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Developing Better Training Guides

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ABSTRACT

Training materials developed within a technical team can often be too focused on detail without explaining broader concepts to the newcomer. Sometimes those that are closest to a project become too comfortable with the subject matter and assume the reader brings the same knowledge with them. Which, of course, they don't.

I recently reviewed a User Guide for a tool I've had minimal exposure to. In several places there was an inherent assumption that the reader would know why a certain process was happening, or what choices to make. My suggested changes included providing simple explanations of key concepts and detailing what the effect of a choice would be, thus allowing users to understand how to achieve what they want.

This paper will detail simple ways to make your user guide or training exercises more accessible for everyone, and therefore make your training more effective and enjoyable for all concerned.

INTRODUCTION

In my early days at d-Wise I took the opportunity to read an internally created user guide for our flagship data de-identification tool, Blur. The main aim of the exercise was for me to understand the tool a little better, however, the exercise turned into a review and I made several suggestions of ways to make the user guide easier to follow for new-comers to data de-identification.

In this paper I will share some of those suggestions and then move on to suggest ways that you can make any user guides or training material that you create better for your audience. This won't be a treatise on learning theory but it should help to make things more appealing.

USER GUIDE REVIEW

FIRST, EXPLAIN THE BASICS!

One of the first things I noticed with the Blur User Guide was that it assumed the reader was up to speed with the concepts involved in data de-identification and the reasons why it is done. The audience for the tool will likely comprise people of widely varying experience. New starters may not be fully aware of the 'what' and 'why'.

For this reason, I recommended that the key concepts around data de-identification (or indeed any other topic) be moved to the beginning of the manual rather than be spread throughout.

NAVIGABILITY AND GENERAL DOCUMENT FORMATTING

I have a background in Regulatory Operations so instinctively look at document formatting. The Blur User Guide is in PDF format but didn't have any bookmarks which means navigating around the document is more of a chore than it needs to be.

Proper use of Heading styles and checking the settings within the PDF generator makes this an easy fix. A Table of Contents is useful (Figure 1), but the bookmarks are available at all times and allow the user to navigate much more easily (Figure 2).

Figure 1: Blur User Guide with no bookmarks

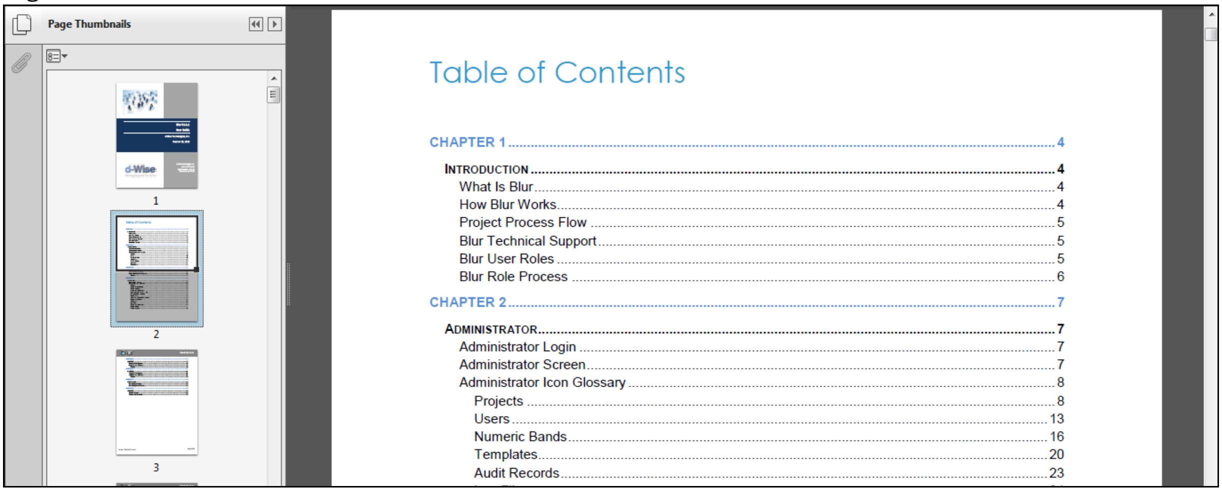
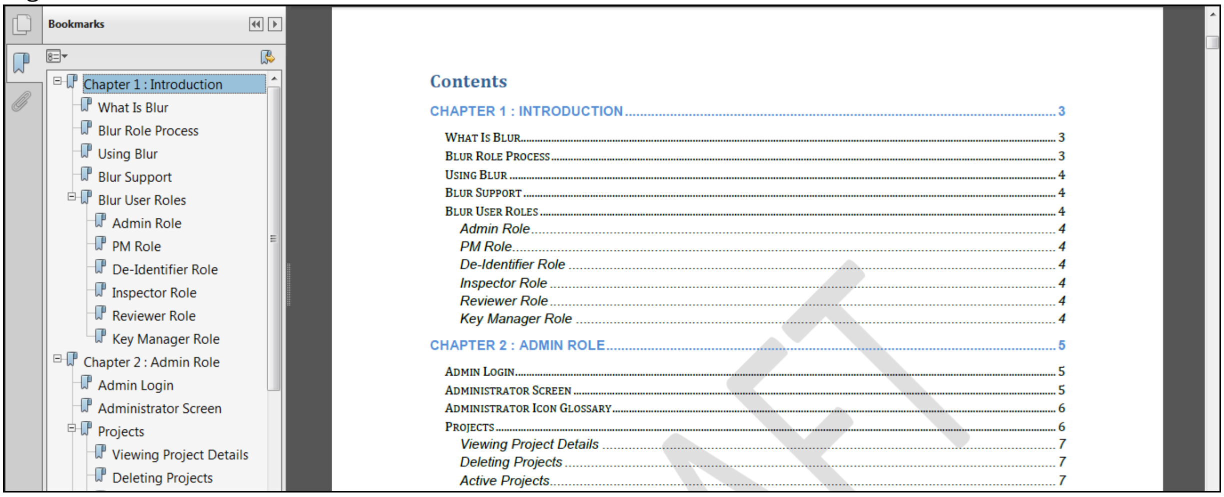


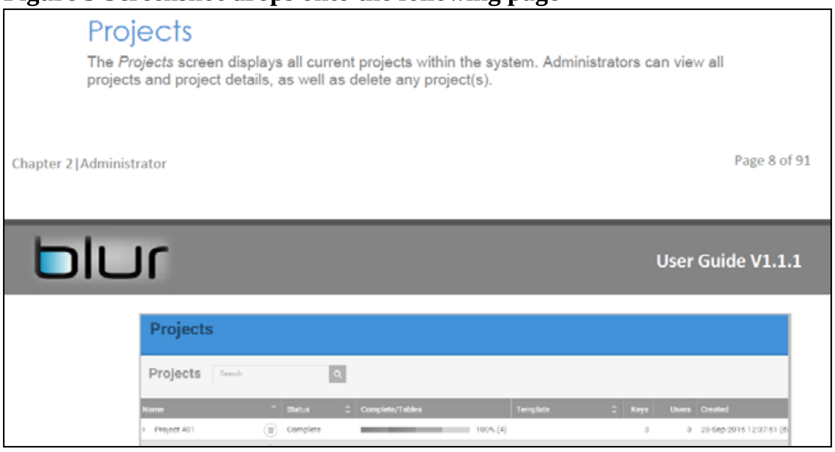
Figure 2: Blur User Guide with bookmarks



Another useful document formatting tip is to use the Paragraph properties 'Keep With Next' and 'Page Break Before' to help your text hang together better.

For example, a section of the document started towards the bottom of a page and after some text was a screenshot to illustrate what was being described. However, as Figure 3 shows us, the screenshot has dropped onto the next page and looks a bit isolated. In this instance, the section could have been moved onto the next page by using 'Page Break Before', or the screenshot could be kept with the text by using 'Keep With Next'.

Figure 3 Screenshot drops onto the following page



Making your screenshots smaller can sometimes be another trick to keep your text and images together, but be careful not to make them so small that they don't add any value.

STEP BY STEP INSTRUCTIONS

Speaking of step-by-step instructions, there are plenty of them in the Blur User Guide. I suggested several improvements. Figure 4 shows an example that could look better with a few simple changes. For context, it's from a section describing how to delete projects.

Firstly, the use of 'Keep With Next', as already described, will keep Step 1 and its associated screenshot together.

The step-by-step instructions should be numbered, and make sure that each step has a number. Note that there is a step between the two screenshots that has lost its number. It also seems to be indented differently to the rest of the text.

Finally, it can help to include a few screenshots to show the users what they should expect to see when following instructions, as is the case in this example. However, don't feel that every step needs to have a screenshot. There's no need to add one that is almost identical to the previous step, for example when a dialog box appears and then options are selected. In this case, a single screenshot of the completed dialog box will suffice.

Figure 4: Step-by-step Instructions


In-Active Projects

Projects are considered inactive within the system, if any/all of the following exists:

- If no tables are checked out
- If no tables are marked complete
- If the project has not been submitted for review

1. Locate the Project to delete, click on the **Trash** icon.

Chapter 2 | Administrator Page 11 of 91

blur User Guide V1.1.1

The *Delete Project?* Confirmation screen displays:

2. Click **OK** to delete the project or **Cancel**, to not delete it. If OK is selected, the project is deleted and removed from the list of projects.

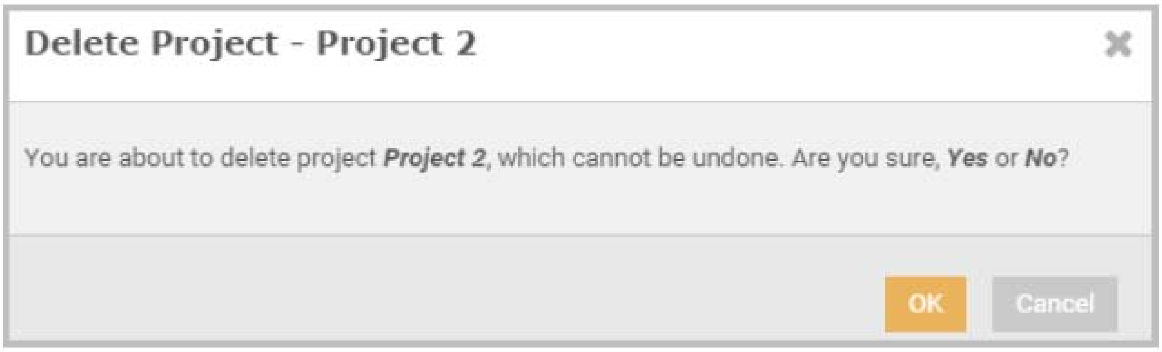
SCREENSHOTS

Screenshots are a great way to help users understand a new system or tool and they provide visual stimulation in a wall of text. The Blur User Guide has many screenshots as you would expect, but not all of them are as effective as they could be.

I've already mentioned those that form part of step-by-step instructions, but there are also those that show the layout of a particular screen. As previously mentioned, making sure that the screenshots don't drop on to the following page, away from the text referencing them is a good idea. Although, if the screenshots have a label and/or title which can then be referenced in the text this can be less of an issue.

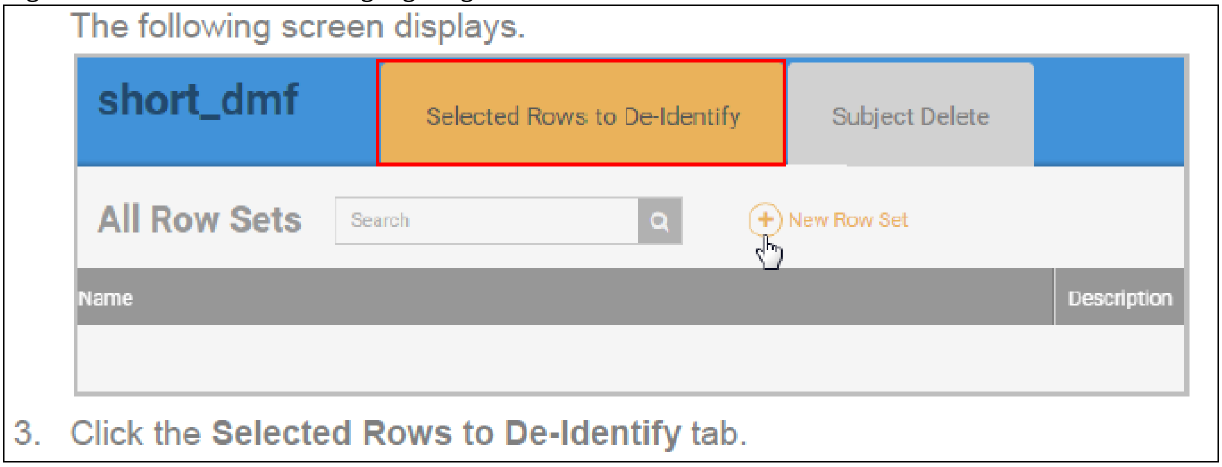
It is also important to make sure that your developers pay attention to the text in dialog boxes and the names of the buttons. In Figure 5, for example, it would be better if the buttons were labelled ‘Yes’ and ‘No’.

Figure 5: Text and Buttons Should Match



When including a screenshot it can be useful to use a snapshot tool to add highlighting boxes to give clarity to the area of interest. The screenshot in Figure 6 could be misleading before the addition of the red box. At first glance the user’s eye could spot the mouse pointer and be led to thinking that they need to click on the ‘Add New Row Sets’ button. Alternatively, try to keep the mouse pointer out of your screenshots.

Figure 6: Screenshot with red highlighting box

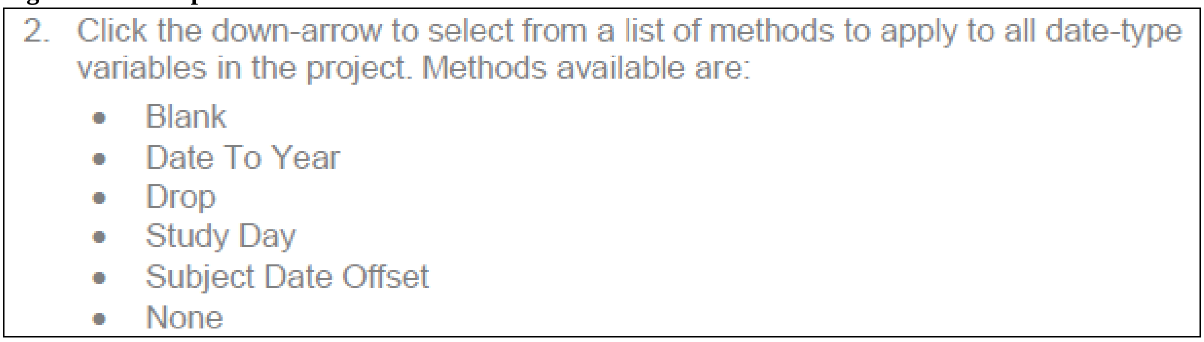


EXPLAIN OPTIONS

The Blur User Guide has several occasions where the user is presented with choices that they need to make, but there is often no indication of what the outcome of those choices will be, or whether there is a standard practice that should be followed in a particular scenario.

Figure 7 shows an example from some step-by-step instructions on managing dates. The user has a choice of methods to assign to date variables. While some of these examples are fairly self-explanatory, Blank, Date to Year, for others it is not so clear what will happen. Also, what is the difference between Blank and Drop? A system or tool User Guide is the obvious place to explain these options and suggest best practices and the reasoning behind them.

Figure 7: Date Options



2. Click the down-arrow to select from a list of methods to apply to all date-type variables in the project. Methods available are:
   - Blank
   - Date To Year
   - Drop
   - Study Day
   - Subject Date Offset
   - None

ORDERING OF SECTIONS

Sometimes, sections in the Blur User Guide were presented in alphabetical order. This might make sense when drafting a document – to be sure that all sections are included, but it can make less sense for the end user. Especially when combined with poor navigability.

I suggested that topics that come chronologically first, or are performed on a more regular basis should appear at the start of a section where they can be more easily found

TERMINOLOGY

Similar to the need to explain the basics mentioned above, it is also important not to assume that your users will understand system acronyms or jargon. Examples in the Blur User Guide included the terms ‘method parameter’ and ‘study day offset’.

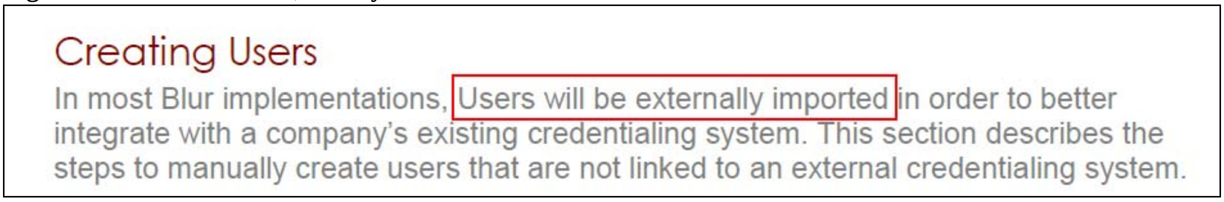
It is always safer to include definitions of terms and phrases like these. Users who know what they mean will automatically skim over them, users who don’t will be grateful. The explanations don’t necessarily have to be within the body text, you can include a Glossary section

AVOID ‘MYSTERY’ SECTIONS

Finally, on at least one occasion the Blur User Guide referred to a process that would be performed, for example importing user credentials from Active Directory (Figure 8). However no mention was made about how this was done or who would do it. This raises questions in the minds of users as to where the mystery section is that describes this information.

A simple statement explaining how this is done and by whom is all that is needed.

Figure 8: How is this done, and by whom?



Creating Users

In most Blur implementations, Users will be externally imported in order to better integrate with a company’s existing credentialing system. This section describes the steps to manually create users that are not linked to an external credentialing system.

DEVELOPING BETTER MATERIALS

If you need to develop your own materials, there are a few simple concepts that you can keep in mind to make them more appealing to your audience. This isn’t about to become a treatise on learning theory or a discussion of how to design and develop complete training courses but it should help steer the subject matter expert on the occasions that they need to create this type of content.

LEFT BRAIN RIGHT BRAIN

As I’m sure you are aware, our brains are in two halves, and it is believed that those halves work in different ways and control different aspects of our behavior, include how we learn and absorb information.

The Left brain likes

- Structured content
- Step by step guides and instructions

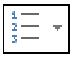
The Right brain likes

- Pictures
- Flowcharts
- Colour

If you can include all of these elements in your User Guide then you’ll be appealing to both sides of the brain and all of your audience should be able to connect with the information you are conveying.

Structured content can mean things like including a table of contents, bookmarks in the PDF, numbered lists and having the document content organized into meaningful sections.

Step-by-step instructions have been mentioned in this paper already. Here are some points to remember:

1. Use the **Numbered List** button that’s available within Word 
2. If you include a screenshot, it doesn’t need a number of its own
3. Screenshots look better if you put a border around them
    a. Right-click and choose **Borders and Shading**, then choose **Box**

4. Make sure all your steps are numbered and keep the indenting the same
   You can keep lines together, like this line, by using a soft return - <shift>+<Return>
5. If you are telling the User to click on a particular button, you could put the button name in bold, as in Step 1
6. If you are telling the user to type a specific piece of text, you could mark it in italics
7. Whatever conventions you adopt, be sure to use them consistently

Including pictures and flowcharts should be fairly easy – any screenshots you can include will count for this. And flowcharts are a great way of helping Users understand processes and workflows. In this case a picture really can be worth a thousand words! Although some explanatory text will often be helpful too. A swim lane diagram can help make clear who does what in the process if responsibilities are shared. You might also consider adding hyperlinks to a process flow chart – the hyperlinks could then take the user to the relevant part of the User Guide.

If your system or application is updated, be sure check ALL screenshots in case they need to be replaced.

As mentioned earlier, a screenshot tool, such as Greenshot which is freeware, can prove to be very useful. They allow you to take more specific screenshots, either of a window or a specified region. They also allow you to edit the image before pasting into your document. You can add coloured highlighting boxes, text boxes etc

LEARNING STYLES

As well as the left/right split there is also the theory of learning styles. The Honey and Mumford Learning Styles Questionnaire(1) offers us four learning preferences. These are preferences for learning something in a specific fashion. This doesn't mean we can't or won't learn when taught in a different way, however we will each learn more effectively if our preferential style is used. Before we discuss how to accommodate these styles, let's see what they are:

Activist - Activists like to learn by doing. They won't want to read through a weighty tome of theory, unless it contains opportunities for them to put the theory into practice by doing an exercise of some kind.

Reflector - Reflectors like to take their time over learning and prefer to observe experiences and watch other people doing an activity. They like to plan their actions and then take some time to reflect and recap what happened afterwards.

Theorist - Not surprisingly, Theorists like to understand the theory rather than the practice. They want to understand *why* something happens and dislike ambiguity or lack of detail.

Pragmatist - Pragmatists prefer to try out new ideas, theories and techniques to discover how they work in practice. They won't be interested in something that they cannot see a use for in their own work.

There is no way that you can tell the learning preferences of your users. However, by including several different elements in your materials you can be confident that all styles are accounted for.

For example, Activists will appreciate hands-on activities, a completed example to copy and extra exercises for fast finishers. Reflectors like instructions to read through before they start an exercise, a completed example to match against their own and repetition to reinforce learning. They might also like the opportunity to be able to watch a video clip of someone performing a particular action or exercise. Theorists will want step by step instructions to follow and a clear purpose to their activities. Pragmatists will need to have any activity embedded in a workplace scenario so that they can see the application of the learning topic. If you can include real data, so much the better.

To accommodate all learning styles, try to cover all of these features in your training materials.

OTHER THOUGHTS FOR YOUR TRAINING

WHAT MATERIALS DO I NEED?

This really depends on what sort of training you are preparing. A simple system update might just require a set of release notes with no formal training involved, while a global rollout might require classroom and/or online training, plus support materials like user guides and quick reference guides.

A short pre-reading document will help prepare your trainees for what is coming in the training. It should explain why they are being invited to attend, what they will learn and how long it will take. This sort of information can help diffuse negative attitudes in some people who feel that the training isn't relevant for them or won't help them in any way.

You will almost certainly need to create exercises for your trainees to complete. These should broadly fit into two categories – practice exercises and a test.

Practice exercises allow trainees to confirm their learning through the course and are not assessed. A test usually signals the end of the training and gives the users a sense of satisfaction that they really have learnt something and that they have met the objectives of the course.

Typically, practice exercises will guide the user through the activity with clear instructions (step by step!), screenshots and an explanation of what they should see as a result of their actions. To appeal to the Pragmatists you should describe a workplace situation in which this activity will occur and Reflectors will appreciate a suggestion to read through each activity before they start.

The test exercise should not consist of much or indeed any guidance. The trainees should know what they need to do! I typically outline a situation and provide the information needed and the outcome expected. The trainees will then use the skills they have practiced in the earlier exercises to complete the test.

Be careful with using the word 'test' though, some people get a bit nervous and worry that they won't pass. Some reassurance that they won't be asked to do anything that they didn't already do in the exercises will help. In delivering training to over 1000 users I've never failed anyone, although I did ask some to repeat exercises. At the end of the day it is up to you as the trainer to decide if the person has learnt what is needed.

DO I NEED A TRAINING ENVIRONMENT?

If you are preparing system training then you might want to talk to your IT colleagues about preparing a dedicated Training (TRA) environment. When set up correctly these can be invaluable if you have a lot of training to deliver:

- They offer a dedicated space to conduct training
- They are a risk-free environment for your trainees
- They reflect the real user experience

A TRA environment is not the same as a Sandbox environment. Sandboxes can be useful areas to learn the basics of a system and to allow users to get a feel for how things are done. However, Sandboxes are not necessarily kept in line with the Production (PRD) environment so they may not reflect that actual functionality of the system. Who wants to be conducting training in those circumstances?

Once the configuration and customization of the PRD environment is complete then IT can create a duplicate environment on a separate server. It is important that the TRA and PRD environments match so that the trainees get a realistic experience. While they need to match for functionality – the same buttons need to display and they need to do the same things, the data within the systems don't need to match. Training data will need to be created or imported in to the system. This might be a copy or snapshot of some existing live data, but be careful with respect to any blinded data.

Once the TRA environment is created to your satisfaction IT will need to take a snapshot. This will then allow them to perform rollbacks to restore TRA back to its original state after a training course has run. You'll need to discuss with IT about the frequency of rollbacks and when to have planned maintenance sessions. During a peak of training the rollbacks might occur daily, slackening off to weekly or monthly over the long term.

Maintenance (Doable Mode) sessions will allow you to adjust the data in TRA and take a new snapshot. You'll need to be careful that no unauthorized access to the TRA environment occurs during the maintenance period as any changes made will be included in the snapshot as well.

Maintenance Phase steps:

1. IT perform rollback
2. IT switch environment to 'Doable Mode'
3. Trainer(s) log in to TRA and make changes
4. IT take new snapshot
5. IT switch environment to 'Undoable Mode'

You will also need to agree with IT on the training accounts that you will need. How many, what permissions they have, what the account names and passwords will be. For a large global rollout, you may also wish to have accounts dedicated to different sites or countries.

Lastly, it can be helpful to have a shared Outlook calendar with your IT support. This allows everyone to see when training classes and maintenance sessions are planned.

CONCLUSION

I recently did a second round of review on the Blur User Guide and I am pleased to report that a lot of my suggestions were taken on board. It now has bookmarks in the PDF and the paragraph formatting is much better. There are better descriptions of terms and the sections appear in a more appropriate order.

The development of the User Guide continues as the tool evolves and other training materials are needed too, so I hope to continue to provide useful input for the Blur team!

When creating your own materials remember to consider the needs of the different learning styles to make your content as balanced as possible. It's not difficult and will make the use of your materials a better experience for everyone.

If you're involved in system training have a discussion with your IT colleagues about creating a TRA environment. When correctly set up it will make your life easier when it comes to training delivery.

REFERENCES

1. Honey, Peter; Mumford, Alan (2006). Learning styles questionnaire: 80-item version. London: Maidenhead. ISBN 1902899296. OCLC 889619009

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