Further Improvements for Temporary Business Rules Management (Friday, Monday)

Development documentation (Draft version)

Overview

Purpose: Improve Temporary Business Rules management process workflow and accelerate the end result to providing weekly PEP screening volume each week

Operational Business Area: Business Rules Management in Compliance Link - Temporary Business Rules for PEP Screening

Supporting Documents *Business Procedure - Business Rules Management in Compliance Link; Navigation: Implementing Temporary Business Rules and evaluating entities in CSA;*

Potential Users: FCP Officers in Customer PEP Screening

Total Expected Impact (Time savings, FTE, etc.): -

Risk Assessment: Any potential solution in customer screening system (*Fircosoft Compliance Link*) has to be aligned and assessed with Process Owner and Operational Risk manager in order to ensure that solution is secure for the use case

Status: Under development

Other notes: -

Contents and Summary of each process step improvement stage

1. **Rule evaluation and ideation process step:**

Current Stage: Completed	*Solution: Automatic comment writing macro*

2. **Entity lists correction in the new proposed rule file after evaluation process:**

Current Stage: Completed	*Solution: Automatic numeration of SD lists macro*

3. **Newly and exceptional entities colouring in the 1st SD list in Letter:**

Current Stage: Idea was removed	N/a

4. **Approved rules documentation in False Positive reduction rules excel:**

Current Stage: Completed	*Solution: Automatic new rules documentation in the FP reduction workbook macro*

5. **Temporary Business Rules creation in Compliance Link:**

Current Stage: TBA	*Solution: TBA*

6. **Additional entities evaluation in CSA (Related to Pre-screening App improvement):**

Current Stage: Testing and Implementing	*Solution: App feature – Monday Letter*

Additional remarks for Prescreening App Features

1. Process Step	Description of Step
- Rules ideation and evaluation process	**Problem:** Too repetitive process when same comments are being used to describe irrelevant changes in the updated PEP list. **Business need:** Speeds up solution writing for each entity change in the list and standardise ideation process, as well rule documentation. Alignment between decision makers. Fastens 4 eyes control when reviewing proposed rules. **Resolution:** Standardize and automate comment writing in "*Letter*" files and CSA status input field with mapped keyboard combinations. **Expected Impact:** - **Applies in:** Word Document – "*Letter*", CSA (Friday, Monday).

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Solution

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Automatic comment writing macro
Scripting language: *Autohotkey*
Applicable: *2 separate AHK files for ideation process on Friday and Monday*
Short description:
Maps a modifier key ("*CTRL*"/ "*ALT*") + Numpad (0-6) and triggers particular action – populates clipboard and pastes keystrokes ("*standard comments*") to any active window.

Running instruction:
1. Download AHK files from down below,
2. Double-click one of the script files with the left mouse button,
3. The AHK icon appears in the Windows system tray, indicating that the program is ready to use,
4. Create comments by using the keyboard combinations below,
5. To disable the script, go to Windows system tray, left-click on the AHK icon and select "Exit".

Hotkey combinations of standard comments:
CTRL + Numpad0 = *Comment when changes in PEP profiles are not taken into consideration for evaluation proc.*
CTRL + Numpad1/ CTRL + ALT + Numpad1 = *Comment when PEP/ Primary PEP active in same position*
CTRL + Numpad2/ CTRL + ALT + Numpad2 = *Comment when PEP/ Primary PEP already former in position*
CTRL + Numpad3/ CTRL + ALT + Numpad3 = *Comment when PEP/ Primary PEP former in position*
CTRL + Numpad4 = *Comment when >1 relations are identified*
Exceptions:
CTRL + Numpad5 = *Comment for YOB exception*
CTRL + Numpad6 = *Comment for COUNTRY exception*

* *Compatible with numpad keyboard*
* *Numlock has to be ON*
* *Disable previous AHK scripts if they were running*
* *„ALT" key used for Primary PEP comments*

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Files to download

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H CommentsFriday.ah k	**H** CommentsMonday. ahk

Previous considered solutions:
a. During rule ideation a GUI decision box activates where standard comments could be selected,
b. Instead of hotkeys, *"hotstrings"* (i.e. text abbreviations) would be used to trigger actions.

Footnote: Completed and ready for use. Testing phase went successfully. Tested by *Šarūnas Matulis*, proposed feedback noted.

2. Process Step	Description of Step
- Entity lists correction in the new proposed rule file after evaluation process	**Problem:** Time consuming process where each entity number needs to be rearranged and grouped according to the correct numbering and formatting. Linked to further errors if something is wrongly formatted by hand. **Business need:** It will significantly saves time spending on correcting structure and lists in rule documentation file, avoiding ongoing mistakes and unnecessary delays in finding bugs. **Resolution:** Create auto numeration of two SDs (*"Stop descriptors"*) lists in Word document by implementing VBA macro or using any other scripting language. **Expected Impact:** - **Applies in:** Word Document - *"Letter"* (Friday).

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Solution Brainstorming

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a. Word document (letter) must have a clear reference point (i.e. an object) to manipulate it and create the logic for formulating a macro. In addition identifying the object, the content range must also be set in order to make iteration;
b. The reference point might be the *first entity ID number of the SD*;
c. Word content range is dynamic, not static;
d. In python might not be possible to make;
e. There is an option – VBA;
f. Duplicate SDs may already be grouped and formatted in lists when composing the letter. The reason is that duplicate SDs are always described or removed from the letter together;
g. A macro should run and rearrange two lists at the end of the rules ideations process.

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Solution

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Automatic numeration of SD lists macro
**Scripting language:** *Visual Basic for Applications (VBA)*
Applicable: *after describing new rules in Word document on Friday*
Short description:
Macro renumbers the 1st entity list and reads its particular words (i.e. SD No., 1st entity number) in each paragraph. After that, it runs through the 2nd entity list and makes entity numbers comparisons. If both entity numbers are equal, then it renumbers 2nd list entity No. accordance to 1st list No. The program are guided by 1st word special characters "**(**", "**.**" in paragraphs.

Running instruction:
1) Before use add macro *"AutoSD_ListsNumeration.bas"* file to *"Normal"* project library. To do that, open Word application and press *"Alt + 11"* shortcut, word editor window opens. Then drag and drop .bas file like below and close editor window:
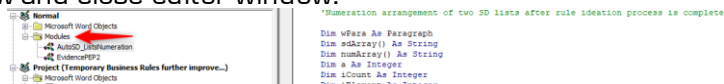
2) Open "letter.docx" file, go to Developer tab and choose Macros,
3) In the Macros dialog box, select "AutoSD_ListsNumeration" and press the Run button.

Important usage notes:
- The macro is adapted only for Word document *"Letter"* file. Hence, the macro should be running only there,
- Likewise as "Letter" formatting features, you need to maintain each entity's first word character formatting (such as *special characters, left parenthesis: (and dot: .*) should not be deleted, changed or moved) to allow program run correctly,
- *! Attention for duplicated stop descriptors.* A case when duplicated stop descriptors is formatted together under same number in the 1st SD list, a space should be inserted after 1st entity number for such cases. If a space not inserted, the macro is not perform numeration for duplicated descriptors,
- Apart from previous attention, duplicated stop descriptors should be formatted same as before according to navigation procedure,
- Macro runs more smoothly with the newest pre-screening app (V1.2) update.

Files to download

AutoSD_ListsNumer
ation.bas

Footnote: Completed. Currently going through testing and debugging phase. Tested by *Sarūnas Matulis,* 1st try passed with bugs.
Amendments added into the code to make it more stable and secure.
Bugs were identified and test runs performed successfully.
The program handling exceptions were noted in documentation.

4) Process Step	Description of Step
- Newly and exceptional entities colouring in the 1st SD ("*Stop Descriptor*") list in Letter	**Problem:** N/A **Business need:** N/A **Resolution:** Detect and colour new added entities, exceptions in 1st SD ("*Stop Descriptor*") list in the new rule documentation file (*Optional Step*). **Applies in:** Word Document - "*Letter*" (Friday).
<center>Solution Brainstorming</center>	
✘ Non relevant step, because newly added entities have to be coloured in the next step anyway, i.e. once the rules extracted to the False Positive Reduction Rules Excel file; ✘ Process step is optional and FCP officer who performs rule ideation has his own highlighting methods for exceptions and new entries; ✘ Besides, there is no defined problem and business need.	
Footnote: Idea was discussed and removed.	

5) Process Step	Description of Step
- Approved rules documentation in false positive reduction rules workbook before rules creation in Compliance Link	**Problem:** It takes extra time to prepare the table before implementing the rules. The dataset often becomes messy when rules are stored and managed in the table. **Business need:** This prepares documentation file for rules automatically without wasting any extra time. In the long run, this will creates an order and standard for all false positive rules stored in the table. **Resolution:** After extracting rules within pre-screening application a macro in "False positive reduction rules.xlsm" runs where dataset in "Rules.xlsx" would be prepared accordingly and then transferred back to the original workbook. **Expected Impact:** - **Applies in:** Excel Workbook - *"False Positive reduction rules"* (Friday).

<div align="center">Solution Brainstorming</div>

a) VBA macro – most likely an option;
b) Tricky point is with new entities marking in table;
c) Appropriate way is to apply those markers and fillings before pasting data to another workbook.

<div align="center">Tested Solutions</div>

False Positive reduction rulesTEST	RulesTEST.xlsx	m_RulesColorMove Prepare.bas

<div align="center">Solution</div>

Automatic new rules documentation macro
Scripting language: *Visual Basic for Applications (VBA)*
Applicable: *For the new rules documentation in the FP reduction rules workbook on Friday*
Short description:
The macro runs through the new rules table, makes colouring and data prefill in the empty cells, also returns values specified by the user and moves dataset to the original workbook.

Running instructions:
1) After the new rule extraction open both excels – *"False positive reduction rules.xlsm"* and *"Rules.xlsx"*,
2) In the *"False positive reduction rules.xlsm"*, go to Developer tab and choose Macros,
3) In the Macro dialog box, select *"Auto_Rules_Documentation"* and press the Run button,
4) The *"Rules.xlsx"* workbook closes automatically after running the macro.

Important usage notes:
- To run properly this macro both relevant workbooks must be opened,
- Run this macro only on Friday (Rule implementation day).

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<div align="center">m_AutoRulesDocu mentation.bas</div>

Footnote: Completed. Testing phase went successfully. Tested by *Šarūnas Matulis,* proposed feedback noted.

Business rules management process steps in Compliance Link/CSA (Customer Screening Administration)

5) Process Step	Description of Step
- Rule implementation in Compliance Link	**Problem:** Process is extremely prone to human mistakes which can create risk in compliance violations and adversely affecting the volume in PEP screening queues. Second issue is the long processing time required to manually load the entire batch to system, and the third issue – the sequence of actions is repetitive, consequently typing and other omission errors may occur.
	Business need: Rule creation process would be accelerated instantly. Rule implementation failure and risk rate would be almost close to zero comparing to manual rule creation.
	Resolution: RPA (dedicated robot) solution which would run through instruction of rule description and based by that would make manipulation (I.e. rule addition to FP rule pack) in Compliance Link.
	Expected Impact: -
	Applies in: Compliance Link - *"Manage Rules"* panel. RPA - uiPath (Friday).
Solution Brainstorming	

a) Advantage point that rule addition process has accurate input points in Compliance link and well define step sequence to add rules;

b) For security, risk and 4 eyes reasons, TEST run of rules creation could be done in SYST ("Sandbox") environment first, and if a bot has successfully done its job there, then rule creation could continue in PROD environment;

c) This process step takes place in customer screening system, therefore risks and impact assessment have to be evaluated and granted. First contact - *Justina Broniukaitiene*;

d) This step improvement focal point is one more RPA development and implementation in CL ("Compliance Link") for Customer PEP Screening unit. Thus, every RPA creation proposals should go through *Intelligent Automation CoE* department. They should look whether it is vital for the bank, assess own resources, and if not possible them to prioritise, they should approve and provide guidelines to follow when developing a robotic automation solution by own department;

e) Concerning rule deactivation and Mobile Pay screening profile update, those steps should not be automated and should be left to supervise by an FCP Officer.

Footnote: Not determined stage - solution brainstorming.

6) Process Step	Description of Step
- Additional entities evaluation in CSA (Related to Pre-screening App improvements)	**Problem:** Writing a final status comment for each stop descriptor greatly prolongs evaluation time especially when each entity profile change setting has to be copied out manually in CSA. In doing so, not all changes are being described in sufficient detail. **Business need:** Saves time and eliminates clicking and pasting waste in documenting each entity changed setting. Conclusions for low risk entities will become better readable, detailed and more accurate in CSA log. **Resolution:** Gather and compose previous and current entity version changes from CSA source code in one Word file. This will be similar to Friday's *"Letter"* one of the feature when SD version changes are combined in one paragraph. **Expected Impact:** - **Applies in:** Customer Screening Administration – *„PEP compare"* panel. Prescreening app (Monday).

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Solution Brainstorming

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a) Adjustment made here - instead, the same solution as already made on Friday can be applied on Monday process as well by fetching entity version changes from CSA source and composing that into Word document paragraphs,

b) Only relevant entity version settings (ones are coloured) should be collected from CSA,

c) Same as latter, paragraph formulation should maintain same text keywords, like "{Setting} changed from … to …", "{Setting} removed/added"

d) Paragraphs should not have include a last sentence ("Conclusion") for starting describing irrelevance of the change, such - "However, these changes have no influence on final decision, …"

e) Each paragraph of entity description should be placed in sequence as in the PEP comparison record list in CSA,

f) Eventually, this enhancement will be used together with automatic comment writing macro.

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Tested Solutions

letter2022-11-14
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Footnote: Feature is being deployed in the app. Currently this implementation going through testing and feedback phase. Improvement developed by – *Blessing Agadagba*. Tested by – *Jonas Laurinaitis*.

Additional remarks for Prescreening App Features

- **Friday Letter Creation**

Problem: Most of the time the app could not extract rules smoothly and provide expected result, because of punctuation fails when duplicate descriptor are moving and formatting by hand in the file.

Proposal: Change composition and formatting for more than 1 entities under same Stop Descriptor. Those entities already could be included under same number in both lists and maintain particular format as follows below:

> *1st list*
> [.4] [Entity ID], [Entity ID], [Entity ID] – [Volumes added together] – PEP [PEP name], PEP [PEP name], PEP [PEP name]
> *2nd list*
> .4. [Entity ID] `[STOP DESCRIPTOR]`: [Rationale for the rule] …
> . [Entity ID] `[STOP DESCRIPTOR]`: [Rationale for the rule] …
> …

Reason: Business rule applies the same for duplicate Stop Descriptors, hence every time all those related entities have to be composed together or deleted from the file by the same principe. Duplicates are not documented separately.