Process Template 1 - Instructions

Introduction

Process Template 1 Overview

This document is distributed alongside Process Template 1 to aid in its understanding and use.

Process Template 1 is a basic template for a process that:

- Loads work from a work source into a Blue Prism Work Queue
- Works items in the work queue
- Completes once all the cases originally loaded into the work queue have been worked

For more complex process examples, please refer to Process Template 2.

Templates Overview

Templates are intended as a base for starting a new processes, the idea being that 'save as' is used to make a copy of a diagram to work on.

Using a template as the basis of building a new process has the following benefits:

- Decrease Process development time
- Provide consistency across all Processes, allowing easier understanding and support
- Assist developers in keeping to best practice and to work within the Development Methodology of an organisation

The Blue Prism process templates are provided as a generic starting point. It is expected that these templates may need modification to create a template that fits the requirements and methodologies of your organisation.

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Process Template 1 Exception Handling

This process template has two main types of exception handling logic: functional (or component) retry exception handling within sub-pages; and top level Work Queue item exception handling on the Main Page.
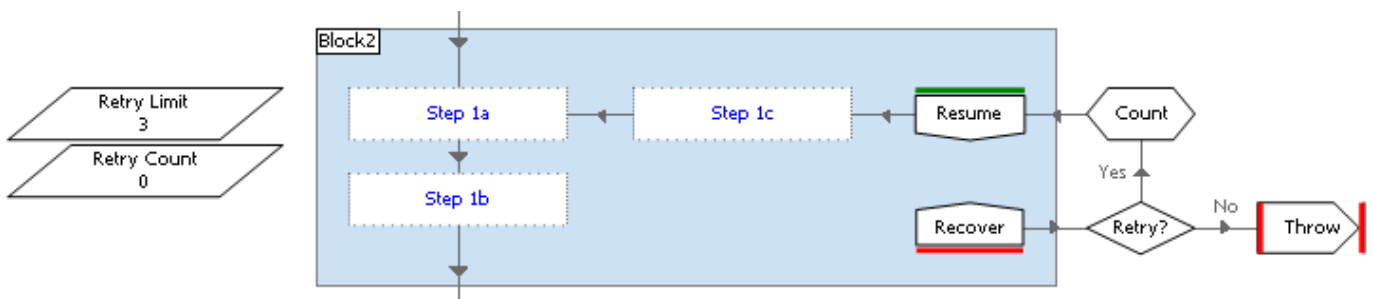
Main Page Exception Handling

There is an Exception Block on the Main Page called 'Work' within which all the 'Work Step' pages of the process template are called.

- If the Work Step pages all complete successfully, the process flow goes to a 'Mark Item as Completed' page.

- If there is an exception within any of the Work Step pages that is not successfully handled by the retry logic within that page, it will be caught by the recover stage in the 'Work' block on the Main Page and the process flow will go to the 'Mark Item as Exception' page.

- If an exception occurs outside the 'Work' exception block whist a case is not being worked, the process will terminate.

Sub-Page Exception Handling

All pages that call Business Object action stages that interface with an application contain *retry exception loops*. These retry loops have use Exception Blocks that contain action stages that perform a distinct function within a system.
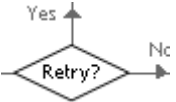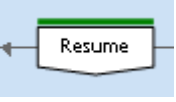

The principle of these retry exception loops is that Blue Prism will recover from an exception, navigate back to a known point in the application, and try to perform the function again.

Exception Data Item Configuration

Data Item Name	Data Item Type	Description
Retry Limit	Local	The initial value of this data item should be set to the maximum number of times you want the process to recover and retry the function being performed.
		This is usually left with the default initial value of 3, but may be increased if an application is known to be very unreliable.

Exception Process Flow Configuration

Stage Name	Description
Retry? Yes ↑ No → ◇ Retry?	By default, this decision stage has been configured to retry System Exception and Internal exception types only. If you have other exception types for which you do not want to recover, you will need to change this decision to cater for the exception types you use.
Step 1a, Step 1b	These note stages can be replaced by the main flow steps of the distinct function being performed in a target system. Note: your flow does not have to have the same number of stages as note stages.
Step 1c ← Resume	This note stage, after the blocks Resume stage, should be replaced by the logic that will recover the application back to a known and working state ready to try and perform the function again. Examples of how you might recover the application may be: • Close any child windows and pop-up windows that may be displayed • Navigate back to a Main Menu or root screen from which the function can be tried again. • Close and restart the system, logging back in. *Note:* *If you are calling Component Objects or Sub-Processes from your process that already contain retry exception handling, you will not need to repeat the retry logic within your process.*

Process Template 1 Pages

Each page within the process template will be explained below, with instructions on how each should be configured for your needs.

This process template has a very basic Process Template Pages and Configuration

Here we will give a description of how to configure each of the pages within the template:

Main Page

The main page within the process does not do any system navigation or updates within the systems, but instead simply calls sub-pages that do all the work that is required. This should leave the Main Page as a simple, high level view of what the process does.

The main page contains some global Environment, Session, and queue related data items. It has the top level exception handling of the process, to handle exceptions that bubble up from any sub-page whilst a case is being worked.

Data Item Configuration

Data Item Name	Data Item Type	Description
Process Name	Global	The initial value of this data item should be set to be the name of the process you are creating.
		The process name could be passed to objects or sub-processes that it calls, if they have process specific actions to take.
Queue Name	Global	The initial value of this data item should be set to the main Work Queue being used by this process.
Stop After Time	Session Variable	The initial value should be set the time the process should stop running. It might be set to a time before a system used by the process is no longer available, or a time when another process needs to be started instead.
		This session variable can be changed by a Blue Prism Controller at run time if there is an operational reason that a running session should finish at a different time to the default.
Stop After Items	Session Variable	This data items allows the developer to configure the process to only work a pre-defined number of cases. The template has the initial value set to 9999999999, which effectively means that the process will work all items.
		This session variable can be changed by a Blue Prism Controller at run time if here is an operational reason to only work a set number of cases before completing.
Stop ASAP	Session Variable	This session variable can be changed from False to True by a Blue Prism Controller to stop the process.

		If set to True the process will stop cleanly, if a case is currently being worked it will be completed before stopping.

Start Up page configuration

The Start Up page gets the process ready to be able to work cases. It does this by:

- Performing any configuration and/or verification that is required
- Starting and logging into the systems that the process uses

Process Flow Configuration

Stage Name	Description
Environment Validation	If there is any validation of the environment required by your process, it should be added to the Start Up page. Examples of the validation to be added are: • Check that the directory paths used by the process exist • Check that any databases or web services used are available • If objects require a specific resolution to run, call an action that ensures the resolution is correct.

Populate Queue page configuration

The Populate Queue page in the Template has been left Blank. A flow should be added to get work from whatever the work source is for this process, and add it to the Work Queue.

Note: Examples of what might go in this page are given in the process, Process Examples - Adding work to a queue.

Work Step Pages configuration

These pages should each be updated to contain the logic to work each Work Flow case, with each page containing logical specific task groupings. For example, a process might have Work Step pages called '01 - Get customer information', '02 - Evaluate Customer', '03 - Update Customer', '04 - Add System Notes'.

- Rename the pages to state what the page does
- Each page should perform a distinct function

You can have as many or as few of these Work Step pages as your process requires. Feel free to delete some of the template pages, or add additional pages as needed.

- Add or remove additional Work Step pages as required

Each Work Step page that calls Business Object actions should contain retry exception handling as described in the previous Exception Handling section.

- Include retry exception handling if a system is being used by the sub page

Mark Item As Completed page configuration

This page should be updated to perform any actions that need to be done if the Work Queue item has been successfully worked without an exception.

By default the page simply updates the status on the Work Queue item and marks it as completed.

If there are any additional actions that the process needs to perform upon completion, they should be added to this page.

Mark Item as Exception page configuration

This page should be updated to perform any actions that need to be done if the Work Queue item has been successfully worked without an exception.
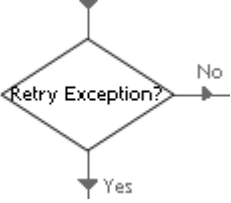
By default the page flow take two main paths, one for System Exceptions, and the other for Business exceptions.

Data Item Configuration

Data Item Name	Data Item Type	Description
Consecutive Exception Limit	Local	The initial value of this data item should be set to the maximum number of times you want the process to try and work subsequent work queue items that have the same System Exception. The default initial value is set to 3.

Process Flow Configuration

Stage Name	Description
Tag Item	The item is tagged with the current Exception Type. This is required for the Blue Prism Performance Report to work, which expects all exception Work Queue items to be tagged as either a

Tag Item	'System Exception' or 'Business Exception' *If you are using exception types other than just 'System Exception' and 'Business Exception', you will need to change the logic of this tagging within your flow so that the item is only tagged as one of these two main types.*
Retry Exception? Retry Exception? ——— No ▼ Yes	This decision stage splits the flow of the page into Business Exception items which are simply marked as exceptions, and System Exceptions items which may cause the process to terminate if the occur repeatedly. If you are using any exception types other than 'System Exception' and 'Business Exception' this decision may need to be altered to ensure that your exception types go down the correct process flow.

Reset Global Data page configuration

Any Data Items that are global to the entire process and need to be reset before working a new case can be reset to their initial value by the call to this page.

Simply move any global data items that need resetting for each case onto this page.

Close Down page configuration

The Close Down page performs any tasks that need to be done before the process completes. By default these include:

- Cleanly exiting the applications being used

Any other actions that need to be performed before the process completes should be added to this page.