



Process Definition Document

BACS List Updates - Council Tax Direct Debits

DigitalNL Programme

Project reference number: M3 – RPA Proof of Concept

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Introduction

Purpose

The purpose of this Process Definition Document (PDD) is to:

- Capture the current (“as-is”) BACS List Updates - Council Tax Direct Debits process currently completed by the Revenue & Benefits team.
- Define the proposed (‘to-be’) process flow for the BACS List Updates - Council Tax Direct Debits activity for a Robotic Process Automation (RPA) solution.
- Capture the inputs, outputs, systems, applications, key dependencies, assumptions and challenges relating to this proposed RPA-enabled process.
- Form the basis of the specification and development necessary to automate the existing process with RPA technology.

This document is subject to review and sign-off as an accurate description of the proposed RPA enabled “to-be” solution by the designated approvers.

Scope

Following an RPA assessment the BACS List Updates - Council Tax Direct Debits activity was selected by NLC for an RPA Proof of Concept (PoC). This PDD specifies the process steps in detail such that automation development can commence.

Key stakeholders

Business Change Lead - Lorraine Brown

Process Owner - Paul Doherty

Process SME - Christopher Hoy

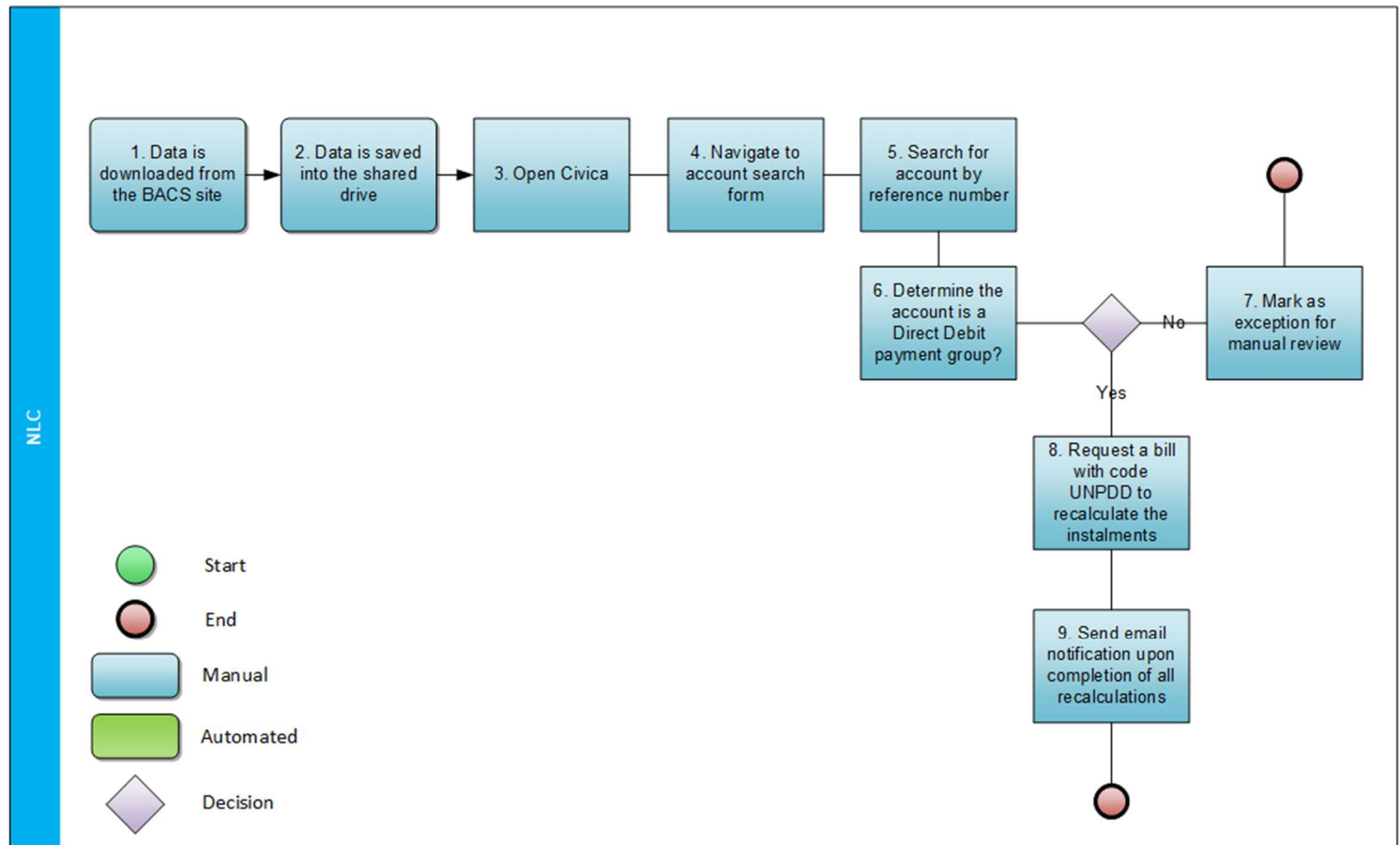
Process description and As-is overview

Process description

The Revenues and Benefits team use this process to recalculate Direct Debit instalments when a customer's Council Tax bill changes. Up-to-date direct debit information is downloaded from the BACS site and is formatted by the team using a number of Excel macros to transfer this into a standardised format. The recalculated direct debit amount is spread over the coming months instead of the previous recalculation that would add the amount when the next payment due. The team then checks whether Payment Groups is Direct Debit, and if so, request a bill to recalculate instalments for customers with reason code UNPDD (Unpaid Direct Debit). This is repeated for each transaction on the spreadsheet with "Refer to Payer" as the reason for return per the BACS site.

As-is Process Map

Below is an as-is process map of the Council Tax Direct Debit process:



Baseline Metrics

Process	Volume	Cycle time	Baseline FTE	Exception rate
BACS List Updates - Council Tax Direct Debits	1000 per month	3.5min	2.2FTE	0%

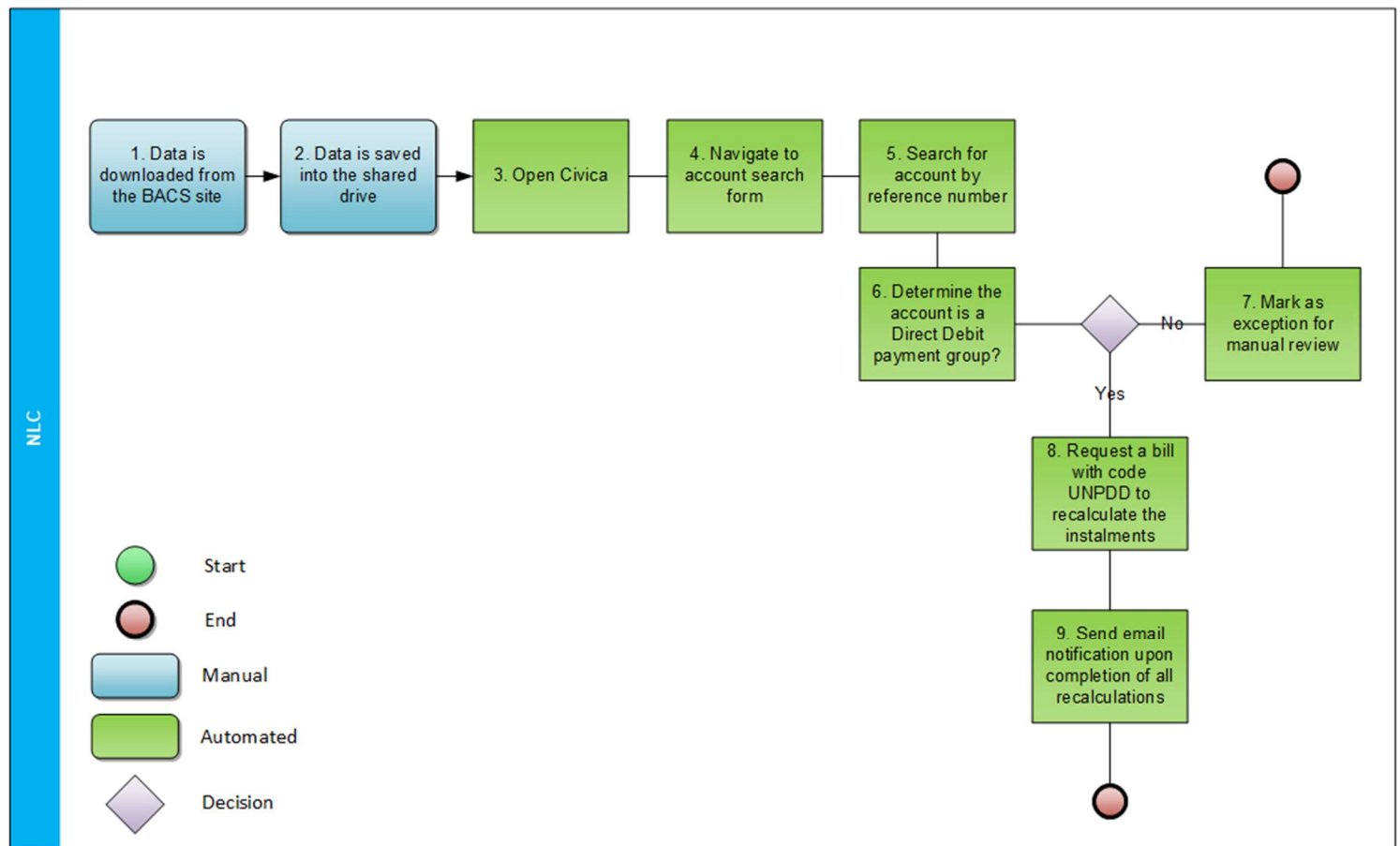
Overview of To-be process

Overview

The to-be process will look as follows:

- The Revenue and Benefits team will complete the BACS download.
- The team then formats the data into Excel and saves this into a temporary save location. The to-be process will use a temporary save location to read in the spreadsheet due to security restrictions on the as-is shared network location.
- The formatting step would only leave transactions with a reason for return marked as “Refer to Payer” and take out any with “Instruction Cancelled” and “No Instruction”.
- This spreadsheet is saved in a CSV file format in the same temporary save location.
- Once the robot identifies a file, it will read in the spreadsheet and validate all the data within this.
- The robot will then use this information to build an internal work queue to be processed.
- The Civica Open Systems application is launched and the robot navigates to the Council Tax Display page.
- The robot searches for the account using the reference number stored in the spreadsheet which now resides in the robots internal work queue.
- In the account, the robot will move to the details tab and verify that the account is one of the Direct Debit payment groups.
- Upon confirmation, it will request a new bill for the account, add the current year and add a reason code UNPDD (Unpaid Direct Debit).
- The robot will work through it work queue and upon completion of all accounts, it will send a completed transaction log back to the revenue and benefits team with a status for all transactions.

To-be Process Map



Expected Benefits

The expected benefits following automation would be reductions in cycle time and headcount as per the table below:

Process	Volume	Cycle time	Capacity Creation	Exception rate
BACS List Updates - Council Tax Direct Debits	1000 per month	30sec	1.8FTE	0%

The expected financial benefits of automation is expected to be equivalent to the scope of the automation which is approximately 80% of the process steps with a capacity creation potential of 1.8FTE. Furthermore, the robot would significantly reduce the processing time for each transaction to around 30 seconds from 3.5 minutes.

Other non financial benefits;

- Significant processing speed and faster throughput
- Improvement in the process quality through Council Tax Direct Debit entry accuracy
- Capacity creation allowing staff to focus on value adding activities

Key process changes

There have been a number of key changes to the to-be process, they are;

Key process changes		
Process Change	Details of change	Approval
None identified		

To-be challenges and mitigation

There have been a number of challenges highlighted in the to-be process, a number of mitigation approaches have been included to resolve these;

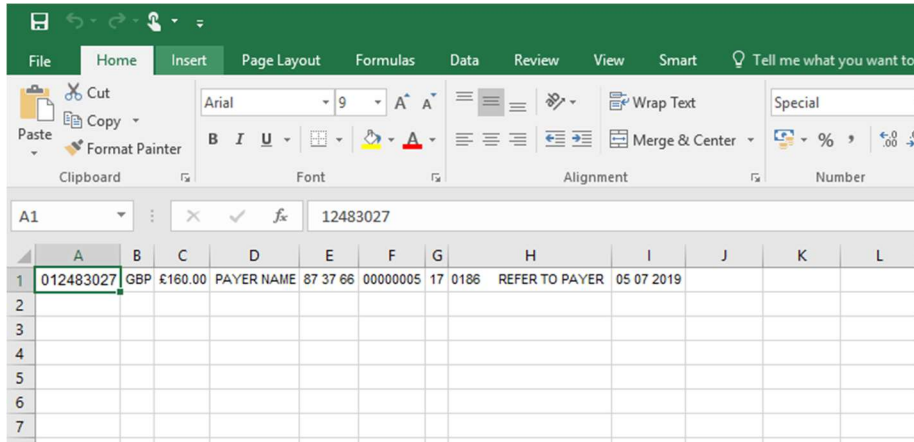
To-be process challenges	
Challenge	Mitigation approach
None identified	

Business requirements

List of business requirements

List of requirements	
Requirement number	Requirement name
001	Read in spreadsheet
002	Data verification
003	Launch Civica Open Systems
004	Navigate to Council Tax Display page
005	Search for customer account
006	Validate payment group
007	Request a new bill
008	Send completion notification

Detailed business requirements

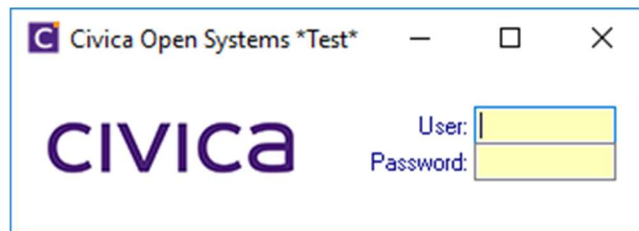
Business Requirement		
Req. Number	Req. Name	Impacted Areas/Systems
001	Read in spreadsheet	Temporary save location Microsoft Excel
Requirement Description	The robot will check the temporary save location for files in the CSV format. If there are CSV files present, it will process the document. If not, the robot will recheck the save location after a set period of time.	
Screenshot		
		
Detailed Description		
	Requirement	
Functionality	<ul style="list-style-type: none">• Check temporary save location for CSV files.• If a CSV file is present, the robot will read the data and store it in it's internal memory.• If a CSV file is not present, the robot will check again later after a defined period.	
Business Rules	<ul style="list-style-type: none">• If the temporary save location is unavailable, send a notification to the revenue and benefits team.• If an error occurs when reading the file, send a notification to the revenue and benefits team.	
Acceptance Criteria	All files that are present in the temporary save location have been found and successfully read into the robot. Moves to data verification.	

Business Requirement		
Req. Number	Req. Name	Impacted Areas/Systems
002	Data verification	N/A
Requirement Description	The robot will loop through the spreadsheet to understand if there are any missing reference numbers. It will also remove any empty rows to create a clean table.	
Screenshot		
N/A - Internal robot functionality		
Detailed Description		
	Requirement	
Functionality	This is a list of the steps taken within the requirement, for example; <ul style="list-style-type: none">Removal of empty rows and columns.Verify that each populated row has a valid reference number.	
Business Rules	Any missing reference numbers will be marked as an exception in the transaction log.	
Acceptance Criteria	Data has been successfully cleansed. Moves to launch Civica Open Systems.	

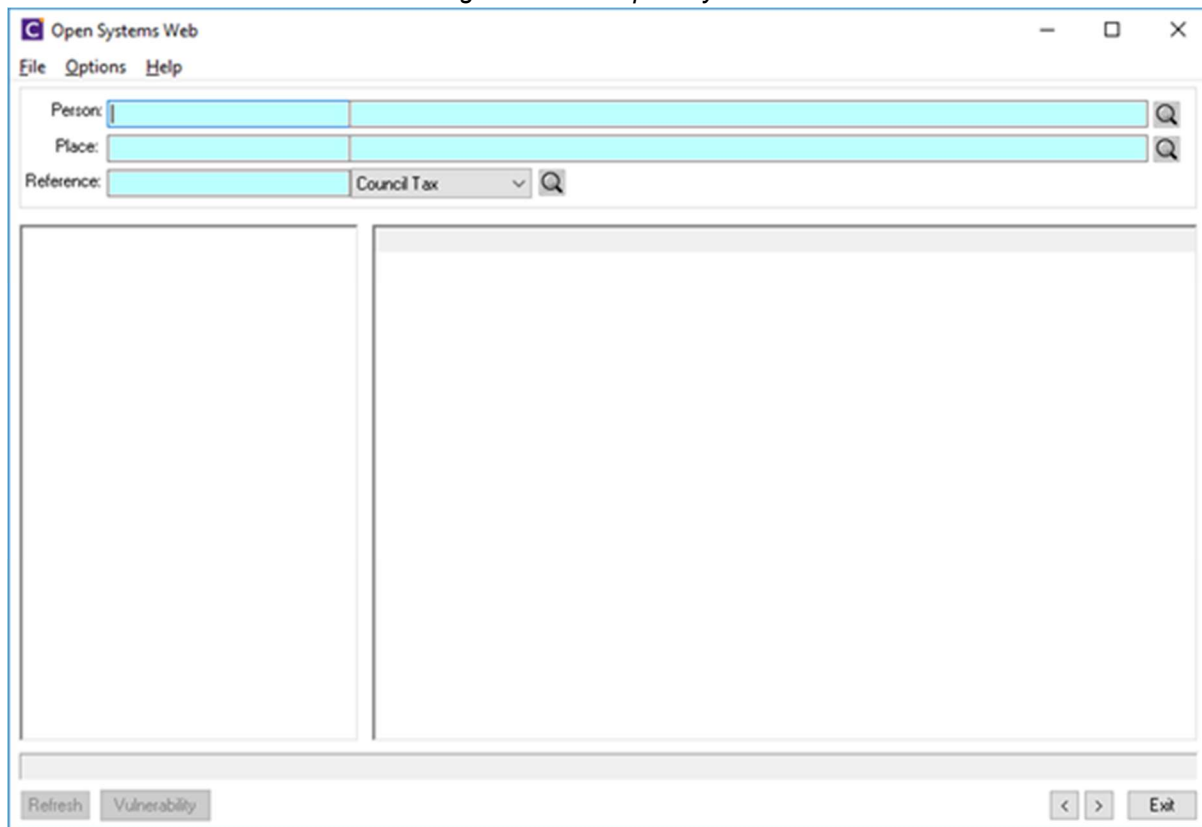
Business Requirement

Req. Number	Req. Name	Impacted Areas/Systems
003	Launch Civica Open Systems	Civica Open Systems
Requirement Description	The robot will launch the Civica Open Systems test application and log in. It will close any pop ups that may appear on launch to give the robot an unrestricted view of the main application to carry out the process.	

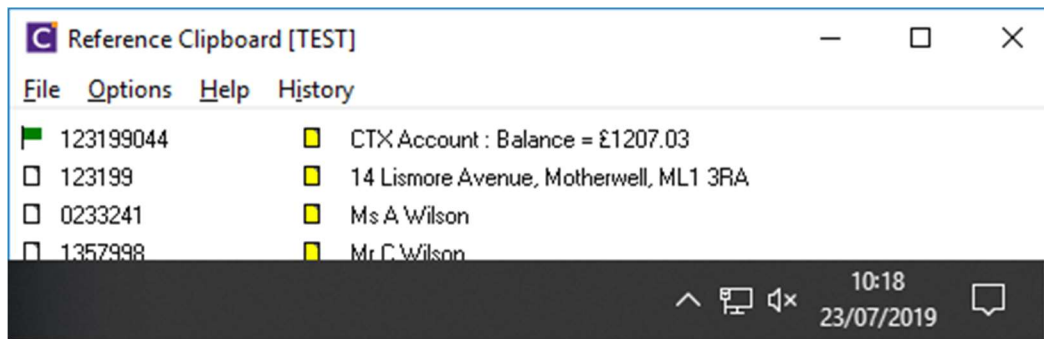
Screenshot



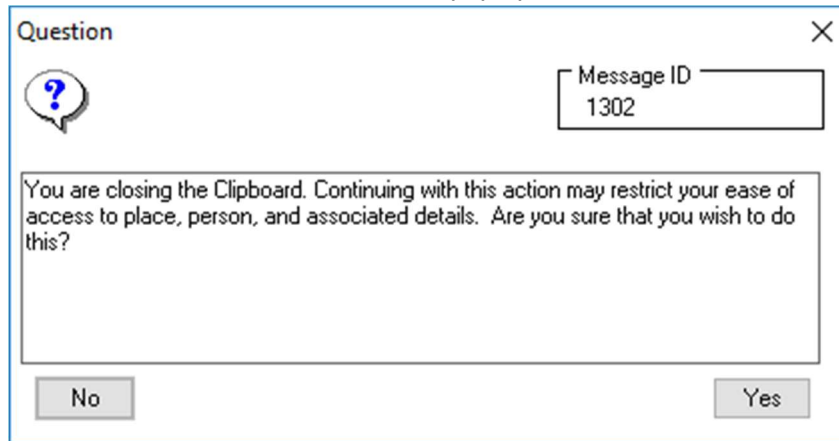
Log into Civica Open Systems



Close this pop-up



Close this pop up



Close this pop-up

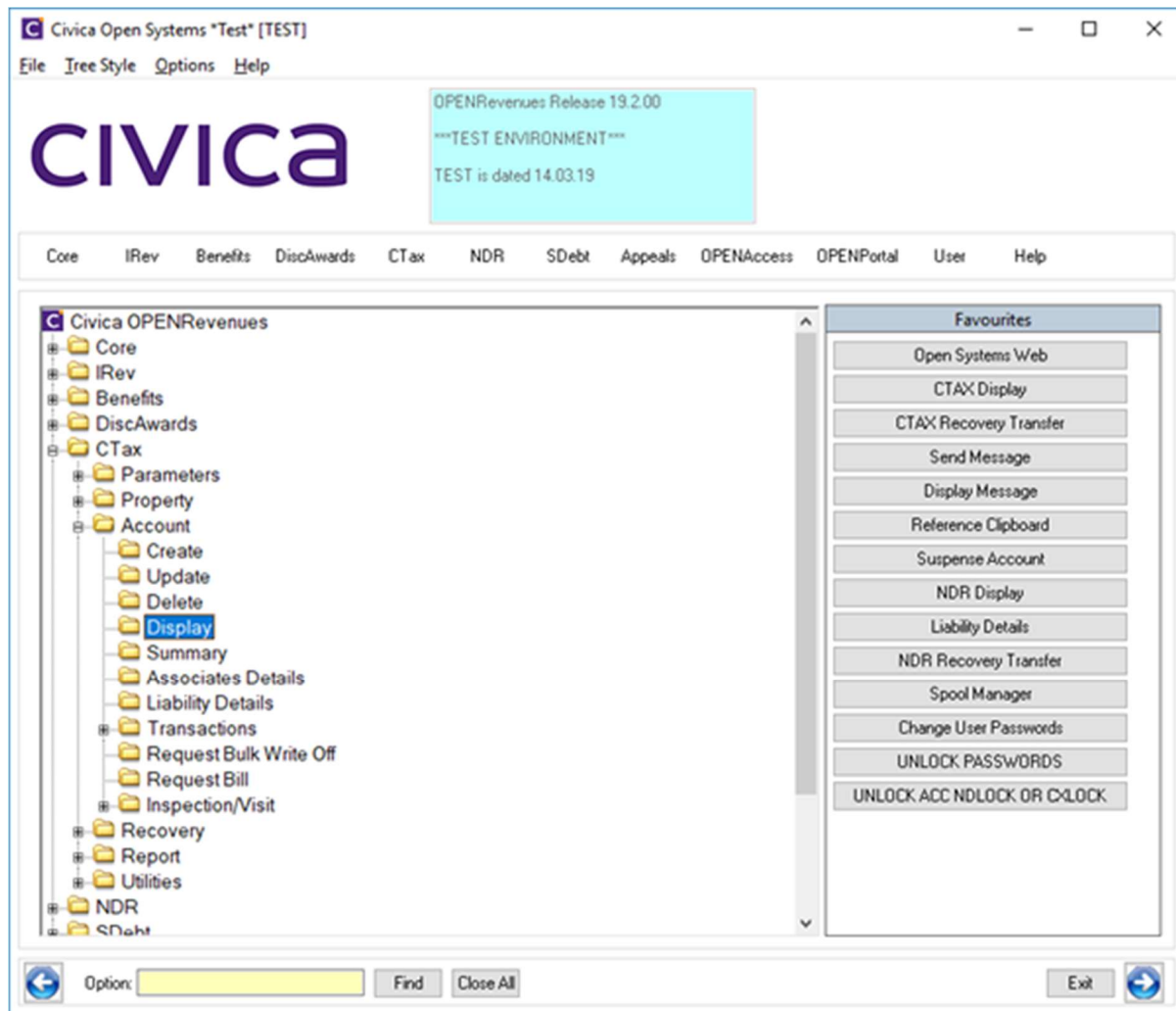
Detailed Description

	Requirement
Functionality	<ul style="list-style-type: none"> • Launch Civica Open Systems test application. • Log into the application with Username and Password. • Verify that the application has been successfully logged into. • Close any pop up windows opened on launch, that are not the core application.
Business Rules	<ul style="list-style-type: none"> • If the application fails to launch, send an email notification to supportteam@northlan.gov.uk. • If the application login fails, send an email notification to supportteam@northlan.gov.uk.
Acceptance Criteria	Application is open and has been successfully logged into, move onto navigation to Council Tax display page.

Business Requirement

Req. Number	Req. Name	Impacted Areas/Systems
004	Navigate to Council Tax Display Page	Civica Open Systems
Requirement Description	The robot will navigate to the Council Tax display page within Civica Open Systems.	

Screenshot



Detailed Description

	Requirement
Functionality	<ul style="list-style-type: none"> Click to expand “CTax” folder. Click to expand “Account” folder. Double click “Display”. Alternative method: Click “CTAX Display” from the favourites section if present - not default.
Business Rules	N/A
Acceptance Criteria	CTax display page has been successfully launched, move to search for customer account.

Business Requirement

Req. Number	Req. Name	Impacted Areas/Systems
005	Search for customer account	Civica Open Systems
Requirement Description	The robot will search for a customer's account details by using the reference number from the BACS report spreadsheet.	

Screenshot

Select CTAX Account [TEST]

File Help

Account Ref Name Address

Account: ☐ Show Deleted

Account Reference	Name	Address	Post Code
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OK Exit

Screen where reference number from BACS is pasted.

Display CTAX Account [TEST]

File Options Help

Account Ref: [REDACTED] Summary Account Status: Live Asc Emp
 Names: [REDACTED] @ E-Bill
 Billing Address: [REDACTED] ✉ OP

Recovery Details Year Summary Liability Periods Reviews

Year	No	Stage	Stage Date	Stage Amount	Balance
2019	1	BIL	21/02/2019	804.55	804.55
2018	1	BIL	22/02/2018	784.16	0.00
2017	1	BIL	13/07/2017	532.00	0.00
2016	1	BIL	13/09/2016	380.00	0.00
2015	1	BIL	11/09/2015	365.00	0.00
2014	1	CR1	11/08/2014	10.00	0.00
2013	1	CR1	05/12/2013	47.16	0.00
2012	1	CR1	07/11/2012	77.00	0.00
2011	1	BIL	13/02/2011	562.63	0.00
2010	1	BIL	14/02/2010	591.65	0.00

Charge Tot: 582.43
 Water: 102.78
 Sewerage: 119.34
 LCTRS: 0.00
 Payments: 0.00
 Refunds: 0.00
 Transfers: 0.00
 Write Offs: 0.00
 Costs: 0.00
 Prv Charge: 0.00
 Penalty: 0.00

Details A/C Balance: 804.55
 O/S Bill: <None> Inhibit Rec: <None>
 Instalments Statement SPAR: <None> Benefit Claims: 90617(X)
 Exit

Screen after customer account is found.

Detailed Description

	Requirement
Functionality	<ul style="list-style-type: none"> Select reference number from spreadsheet. Paste reference number in "Account" field on the "Select CTAX Account" page. Search for customer account by hitting Enter. If found, proceed to "Payment Group" validation step. If not found, raise an exception.
Business Rules	Any account not found will be marked as an exception in the transaction log.
Acceptance Criteria	The customer account is found and a window is opened for the account (as shown above). Move to validate payment group.

Business Requirement

Req. Number	Req. Name	Impacted Areas/Systems
006	Validate payment group	Civica Open Systems
Requirement Description	The robot checks whether the payment group on the “Details” tab of the customer account window contains a direct debit code (defined in the business rules section).	

Screenshot

Names: [Redacted] @ E-Bill
Billing Address: [Redacted] ✉ OP

Recovery Details Year Summary Liability Periods Reviews

Payment Group: D1 * Admin Area: H Inhibit Recovery: [Redacted] Until: [Redacted]
Next Year pay Grp: [Redacted] RTN Borough: [Redacted] EPP Supp Ind: ☐ Inhibit Bill: ☐ Until: [Redacted]
Benefit Pending: ☐ Date: [Redacted]
Payroll Ref No: [Redacted] Suppress Review: ☐ Until: [Redacted]

Screen showing “Details” tab

Alternative screens to read “Payment Group” code:

Title	Initials	Forenames	Surname	Person Ref	Bill Rec	Bill Type
Exors Of	A	[Redacted]	[Redacted]	[Redacted]		N/A
Mr	M	[Redacted]	[Redacted]	[Redacted]	S Y	Paper

Account Bank Associates

Screen showing “Account” button

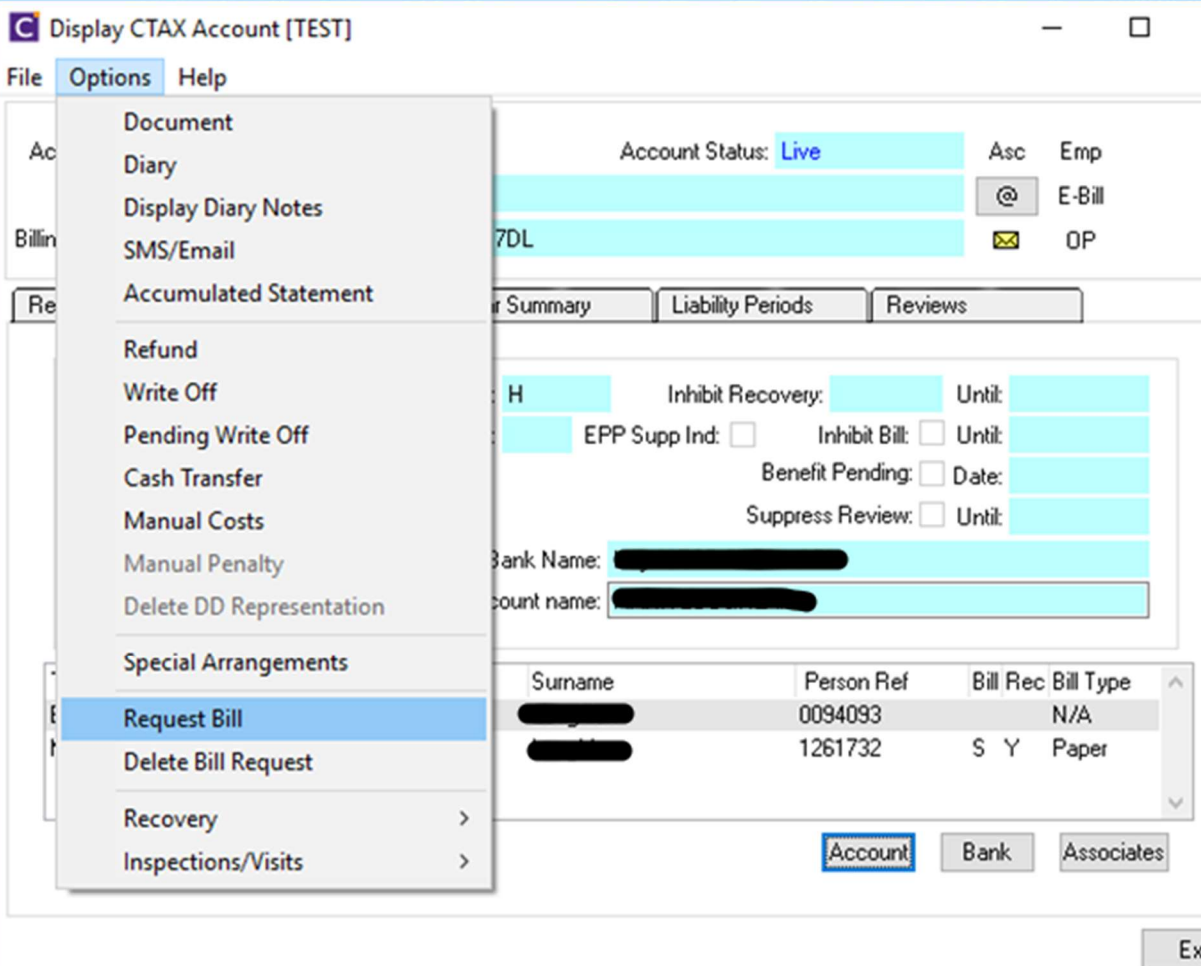
Pay Group Admin Area: H Inhibit Bill: ☐ Until: [Redacted]
Current Year: D1 Payroll Ref No: [Redacted] Inhibit Recovery: [Redacted] Until: [Redacted]
Next Year: [Redacted] RTN Borough: [Redacted] Benefits Pend: ☐ Date: [Redacted]
EPP Supp Ind: ☐ Supp Review: ☐ Until: [Redacted]

Initial	Forenames	Surname	Person Reference	Bill Doc	Rec Doc
A	[Redacted]	[Redacted]	[Redacted]		
M	[Redacted]	[Redacted]	[Redacted]	S	Y

OK Cancel

Screen showing "Payment Group" under "Pay Group" in the "Current Year" field.

Detailed Description	
	Requirement
Functionality	<ul style="list-style-type: none">• Navigate to "Details" tab of the customer account window.• Read the "Payment Group" field from the "Details" tab.• Alternative method:• Click "Account", read "Current Year" field in "Pay Group" section then click "Cancel".• Check whether the "Payment Group" field is a valid direct debit code as per direct debit code list (see next section).• If direct debit code is valid, proceed to next step for requesting bill for recalculating instalments.• If direct debit code is not valid, click the "Cancel" button to leave screen.
Business Rules	<p>The "Payment Group" field needs to contain any of the following valid Direct Debit codes before requesting a bill for recalculating instalments: D1, D2, D3, D4, D5, D6, D7, D8, D9, DM.</p> <p>A customer account not containing any of these direct debit codes will be marked as an exception in the transaction log.</p>
Acceptance Criteria	"Payment Group" matches direct debit codes as per list above. Move to request a new bill.

Business Requirement															
Req. Number	Req. Name	Impacted Areas/Systems													
007	Request a new bill	Civica Open Systems													
Requirement Description	The robot will request a new bill to recalculate council tax instalments within the Civica Open Systems application for all customer accounts with a valid direct debit payment group.														
Screenshot															
 <p>The screenshot shows a web application titled "Display CTAX Account [TEST]". The "Options" menu is open, listing various actions such as "Document", "Diary", "Display Diary Notes", "SMS/Email", "Accumulated Statement", "Refund", "Write Off", "Pending Write Off", "Cash Transfer", "Manual Costs", "Manual Penalty", "Delete DD Representation", "Special Arrangements", "Request Bill" (highlighted), "Delete Bill Request", "Recovery", and "Inspections/Visits". The background displays account information for a "Live" account, including a table of bill records.</p> <table><tr><th>Surname</th><th>Person Ref</th><th>Bill Rec</th><th>Bill Type</th></tr><tr><td>[REDACTED]</td><td>0094093</td><td></td><td>N/A</td></tr><tr><td>[REDACTED]</td><td>1261732</td><td>S Y</td><td>Paper</td></tr></table>			Surname	Person Ref	Bill Rec	Bill Type	[REDACTED]	0094093		N/A	[REDACTED]	1261732	S Y	Paper	
Surname	Person Ref	Bill Rec	Bill Type												
[REDACTED]	0094093		N/A												
[REDACTED]	1261732	S Y	Paper												
Screen showing "Options" menu and "Request Bill" action															

Request Bill [TEST]

File Payment Card Help

A/C: [Redacted]

Years: 2019, 2018, 2017, 2016, 2015, 2014, 2013

Add >

< Delete

To Bill

Options:

☒ Recalc Instalments ☐ Payment Documentation

Reason: [Redacted]

☐ Produce bill on line

OK Exit

Screen showing "Request Bill" window

Detailed Description		
	Requirement	
Functionality	<ul style="list-style-type: none"> Click the "Option" menu then click "Request Bill". Ensure the current year is selected - this is done by default. Click "Add >" button to confirm the bill requested is for the current year. Ensure "Recalc Instalments" is selected - this is done by default. Complete the "Reason" field with "UNPDD" as the reason code. Click "OK" button at the bottom of the window. 	
Business Rules	Current year must be selected and recalc Instalments ticked.	
Acceptance Criteria	The current year and "Recalc Instalments" must be selected and the reason code must be set as "UNPDD" when requesting the bill.	

Business Requirement		
Req. Number	Req. Name	Impacted Areas/Systems
008	Send completion notification	Microsoft Outlook Microsoft Excel
Requirement Description	The robot will send a transaction log to the Revenue & Benefits team after processing all the transactions on the original BACS spreadsheet.	
Screenshot		
n/a		
Detailed Description		
	Requirement	
Functionality	<ul style="list-style-type: none">• Update transaction log with status of each transaction processed.• Save transaction log in temporary folder.• Create an email in Outlook.• Attach transaction log to email.• Send email to relevant Revenue & Benefits team member(s).	
Business Rules	Email address to be used for notification email - supportteam@northlan.gov.uk .	
Acceptance Criteria	The robot has entered the correct information into the email and is sent to the support team.	

Dependencies and Assumptions

Dependencies

List of Dependencies	
Dependency area	Dependency detail
Hardware	For the purpose of the PoC, the robot will reside on an NLC assigned laptop. Please note that the performance of the robot will be directly impacted by the hardware on which it resides.
Software	Software required on top of BAU (business as usual) requirements is UiPath Studio and UiPath Robot.
Licenses	For the purpose of the PoC only development licenses will be used.
Applications	Microsoft Excel Microsoft Outlook Civica Open Systems
Access/Credentials	The developer requires access to all the application required in the to-be process. The developer will require their own credentials. The robot will use the same credentials for the purpose of the PoC
Test data	To enable a successful build and to minimise risk to the business, there will need to be sufficient test data to support all testing scenarios.
SME access	Ad-hoc SME support will be required throughout the build to ensure the robot is progressing on the right path.
Process changes agreed	Temporary shared network drive for the robot to be created for the purpose of the PoC.
Security	Access to the PoC robot will be limited to the service area users, relevant management and members of the DigitalNL programme. Any configuration changes will be reported and decided via management.
Work case/Assignee selection case handover	The end handover will be a notification sent to the Benefit and Revenue team via email.
Data standardisation	Data is already standardised in the As-is process, no changes are required.

Assumptions

The following assumptions have been made whilst deriving the requirements documented in this process definition document.

List of assumptions	
No.	Assumption
001	No changes are planned to the current process and/or the interacting systems.
002	The process outlined in the business requirements section will be repeated for all entries in the CSV file provided.

Appendix

n/a

Glossary

- BACS** - Bankers Automated Clearing Services
- CTax** - Council Tax
- PDD** - Process Definition Document
- RPA** - Robotic Process Automation
- SME** - Subject Matter Expert