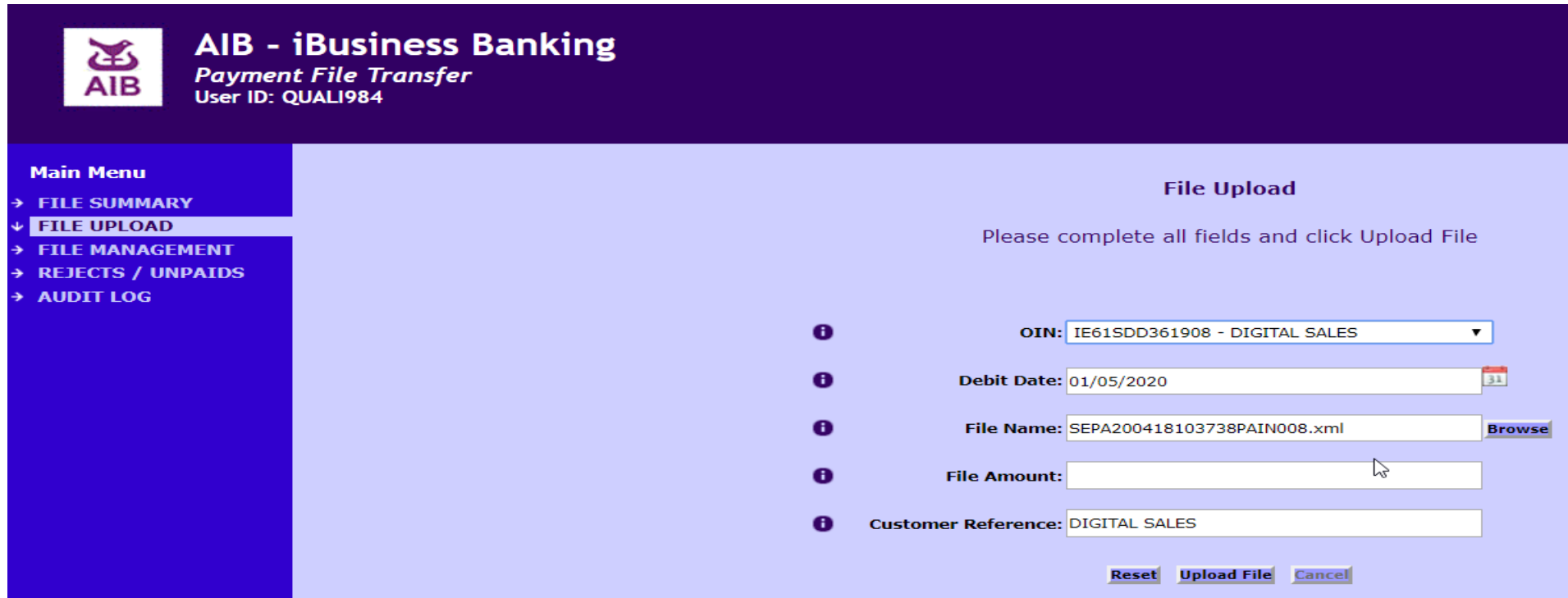# SEPA XML GENERATOR – INTERACTIVE DESIGN PROJECT – Diarmuid Haughian

Interactive Design Project Introduction
SEPA XML GENERATOR

SEPA XML GENERATOR is:

- B2B Financial Software
- The software only has one defined purpose
- It can generate an XML file used by customers to take direct debits payments from clients
- The XML File contains information on customers such as: Collection Date, Debit Amount, BIC, IBAN, etc.
- Once Generated the file is uploaded to a businesses Online Banking System, such as:

A Successful SEPA XML FILE will look like:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:pain.008.001.02" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <CstmrDrctDbtInitn>
    <GrpHdr>
      <MsgId>DIG200424082957</MsgId>
      <CreDtTm>2020-04-24T08:29:57</CreDtTm>
      <NbOfTxs>1</NbOfTxs>
      <CtrlSum>50.00</CtrlSum>
      <InitgPty>
        <Id>
          <OrgId>
            <Othr>
              <Id>db</Id>
            </Othr>
          </OrgId>
        </Id>
      </InitgPty>
    </GrpHdr>
    <PmtInf>
      <PmtInfId>DIGRCUR200424082957</PmtInfId>
      <PmtMtd>DD</PmtMtd>
      <BtchBookg>true</BtchBookg>
      <NbOfTxs>1</NbOfTxs>
      <CtrlSum>50</CtrlSum>
      <PmtTpInf>
        <SvcLvl>
          <Cd>SEPA</Cd>
        </SvcLvl>
        <LclInstrm>
          <Cd>CORE</Cd>
        </LclInstrm>
        <SeqTp>RCUR</SeqTp>
        <CtgyPurp>
          <Cd>CASH</Cd>
        </CtgyPurp>
      </PmtTpInf>
      <ReqdColltnDt>2020-04-27</ReqdColltnDt>
      <Cdtr>
        <Nm>abc ltD</Nm>
        <PstlAdr>
          <Ctry>IE</Ctry>
          <AdrLine>123 FAKE ST</AdrLine>
        </PstlAdr>
```

A Unsuccessful SEPA XML FILE will look like and will be rejected when submitted to the companies Bank:

C:\Users\me\Downloads\SEPA200419010700PAIN008.xml

C:\Users\me\Downloads\SE...

```xml
<?xml version="1.0" encoding="UTF-8"?>
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:pain.008.001.02" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"/>
```

File Upload

File Upload Complete

Your Payment File has been successfully uploaded to AIB. Please check File Management Screen for confirmation of file status.

Name	Reference	Size	
SEPA200418103738PAIN008.xml	0H1720EGGAAUS2T8	6.17KB	✔

This file has a SHA256 (Base 64) checksum value **(Gfq3oxtYFLdlFlg4afRy5a34WsqOYoQVbRJ7c0L5Mxc=)** please refer to this when Authorising this file.

(3bf3ee847a1697cba1248cf1e517f2e0beac27d9) The display of this SHA1 checksum value will be retired to enhance security. It will be replaced by the SHA256 (Base 64) format displayed above.

For further information please visit here

OK

THE PROBLEM:

Can Users Generate a Successful SEPA XML File without errors

Why:

SEPA XML GENERATOR believes users are having difficulty with the system

Goals & Objectives of Research:

Identify the Primary Pain Points – Formulate Solutions – Apply and Test

	User Analyses	SWOT Analyses	
	Two Types of Research:	User Maps	
	Questionnaire to understand concerns users of competitors solutions may have	Empathy Map	
		Story Boards	
	Define three system tasks and video record cursor actions and verbal thoughts of test users	Affinity Maps	
	Collate data, document and identify issues		
1 Day 23.03.2020	**Product Assessment** Assessment of the software as is, define the most pressing issue and how can it be resolved?	As Is User Flow Heuristic Evaluation	Diarmuid
2 Days 24.03.2020 and 25.03.2020	**Strategy Workshop & Recommendations** Address the most pressing concerns	To Be User Flow	Diarmuid
1 Day 26.03.2020	**Recommendations** Sketch User Wireframe	Hand Sketched Wireframes Low Fidelity Wireframes	Diarmuid
3 Days 27.03.2020 to 31.03.2020	**Initial Concepts agreed and Designed**	Design Concept	Diarmuid
14 Days 01.04.2020 to 15.04.2020	**Designs and UX Improvements Applied to Live System**	Changes to Live System	Software Development Team

Initial User Research:
The software target audience is typically:

- Small Business Owners with 1 to 10 staff members and in some cases up to 50 employees
- Entrepreneurs and Start Up businesses with recurring revenue customers
- Target Geographic: European States which are under the SEPA Umbrella
- End Users: Business Owners, Administration or Finance Staff
- User Environment: Office and Desk Based using Desktop type PC's

- The Quantitative and Qualitative research focused on the potential user group define above
- Questionnaires targeted at user that use alternative solutions
- Video Recorded 3 User Tasks with Accountants and Account Admin Staff

Questionnaire Findings

Key Findings:

System backups were considered important

Security was a priority and Deleting Old XML Files was considered a security improvement

User Experience:

System Aesthetics was of little importance

User Guides and Information Popups considered very helpful

Task Completion and Video Recording

3 User Flow Tasks and One Outcome

All 3 Steps completed but ZERO successful XML Files Produced

User Tasks Detailed

Task 1:

Add and save your company details to the system

Definition: the bank account details for your company, which will allow your company to receive payments.

Task 2:

Add one pretend Direct Debit Customer to your account who pays 50.00 euro

Definition: A person who has signed a direct debit mandate for 50.00 euro

Take 3:

Generate an SEPA xml file for the one customer just added to the system

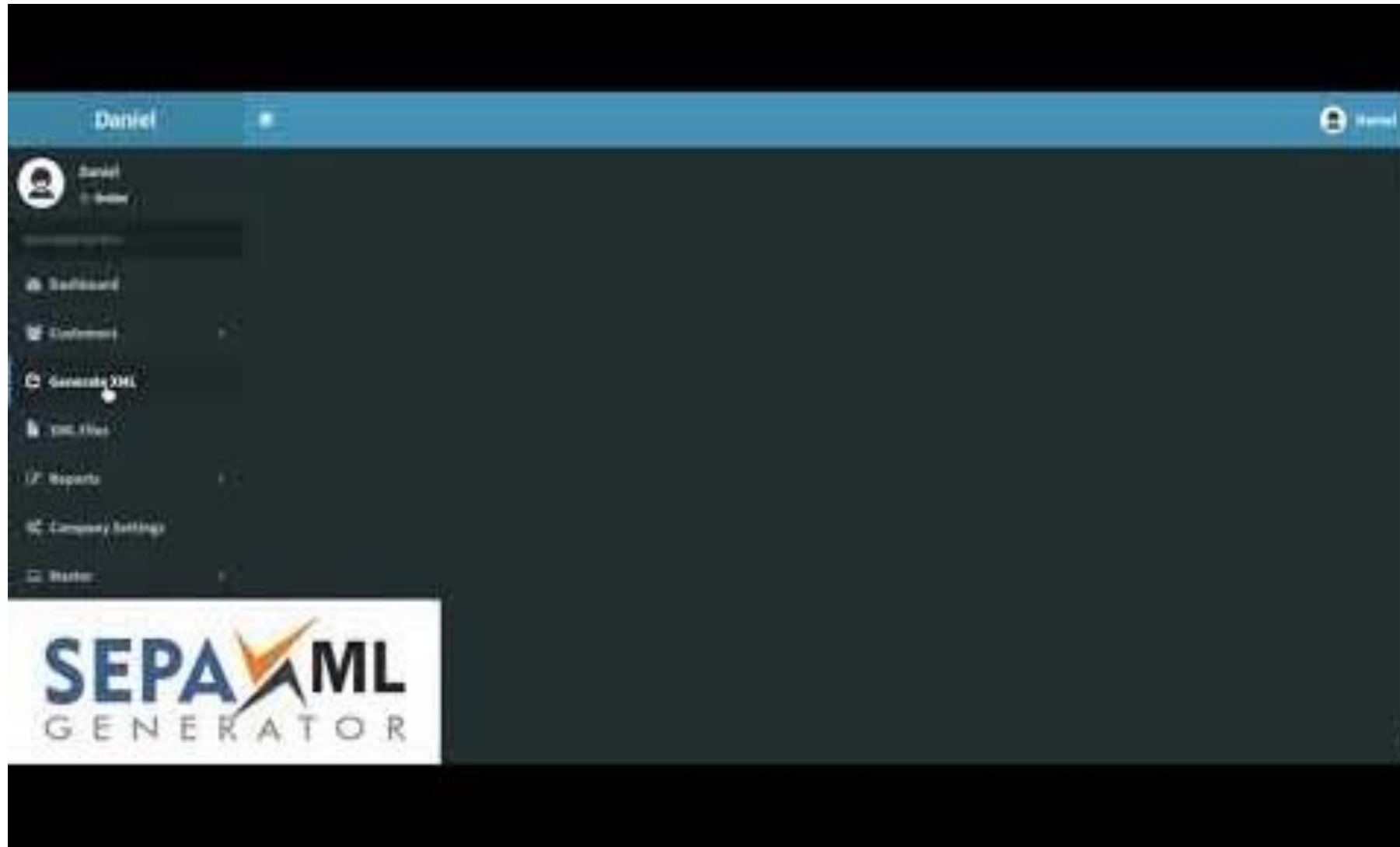Definition: Selecting a date in the future for the debit to be taken from the customer account

Your Trial Login Details are:

http://sepaxmlgenerator.com/sepa-xml-login/

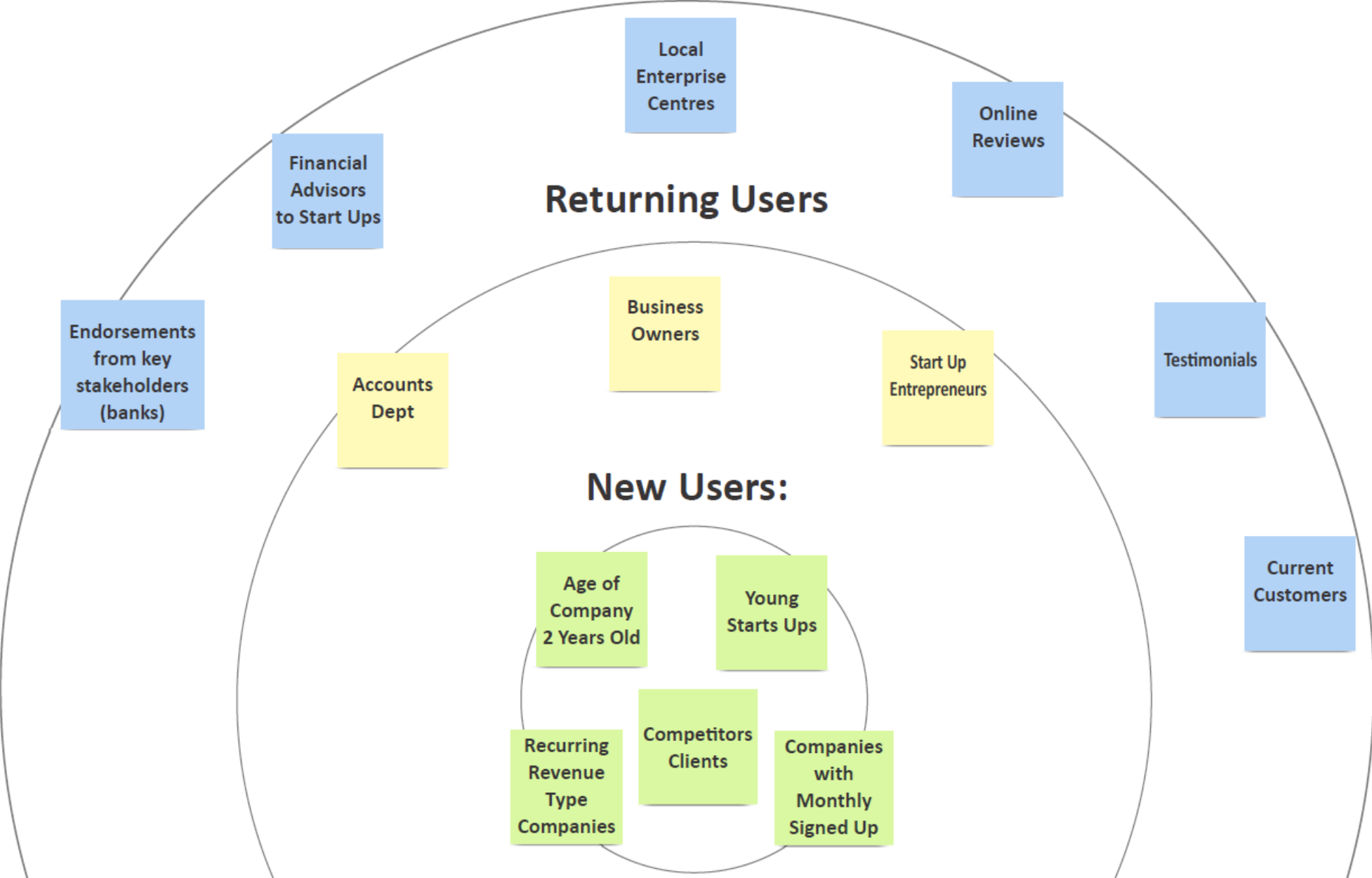Username: trial2@sepaxmlgenerator.com   Password: Trial123

Sample of Video Recording – Task Analyses – with Audio

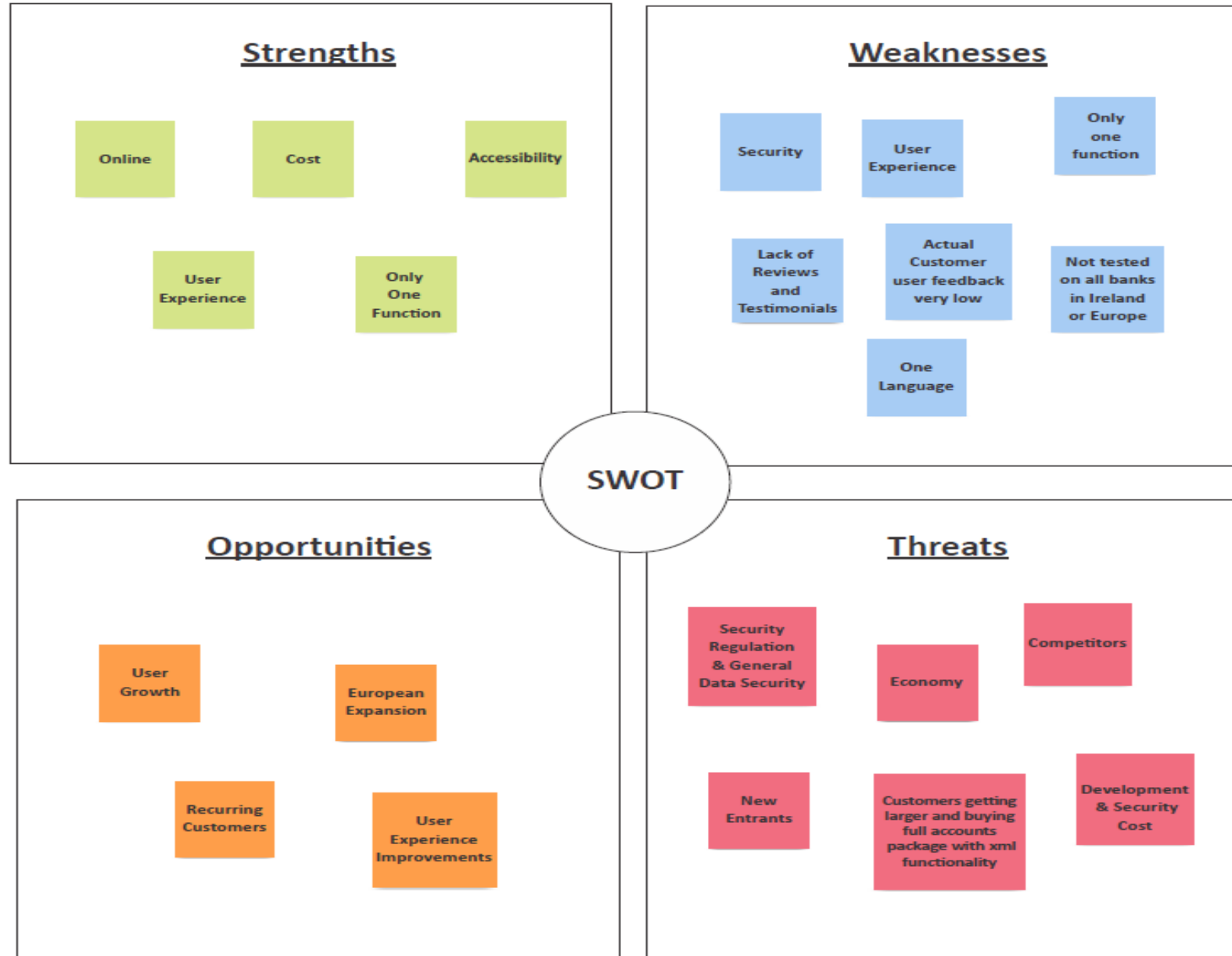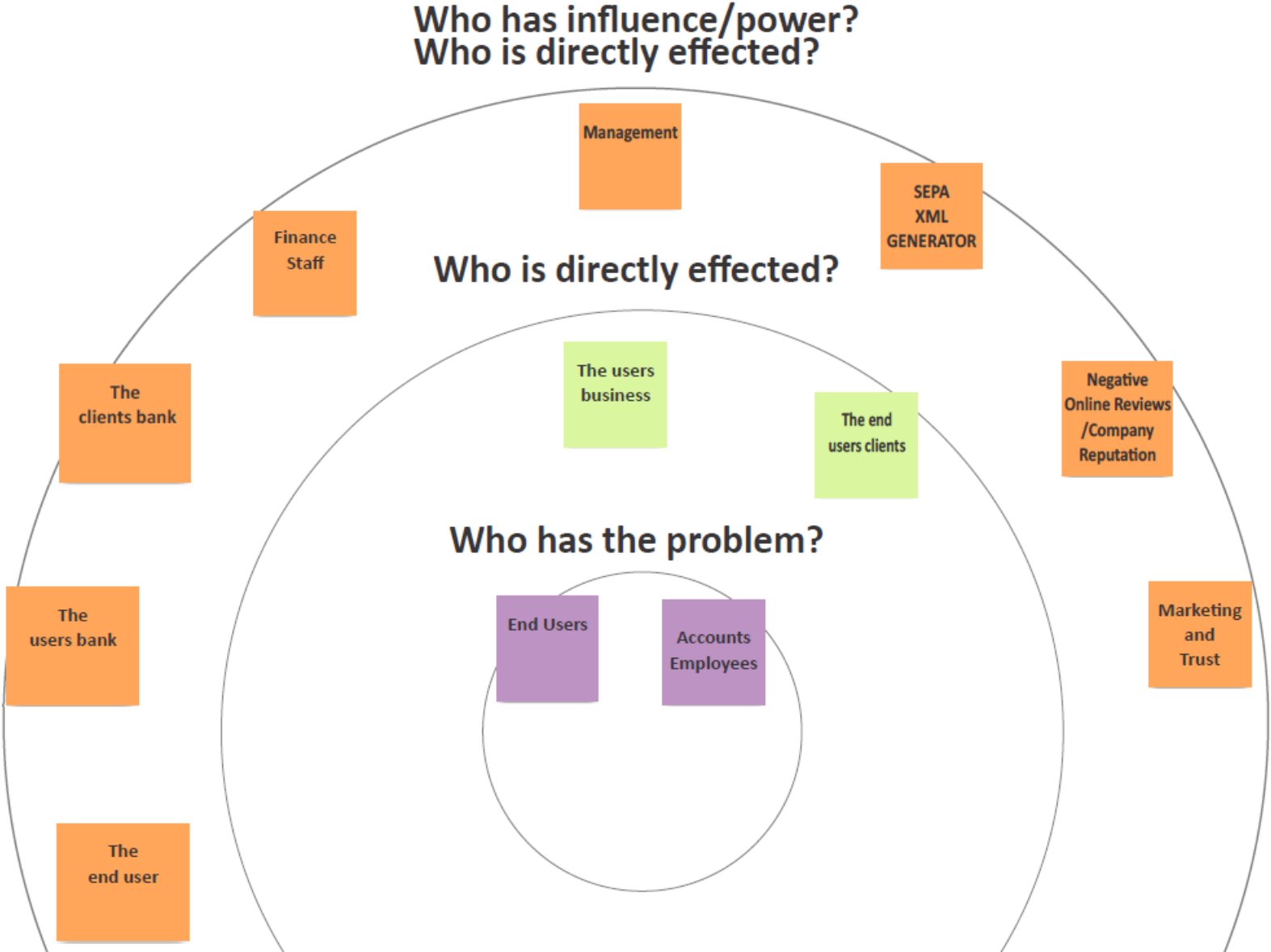# BETTER UNDERSTANDING OF THE MARKET SECTOR AND THE USERS

Influencers/Experts/Evangelists

Local Enterprise Centres

Online Reviews

Financial Advisors to Start Ups

Returning Users

Endorsements from key stakeholders (banks)

Accounts Dept

Business Owners

Start Up Entrepreneurs

Testimonials

New Users:

Age of Company 2 Years Old

Young Starts Ups

Recurring Revenue Type Companies

Competitors Clients

Companies with Monthly Signed Up

Current Customers

SWOT Analyses – SEPA XML GENERATOR

Strengths

- Online
- Cost
- Accessibility
- User Experience
- Only One Function

Weaknesses

- Security
- User Experience
- Only one function
- Lack of Reviews and Testimonials
- Actual Customer user feedback very low
- Not tested on all banks in Ireland or Europe
- One Language

SWOT

Opportunities

- User Growth
- European Expansion
- Recurring Customers
- User Experience Improvements

Threats

- Security Regulation & General Data Security
- Economy
- Competitors
- New Entrants
- Customers getting larger and buying full accounts package with xml functionality
- Development & Security Cost

Stakeholders Map – SEPA XML GENERATOR

UNDERSTANDING USERS, USER CONCERNS & SCENARIOS

SEPA XML GENERATOR

PROJECT: SEPA XML GENERATOR

Date: April 2020

	Name: Eileen Whelan
	Job / Role / Student of : Accounts Employee (Potentially Part Time)
	Quote (likely to say: Easy to use and error proofed outcomes (files)

Background	Values (their priorities)
Age: 55	Family: Very Important
Status : Married	Time: Important
Education : Post Primary	Money: Not as Important
Location : Dublin	Success: Not Important
Income : 32K	Other: Life Balance Important

Tech Skills	Likes / Dislikes	Motivations & Influences
Usage Infrequent——————50%————————frequent **Skill Level** novice——————35%————————expert **Professional** un-experienced———45%————experienced	Things that work, improves my life, work efficiency and helps deliver on job requirements.	How my job performance can be improved? And I can justify my importance and value added to the team.

Goals

What is their goal? What job(s) do they want or need to get done?

Generate payments and invoice clients with the accounts package. No mistakes on the xml, over or under charges, essentially, NO mistakes. Mistakes equates to unhappy customers and extract accountancy work.

Pains (problem)

What current pain (problem) do they experience?

I'm not sure where to start. Am I sure this xml has the right users and amounts on it?
What do the need to be differently?
Educate themselves on the software. Take more time processing the files and double check the files.

What consequences are caused by this?

Frustration
Buy an Alternative Solution
Mistakes and Loss of time
Unhappy Customers

Gains (benefit)

What would be a great outcome/success for them?

Easier to use
Easier to track and verify payments/customers and amount

How might they measure success?

Reviews
Surveys
Referrals

Change!

What do they need to do differently?

If it was easier to verify that the amounts and totals of the direct debits are correct, that would be great!

SEPA XML GENERATOR

PROJECT: SEPA XML GENERATOR

Date: April 2020

Name: Edward Collins

Job / Role / Student of : Company Founder

Quote (likely to say: Secure, Easy to use and Accessible (always available)

Background

Age: 35

Status : Married

Education : Third Level

Location : Dublin

Income : 85K

Values (their priorities)

Family: Important

Time: Very Important

Money: Important

Success: Extremely Important

Other: Business Growth

Tech Skills

Usage
Infrequent———————30%———————frequent

Skill Level
novice———————60%———————expert

Professional
un-experienced———50%———experienced

Likes / Dislikes

Efficiency, Getting Things Done, Getting Payments and Sales.

Dislikes: Problems, overpromises and costs.

Motivations & Influences

How can I get paid regularly, on time and get more customers on direct debit payments? So, I can manage cash flow better and meet outgoings.

Goals

What is their goal? What job(s) do they want or need to get done?

Add new customers quickly, confirm the debit amounts and generate the sepa xml file. Push these transactions into the company accounts software. No mistakes.

Pains (problem)

What current pain (problem) do they experience?

How secure is this? Is this a reputable company?
Are my customers banking details secure? And mine?
I can't remember how to use this again, how do I add a customer again?

What consequences are caused by this ?

Fear regarding sensitive data
Lack of Trust
Frustration
Buy an Alternative Solution

Gains (benefit)

What would be a great outcome / success for them?

Increased Security Settings
More Instructional User Flow – Steps to Add a user
Quick User Video Links

How might they measure success?

Better User Experience
Time it takes to Add a New Customer
Extra Security Features

Change!

What do they need to do differently?

A bit of double entry with the Customers which is a little annoying could be removed,
but a quick refresher video would be also be handy, as I only use the system once a month.
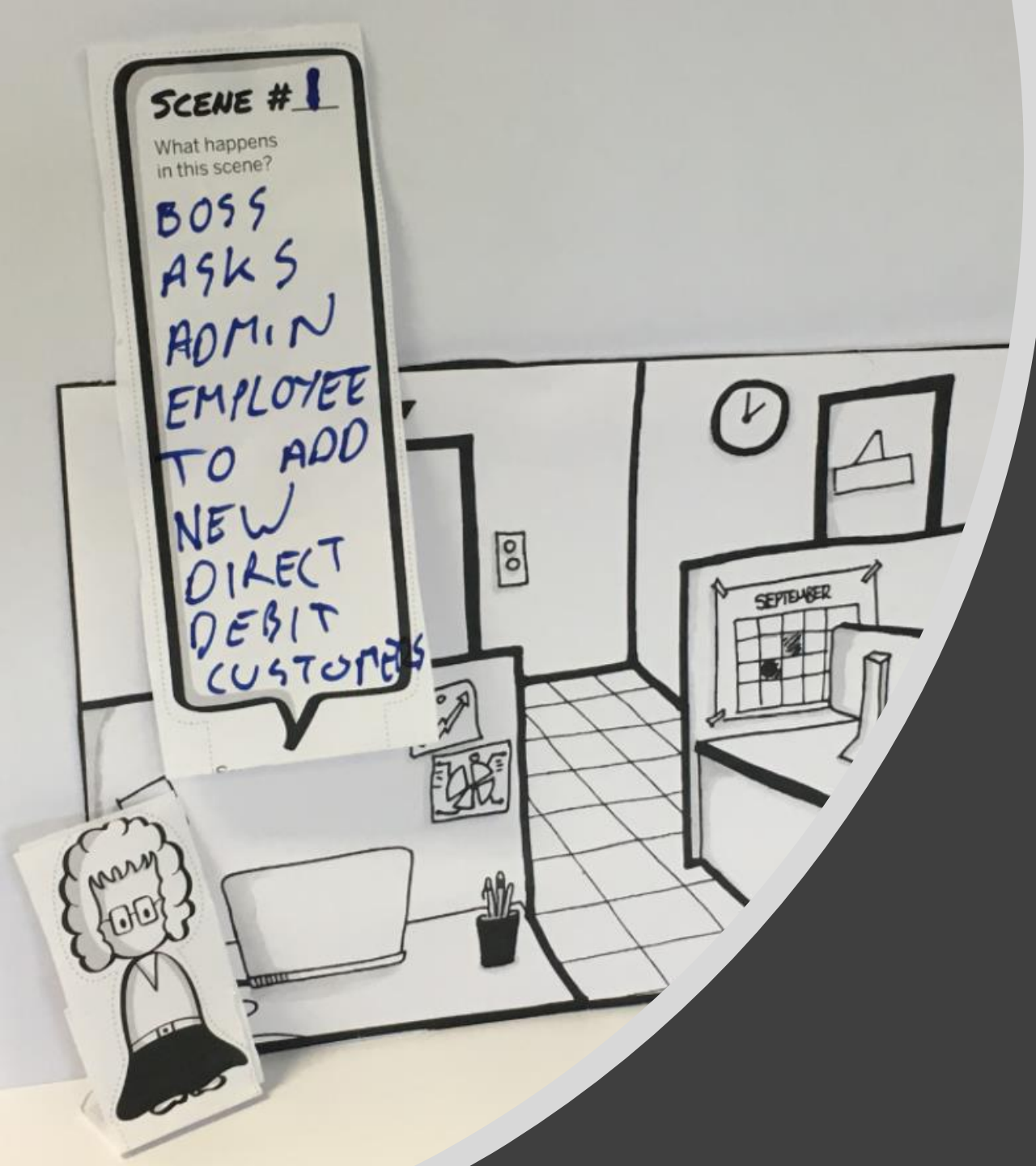
USER STORYBOARD

USER STORYBOARD

HEURISTIC EVALUATION OF CURRENT SYSTEM AND AS IS USER FLOW

Heuristic Evaluation – SEPA XML GENERATOR

Visibility

The are no visible breadcrumbs or process steps for the user to follow in order to generate a file, the user must make assumptions.

Mapping

Links should be more description, such as: Home/Dashboard, My Customers, Archived XML Files. Regularly used Links should appear at the top of the sequence

Freedom

There are good exit navigation throughout the application and ample edit and undo features which are very accessible.

Consistency

The application offers users one function, and the language used is particularly direct and consistent.

Error Prevention

The user flow has the potential to create errors unbeknown to a new user. There are no information/educational prompt against fields.

Recognition

The left hand menu allows for good recognition and is easily retriable. However, there are no information videos for user who may use the system once a month.

Flexibility

Users have good access to quickly edit monthly direct debit amounts. There is no grouping for users to select a pre-defined group of customers, which would make the system more efficient.

Minimalism

There are fields which are not required in order to generate the file for example a Postal Address. There are too many decorative fields which are not required.

Error Recovery

Xml files are generated with no amounts, which should trigger an error message, IBAN numbers have a predefined length, but a failsafe is not within the application.

Help

There are no help videos or users manuals within the system.

CURRENT SYSTEM

User Flow Diagram for SEPA XML GENERATOR

MAJOR PAIN POINT

TO BE User Flow Diagram for SEPA XML GENERATOR

Website Homepage
www.sepaxmlgenerator.com

Sign In

Enter
email & password

Home/
Dashboard

Company
Settings

Enter company
settings

Enter company
iformation and
update

Customers

Add customer / Customer debit
amount and signature date

Generate
XML File/s

Select
Customer/s

Select
Transaction
date

Genarate
XML file

Open XML File in
Download folder

XML Files

Donwload
archived file

WIREFRAME IDEA SOLUTION – DASHBOARD AND ADDING A CUSTOMER

≡

Dashboard / Team

⚙ Your company settings

⚙ Add new customers

⚙ Your customers

⚙ Generate XML files

⚙ Archive XML files

⚙ Add BIC numbers

⚙ Reports

⚙ Company settings

⚙ "How to" videos

Dashboard/Home

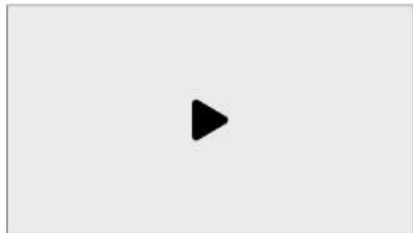| Your Company settings | Add new customers | Generate XML file |

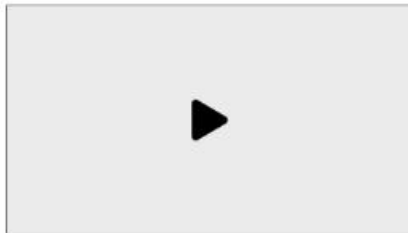| **50** | **40** | **09** |
| Total cutomer | Total active cutomer | Total inactive cutomer |

How to use your SEPA XML Generator:

Step- 1	Step- 2	Step- 3
Update your Company Settings	Add your Direct Debit Customers	Generate your XML File
▶	▶	▶

Dashboard / Team

Your company settings

Add new customers

Your customers

Generate XML files

Archive XML files

Add BIC numbers

Reports

Company settings

"How to" videos

Add a New Customer and Assign Direct Debit Amount

Basic Customer Information

A/C code*

0010

Your customers business name or Name*

Enter UMR

Email address*

Enter email address*

Customer BIC*

Select BIC no.   ∨

Customer IBAN*

Enter IBAN no.

Other Customer Information

UMR (Unique Mandate Reference)

Enter UMR

Address

Enter address

Phone no.

Enter phone number

Mobile no.

Enter mobile number

Direct debit amount

SEPA XML GENERATOR

Navigation
- Dashboard / Home
- Your Company Settings
- Add New Customers
- Your Customers
- Generate XML Files
- Archive XML Files
- Add BIC Numbers
- Reports
- Company Settings
- "How to" Videos

Your Company Settings

Add New Customers

Generate XML File

50
Total Customer

40
Total Active Customer

09
Total Inactive Customer

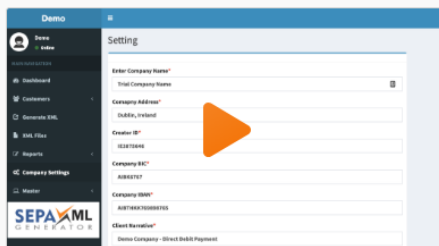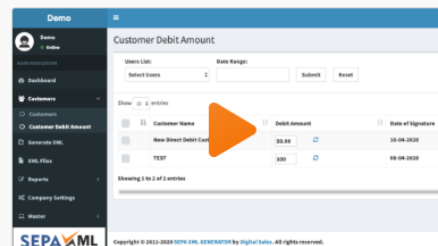## How to use your SEPA XML Generator:
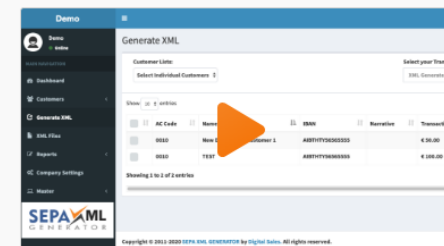
Step- 1
Update your Company Settings

Step- 2
Add your Direct Debit Customers

Step- 3
Generate your XML File

Add a New Customer and Assign Direct Debit Amount

Your Customers Business Name Or Name*

Enter your customer number

Customer BIC*

Select BIC no.

Customer IBAN*

Enter IBAN no.

Direct Debit Amount*

Enter direct debit amount

Date Direct Debit Mandate Signed*

Enter date

Customer Status*

◉ Active   ○ Deactive

Other Customer Information (Not Compulsory)

Address

Enter address

Phone No.

Enter phone number

Mobile No.

Enter mobile number

First Direct Debit

Enter first debit submitted

Most Recent Submitted

Enter amount

Note

Enter notes

Make last payment   ○ Customer status

Add   Cancel

Sidebar

- Dashboard / Home
- Your Company Settings
- Add New Customers
- Your Customers
- Generate XML Files
- Archive XML Files
- Add BIC Numbers
- Reports
- Company Settings
- "How to" Videos

INITIAL TESTING ON APPLIED USER EXPERIENCE UPDATES – VIDEO

Task 1:

Add and save your company details to the system

Definition: the bank account details for your company, which will allow your company to receive payments.

Task 2:

Add one pretend Direct Debit Customer to your account who pays 50.00 euro

Definition: A person who has signed a direct debit mandate for 50.00 euro

Take 3:

Generate an SEPA xml file for the one customer just added to the system

Definition: Selecting a date in the future for the debit to be taken from the customer account

Your Trial Login Details are:

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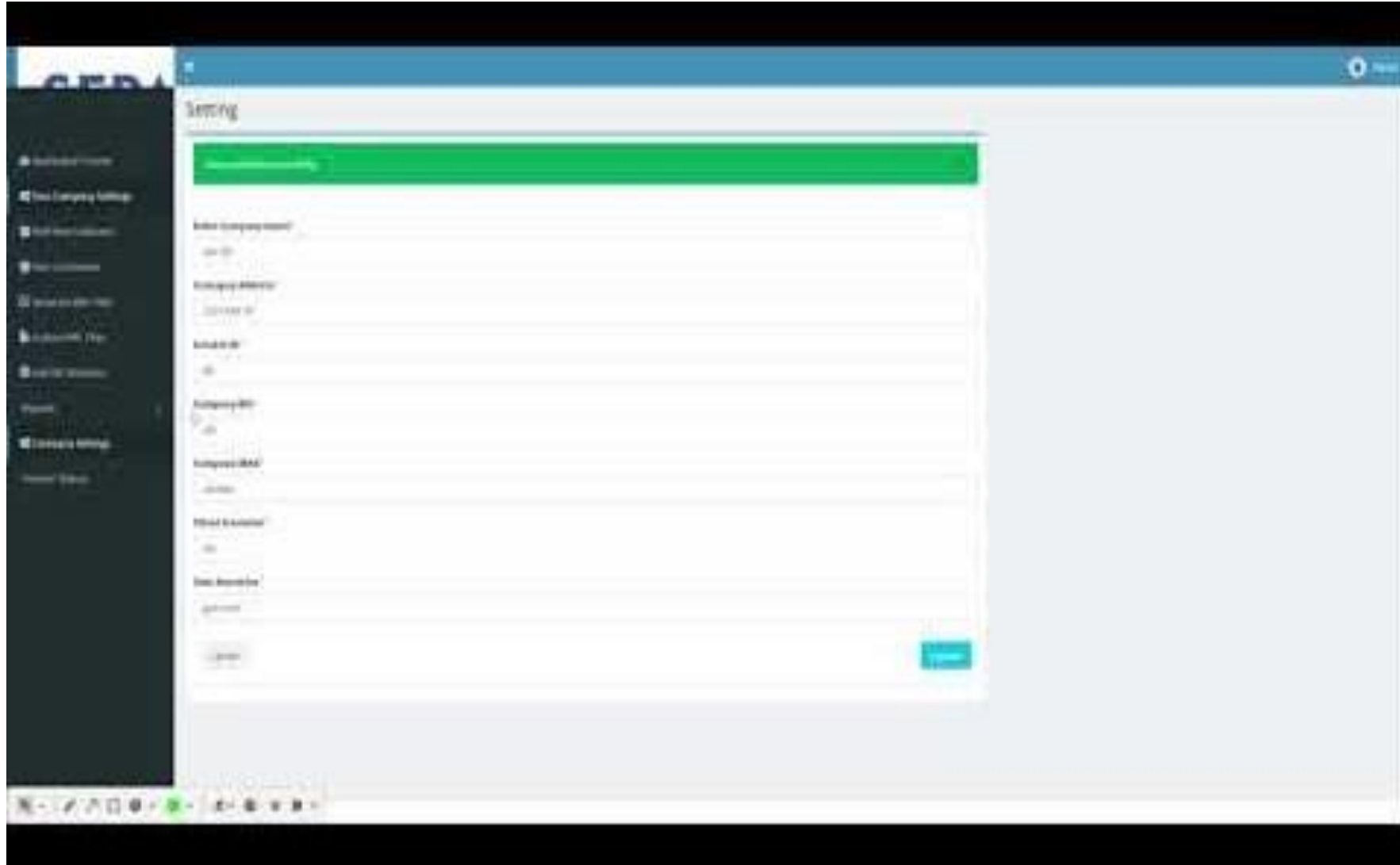Username: trial2@sepaxmlgenerator.com   Password: Trial123

```xml
<?xml version="1.0" encoding="UTF-8"?>
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:pain.008.001.02" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <CstmrDrctDbtInitn>
    <GrpHdr>
      <MsgId>DIG200424082957</MsgId>
      <CreDtTm>2020-04-24T08:29:57</CreDtTm>
      <NbOfTxs>1</NbOfTxs>
      <CtrlSum>50.00</CtrlSum>
      <InitgPty>
        <Id>
          <OrgId>
            <Othr>
              <Id>db</Id>
            </Othr>
          </OrgId>
        </Id>
      </InitgPty>
    </GrpHdr>
    <PmtInf>
      <PmtInfId>DIGRCUR200424082957</PmtInfId>
      <PmtMtd>DD</PmtMtd>
      <BtchBookg>true</BtchBookg>
      <NbOfTxs>1</NbOfTxs>
      <CtrlSum>50</CtrlSum>
      <PmtTpInf>
        <SvcLvl>
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        <LclInstrm>
          <Cd>CORE</Cd>
        </LclInstrm>
        <SeqTp>RCUR</SeqTp>
        <CtgyPurp>
          <Cd>CASH</Cd>
        </CtgyPurp>
      </PmtTpInf>
      <ReqdColltnDt>2020-04-27</ReqdColltnDt>
      <Cdtr>
        <Nm>abc ltD</Nm>
        <PstlAdr>
          <Ctry>IE</Ctry>
          <AdrLine>123 FAKE ST</AdrLine>
        </PstlAdr>
      </Cdtr>
```

A Successful File Completion – First User Trial Result

CONCLUSIONS

CONCLUSIONS

It is difficult to find relevant users within the B2B Space

Competitor Analyses is almost impossible due to getting access to protected software

B2B Users appear more concerned about results and getting the job done

Potential Test Candidates have issues undertaking research concerning security

The UX is geared towards one type of user, at one stage in the Customer Journey

Prospects who are using competitor products will need alternative functionality, for example, they will need to upload their current customers

From a Reflective perspective – the process forced me to step back from my prefixed assumptions