



Library Outsourcing

Retrospective RFID Tagging

The importance of 'getting it right the first time'

By Martin Parsons
Managing Director
Library Outsourcing Ltd.

June 2012

RFID TAGGING

The issue of the retrospective tagging of library stock does not always receive the attention it requires during the procurement of an RFID library solution. This is an omission that can cause considerable delays and problems with the system once launched.

Planning Ahead

Essential for the success of any project and tagging is no exception. Including tagging in your main tender - or even perhaps as a separate and earlier tender - is a very worthwhile undertaking. Completing the tagging process is the most time consuming element when introducing RFID and should ideally be completed approximately three months before the RFID system goes live.

Why? Because the more stock that is captured and tagged ahead of hardware installation, the fewer the difficulties that will occur when the system goes live. Having the vast majority of your stock tagged, especially your fast moving items, will allow for a smooth transition and a positive first experience for your readers, bringing an overall confidence in the new system. Not having the majority of your stock processed is likely to have the opposite effect.

If you operate a multi-site library service our recommendation would be to tag all sites prior to system implementation in any single library. Unless all stock in all libraries has been tagged, multi-site issue and return problems will arise.

Different Stock Different Process

The actual tagging of each item type will also need careful consideration. The question of what should and should not be tagged is often not considered until the process is underway rather than, as it should be, well in advance.

Particular item types need consideration:

AV stock often causes surprising issues. Various tagging methods are currently in use, either applying a disk tag directly onto the item or employing a security case of some kind. There has been much discussion elsewhere regarding the effectiveness of various systems, but here we are only dealing with the processing, not system effectiveness. For CD/DVD discs, the application of 'doughnut' tags is more demanding than book tagging, each tag having to be placed very accurately on the disc. There are devices available to help with this process. It should also be noted that some discs have a metal inlay which may disrupt the RFID signal, and for this reason it is necessary to test each tag's effectiveness prior to sticking it to the disc, a process that is both time consuming and requires accuracy and patience. Security



cases also present other processing issues. Artwork may be required to be transferred from an old to a new case, a process that becomes more difficult with some existing CD/DVD case formats, particularly cardboard cases, where the best solution may be to photocopy the artwork, a time consuming operation with possible copyright infringement concerns.

Further difficulties may arise relating to the current system. If the existing case has a barcode attached it will either require transferring to the new case or, more likely due to removal difficulties, need replacing and the LMS record changed to reflect the new barcode. There may also be other information on the case which requires transferring or replacing.

Other items which will require consideration but no major change in process are: local history and special collections, journals, reference stock, items without a barcode, music scores and other non-standard stock.

Who Is Doing The Work?

Who should complete your RFID tagging project is a major question to which there are three alternative answers - library staff, temporary staff or a commercial tagging operation such as Library Outsourcing Ltd.

Utilising **library staff** may appear to be the most cost effective method and potentially has no impact on the project's capital budget, but it has its pitfalls. In many libraries, where staff have been expected to add RFID tagging to their existing workload, it has been realised that it is simply not a job that can be dipped in and out of. It requires full time, heavy, highly repetitive manual work with an unblinking eye kept firmly focused on quality control. It also requires the person performing the task to fully appreciate how the technology works and the reasons why each process is completed in a specific way. To attain reasonable productivity rates operatives must be able to give the task their full attention and take responsibility for the whole process for each item. This rarely happens with self-tagging operations. When it does it can work, and many libraries have used a team dedicated to the process. Provided the correct training is given and someone internally placed in charge the project may be completed successfully.

Using **temporary staff** is another method that is often employed. It does however carry the greatest risk to the maintenance of quality standards - and the highest cost with regards to manpower. Temporary staff often have little insight into the end goal, are not usually concerned with the results and are very unlikely to achieve an output per day that justifies their wage. You will also be responsible, in most cases, for holiday and sick pay during the process. Bearing in mind the nature of the work, time off sick is likely to be a significant cost factor and has proven to be so on numerous occasions.



Both of these methods also create considerable difficulty in answering the most important question, **how long will it take?** Neither provides either a fixed timescale or a guaranteed end date. Using figures from project reports taken from several countries the sample project summary reproduced below gives some indication of how many people are required to complete a tagging scenario - and in what timescale. However there are limitations. You can only use as many operatives as you can manage effectively, you have a finite number of RFID tagging stations and you need to manage quality control effectively, throughout.

Your third option is to use a **commercial tagging company** like Library Outsourcing. There are clear benefits in cost, timescale and quality control. A comparison for cost cannot be made against the use of internal staff, but against temporary staff comparison may be made based on a 'per unit' cost price. Whereas temporary staff are paid hourly, a commercial company will charge 'per item'. This 'per item' cost is fixed for the contract and supported by data logs created during the tagging process, thus the company are paid on results only. Temporary staff have no fixed cost, they may be slow, interrupted, sick, on holiday or produce poor quality work, but their payment will continue at a fixed rate.

Quality Control

As previously discussed, quality control is extremely important. Should the quality control process suffer from problems, these will be reflected in the ultimate effectiveness of the system. There have been cases where whole libraries have had to be re-tagged, due to problems not being identified during the initial tagging process. All these problems are avoidable but strict measures need to be in place to do so.

Training of tagging operatives needs to be much more comprehensive than many publications on the internet indicate. It is important that tagging operatives understand the technology being used. This will allow them to apply the best tagging process for each situation. It is a highly repetitive task, which is prone to induce disenchantment, disengagement and a lack of concentration. For these reasons two layers of quality control should be in place, the first being a physical monitoring of the work being carried out. This will highlight any poor quality tagging from a positioning perspective, which is an indication of defective work throughout the process. This checking procedure should not be limited to the first few hours, days or even weeks of an individual's work, it should remain in place throughout the process. Everyone can have a bad day or become disillusioned with their work at any time.

The second element required is a software analysis of the daily logs created during the process. Analysing these logs will detect any programming issues that may have been created. Usually this can happen when the process is altered by the tagging operative in the belief they are improving it, or when the workspace is poorly designed for the process, particularly the use of inappropriate workspace and desks. Additionally anyone trying to

show high productivity and therefore rushing the process will often cause programming issues.

We spot them by searching for duplicate data for both the tag ID and the bar-code. The most common errors show either a single tag ID with two bar-codes applied or a single bar-code being applied to two different tag IDs. This procedure highlights any processing errors, likely to be repeated, causing considerable problems once RFID goes live.

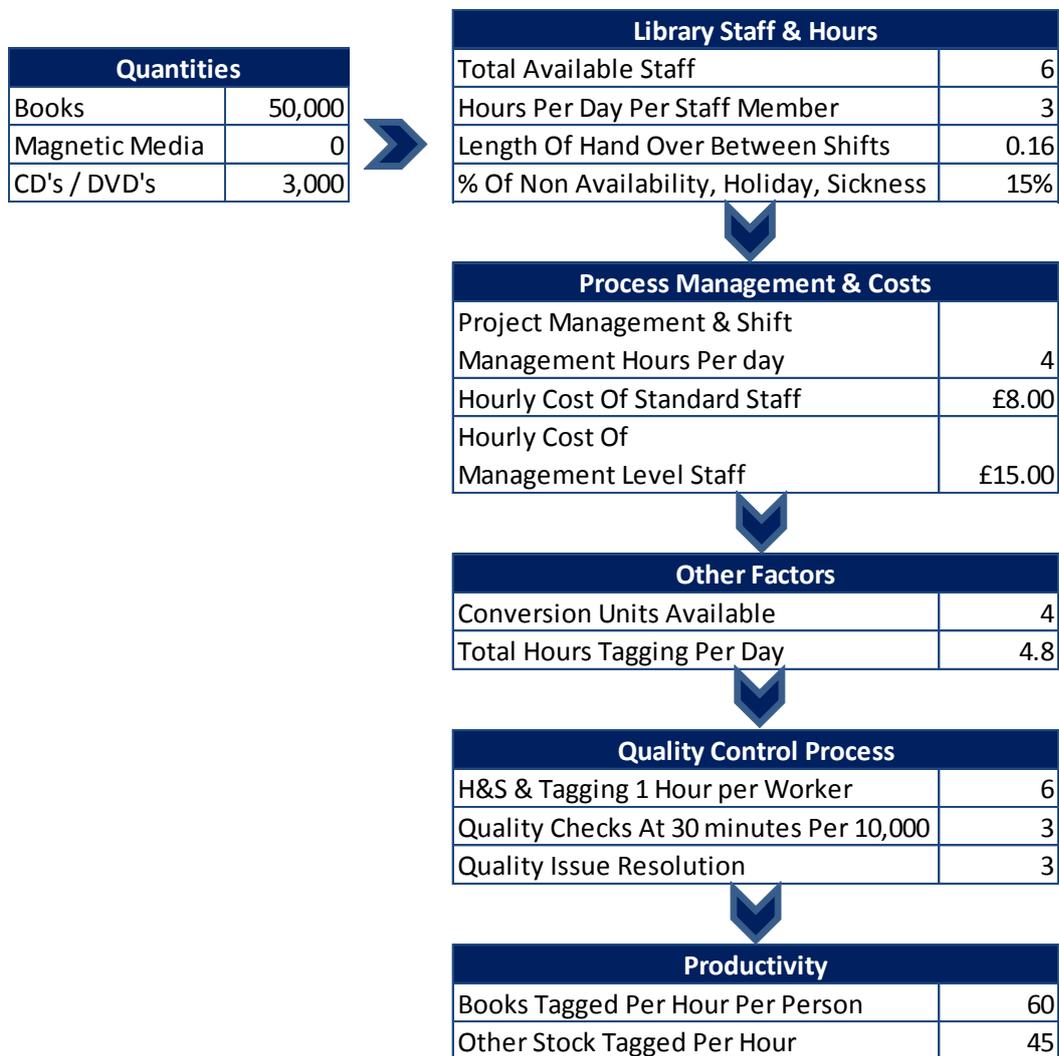
How the Process Affects Your Library

What actually happens during the tagging process? There is sometimes a misconception that the process may disrupt normal library operations. It shouldn't. The process operates differently dependent upon which option you chose to take for your tagging. Library staff may not be able to operate directly from the shelves as the process itself is likely to be fragmented. Temporary staff may be able to do so, however you will need to be sure that they manage their equipment carefully and safely and that they can communicate well with library users.

A commercial tagging operation will work directly from the shelves, cause little or no disruption to library services and are trained to communicate well with library users.

In summary: The tagging process is demanding, time consuming and has cost implications, but success is achievable with thorough planning and a well-managed operation. Quality control will play a key part in the process, along with health and safety and risk assessment for tagging operatives. Getting everything right first time is critical to the future of your whole RFID project.

Library Staff & Hours



Your Project Summary

Hard Costs

Total Cost Per Item	£0.31
Management Cost	£2,566
Staff Cost	£13,957
Cost Per Item Staff Only	£0.26

Timescale:	9 Weeks
Sickness / Holidays +	15%
Total Expected Timescale	10 Weeks

Variables

Holidays
Sickness
Morale
Will your staff be happy doing this work for an extended period
What % of your staff could not do this work

LO Project Summary

For more information on how you can save money using Library Outsourcing Tagging Team, please visit: www.libraryoutsourcing.com

Timescale:	9 Days
Sickness / Holidays +	0%
Total Expected Timescale	2 Weeks

Soft Costs

Cost of 'normal' work not completed
Impact On Reader Services
Distraction of front of house staff
Impact on routine service tasks

Staff Considerations

Staff compliance, will your staff be happy to work on this project?
Staff morale, will the size of the task and the type of work have a detrimental effect on staff morale?
Staff fatigue, this is a long term project, will your staff be willing / able to see it through?
Repetitive task issues, is health and safety an issue?, how will you ensure that potential issues are avoided?
Working conditions, are there implications regarding space when working from the shelves?