Deployment of eLearning in the Airline Industry

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Abstract
Learning management systems provide an indispensable basis for the manifold training requirements of flight crew, ground staff, engineering and maintenance personnel mandatory to the airline industry. Screening and deployment of such a system is a complex endeavor which is discussed against the background of specific requirements of the airline industry. A case study of Etihad Airways is provided.

Key words: eLearning, learning management systems, deployment, airline

Introduction
Airlines have been pioneers in using educational technologies since decades. The Aviation Industry Computer Based Training Committee (AICC) was the first professional organization to declare that training delivered via computers needed to conform to a specific set of guidelines. The long tradition of computerised training in the aviation domain seems to have made it easier to exploit the potential benefits of eLearning. Most airlines adopted eLearning to a certain extent now. Training and re-training of flight crew, ground staff, engineering and maintenance personnel is mandatory to the airline industry. Proper qualification of different user groups is to be attested by regulation which requires tracking of certifications of a huge number of employees. In order to fulfill those statutory obligations and likewise to offer sophisticated learning opportunities suitable systems and methods are required. This is why today almost every airline operator is involved in eLearning initiatives. The airline industry like any other smart enterprise understands that investment in their employees’ qualifications and in technologies serve their needs and naturally has a positive effect on business success.

Learning Management System Implementation
A learning management system (LMS) is key to proper deployment of eLearning in an organisation with lots of users and trainings to manage. In a nutshell an LMS is a software that automates the administration of training events and supports the management of learning in an organization. It provides the infrastructure centralising two sets of components associated with training. (1) Management/Administration: training programme, enrolment, certification, reporting (2) Learning/Teaching: learning activity, content delivery, communication, collaboration, assessment. The airline industry faces strong vertical exposure on e-learning courses and therefore is a core user of LMS.

LMSs have been on the market for more than a decade, so that currently customers are left with the agony of choice between more than a hundred products. When it comes to accept a bid, both, general criteria as well as feature-related criteria are to be considered. General criteria should include cost of ownership, maintainability, usability, standards compliance, scalability, security, hardware software considerations and, last but not least, the integration into the operational environment. The set of feature-related evaluation criteria include administration, security, access, integration with other systems, course design, online
collaboration and communications and productivity tools (Mendoza, 2006). A list of more than 30 criteria including an adaptable grid for evaluation can be taken from (Longsight, 2010).

Today’s emerging LMSs are about to change while retaining its mission critical functions. According to The E-Learning Guild Research (Davis, 2009) next-generation learning management systems will open up to various access channels, to dynamic containers, to social networks, to tracking user behavior across a variety of sites and across multiple devices. Be that as it may, the prompt integration of all those advanced eLearning 2.0 features might be an issue only for certain organizations, whereas many others might rather have to admit that struggling with traditional eLearning 1.0 is a daily occurrence.

Due to the multiple facets of such a learning management system its implementation is a complex process which requires thorough planning as it involves risks related with cost, time and acceptance. A LMS needs to be deployed effectively with the support of experts and professionals from both, the management domain and the education domain. Favorably, a change management approach is to be defined and executed in order to prepare stakeholders and key users for their new roles in the new training processes. With PAS 1032-1/2, which is a DIN specification on Education and Training with Special Emphasis on e-Learning a well specified implementation process is at hand, which may serve as a most feasible guideline. It consists of both, a reference model and a process description for e-learning including seven steps covering the whole deployment cycle. The process steps range from identifying, analysing, planning, producing, implementing, and operating up to evaluating of e-learning measures.

Airline Specifics
Airlines have requirements that typically result in a good justification for implementing an LMS. Unlike most other industries, airlines are heavily regulated in each area from security to food service, via mechanics and anything in between. Interestingly, airlines often don’t think of an LMS as a corporate-wide type application but rather tend to implement in one area selectively. Though, solving issues like documentation or scheduling for one department, doesn’t improve the business as a whole and results in very low return on the investment. Another area that airlines seem to miss when implementing an LMS is the importance of integration with other systems or at least comparing the data from other systems. Delivering and tracking training is good, but that’s only half of the solution. Being able to continuously measure the effectiveness of the training on the business as a whole and being able to accurately identify what training needs to be developed based on the airlines performance is absolutely critical to having an impact on the business.

Although there are many learning management and performance management systems available on the market today, very few of them can meet the requirements of a corporate implementation at an airline off the cuff. Unlike other industries, airlines have complex rules around when training expires and how frequently retraining must occur. In addition, aviation training is very revision sensitive because they support many configurations of the same aircraft. This type of capability is not typically found in many systems. As a rule, when an airline selects a learning or performance management system, the airline should focus on these and other capabilities that are specific to the industry during the selection process. Too often airlines seem to go with the simplest or most attractive solution and find themselves either duplicating work or not being able to get enough value out of the system to justify the cost.

Case Study
Etihad Airways, a fast growing airline in UAE, serves about 80 destinations and naturally faces numerous challenges dealing with training and communication issues. Etihad has implemented an LMS for operations related courses in April 2006. The initially implemented
LMS was facing some problems with Internet accessibility due to the fact that all Internet traffic was routed via a telecommunications operator’s proxy server due to security requirements. The access was relatively slow and unstable. Due to the increased requirements to train more staff in additional courses, the organization has decided to invest in a new LMS. A comparison of five suppliers and references have been conducted and one product was selected. The project roadmap was focusing on the technological challenges of the implementation rather than on the back-to-back processes around the LMS implementation project. The product was implemented, however, did not fulfill the original specification and requirements as specified during the scoping study. The challenges of organisational processes required to implement a complex LMS have been underestimated.

The LMS had to serve various purposes and different user groups including ground staff located all over the world, flight crew, cabin crew, aircraft engineers, customers, and other partners all of them with their intercultural diversity. The majority of users was readily accepting trainings delivered by the LMS, however, around 10% put up resistance. For example users from Pakistan tended to refuse instructions from a computer. Access conditions for all those dislocated users might vary considerably in terms of bandwidth and security when connecting from hotels, cyber-cafes, from home, or from the office. At some times, more than 600 were accessing one online course at the same time. The courses offered relate to three different type of contents: a) regulatory required training (like dangerous goods awareness training, ETOPS, safety courses, technical training), b) service oriented content (voluntary courses, on demand instructions), and c) policies and procedures CBTs (work orders and new procedures, news). Tracking and certification had to be managed either way. Auto-generation of certificates was required for several courses. Each of the courses had to be approved by the regulator or by an internal acceptance forum no matter of the type or origin of the content. Content development proved to be too expensive when developed in-house by subject experts. Outsourcing was more economic but required very strict quality control procedures. Service turned out to be a critical issue. Help desks service had to be available continuously providing support for login-related requests as well as for technical service. Additionally, it turned out that also content specific requests, dealing with comprehension questions, bug reports and the like were to be covered.

Discussion
The characteristics of airline businesses and their target groups require special care. But as in any other business there are fundamental challenges common to most environments. Given the fact that technology, content and design are important, efficient custom-tailored deployment is essential.

Successful implementation requires that all stakeholders are vested in the project. It is recommendable to gain business buy-in and the committed support of senior management of as many business areas as possible. Involve IT, HR, line managers, executives, works committee, subject experts, and end users. Make the “what’s in for me” apparent to any of the contributors aiming at quick wins while thinking long term, this will be helpful during the implementation process. There might also be a need for adopting company policies that allow trainees to take time from their daily work to utilize the LMS, which might be only one aspect of a full-span change management approach. In addition, having a strong information campaign is key to overcome potential acceptance problems. Internal marketing and training should highlight the importance of using the LMS, its benefits, and how and when to use it. A visible example course of good practice could be helpful.

It is crucial to get employees to start using the LMS which is only worthwhile if it is launched effectively and utilized widely. While the airline could simply make it compulsory to take certain courses, there are reasons why getting people to use the system of their own accord alternatively. In a learning environment a benefit could easily be established by providing a unified overview of diverse elements like the course documentation, virtual classroom sessions, live training events, articles, message boards, multimedia material, test results,
certificates, career paths or links to other trainees. The main issue is to provide some kind of improvement over the existing way of doing. More comfort, more choice, more control, more options, more service, more whatsoever personal benefit should be provided.

References

