bugs from the first cycle are fixed and new functionalities did not prevent the existing structures from working.

PROLOGIS' UAT MANAGEMENT APPROACH

PROLOGIS has conducted numerous UAT management projects in the past. We were most often contracted to support airlines during a migration project of a passenger service system (PSS). Most of our clients appreciate the external view that we have on the company, its business processes and the workforce. They often value having the role of the UAT manager filled by an external employee without any internal bias.

> **Managing UAT cycles online helps to improve the overview of the testing and leads to better results**

PROLOGIS has conducted projects with over 55 customers all over the world. For many of them, we have also taken over a UAT management project. From our experience, it is vital for the success of User Acceptance Testing that collaboration with the internal staff as well as the coordination of tasks with the project manager of the migration works well. So far, every UAT management project has been a great success, not only for us, but also for the companies we worked with. Our approach to integrate in the team as a partner and colleague instead of being an external voice is always appreciated by our customers. In addition, it is very helpful to overcome cultural differences and diverse working attitudes.

Furthermore, the know-how of the migrated system should be profound and extensive in order to understand problems and issues that might occur during testing.

The following is a small extract of airlines from different continents where PROLOGIS took over the UAT management role:

- Frontier Airlines (PSS migration)
- Hong Kong Express (PSS migration)
- Flyadeal (Start-up airline in need of support for their PSS set-up)
- JetSMART (Start-up airline in need of support for their PSS set-up)
- Vueling Airlines (PSS migration)

The overall tasks of a UAT manager can vary depending on the complexity of the project and the system to be implemented/migrated. Overall, prior to the start of the actual UAT cycles, it is important to create and customize test cases for the individual functionalities required by the airline. During the UAT cycles, regular monitoring of the test cycles, reporting to the project manager and the system provider as well as troubleshooting and problem solving belong to the everyday tasks of a UAT manager. In past projects, PROLOGIS consultants even took over parts of the testing themselves – in cases where the airline was short on testers, but functionalities needed to be tested. Being that flexible is very

advantageous and was very much appreciated by the customer.

Projects tended to be even more successful if PROLOGIS did not only take over the role of the UAT manager for the project, but expanded its engagement with a second resource to cover the role of the external project manager as well. Due to a facilitated communication flow, a reduced workload for the UAT manager and improved coordination with the internal project manager, those projects have been a great success.

PROLOGIS' UAT management also has additional advantages. Due to the various UAT projects executed over the years, we have created and constantly updated a set of predefined standard test cases. Basic functionalities are covered and, for special business processes of airlines, these test cases can be customized prior to uploading them to our web-based test tool.

The entire User Acceptance Testing can be managed and tracked entirely online via the tool. Its capability of creating all kinds of test reports for the results and status of the testing is very helpful for tracking the entire progress of User Acceptance Testing.

Combining a project manager with a separate UAT manager often leads to more successful project outcomes

Especially in times where parallel projects are being carried out in an airline and staff for the occupation of the various roles is short, having external support on-site could be beneficial. UAT management takes a lot of effort and its impact on the success of a migration project is not to be underestimated. We would therefore be more than happy to support even more airlines in their respective UAT projects.

About PROLOGIS

With more than 15 years of experience and serving more than 50 airline clients worldwide, PROLOGIS is one of the leading aviation consultancies in the world. All PROLOGIS consultants have an average of 7 years of active experience in the airline industry; they are experts on Distribution & Revenue Management, Ground Operations & Airport Processes, Revenue Accounting, Network Planning & Scheduling, IT-Services (System Migration, Evaluation and Implementation). As a result of the international consultancy projects at network, low-cost and charter airlines in more than 34 countries, PROLOGIS knows best practice and can help to implement it into every client's existing structures.

For more information about PROLOGIS visit **www.prologis.aero** or contact info@prologis.aero.

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