

SME Mobile Lending 1.1.0

User Guide

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Overview

The SME Mobile Lending is a digital journey that allows an **SME**¹ to access financing solutions in minutes. It is an end-to-end loan origination process, fully automated. This accelerator caters to the needs of digitization for financial institutions, commercial banks, credit unions, and investment banks. Any institution that is looking for a digital conversion benefits from the usage of such digital technology that is fast-track and with real-time answers.

The solution is addressed to SMEs that have a small market capitalization and present low-risk products. Additionally, the SME itself must not be part of a group, and the stakeholders themselves must not be part of other stakeholders groups. To access the financing solution, only a legal representative of the SME can apply for the loan. The SME must be a new customer to the financial institution. During this self-service journey, the representative goes through two steps: an instant **decision in principle**² followed by the application for the approval. The process doesn't require the user to visit a branch or talk to the bank over the phone, it is entirely done within the application with no interaction unless demanded by the customer. No paper is printed or required to complete the process.

Firstly, it identifies the needs of the customer through hyper-personalization, followed by the configuration for the amount and period with a simulation. The offering takes into account all the inputted data of the customer. Based on the amount and period requested, the system filters the products the institution has.

Shortly after, the company is identified, as well as the representative who is applying for the loan. Within a few minutes, the solution enables a loan origination service that informs the applicant if they qualify for the desired amount and period. This accelerator offers different functionalities for collecting and analyzing the customer's financial data that improve time to yes (TTY) and crucially, time to cash (TTC).

The solution is built using components that are easy to include/ exclude from the journey. For example, a financial institution can define specific rules for the client validation steps (OTP's required, level of KYC needed). The digital journey is built for

¹Small and mid-size enterprises are businesses that maintain revenues, assets or a number of employees below a certain threshold depending on the country.

²It offers an easy way for customers to view product requirements before advancing to the next step in the digital journey.

mobile mode with a user interface easily fitted for smaller screens, such as iOS 15.2 and Android 11. The journey can be used in desktop mode as well on Windows 10. It can be exposed in multiple environments such as websites, mobile applications, and more.

Business Pain Points

The SME Mobile Lending digital journey by FintechOS is aimed at resolving some of the pain points when applying for a loan:

- lack of personalization with rigid product offerings;
- cost of service;
- creating a loan request;
- manual verification of financial data from various sources;
- requires documents to verify identity;
- long time to find out if you as a customer qualify for the loan.

The SME Mobile Lending journey by FintechOS solves these pain points by offering a fully digital seamless way for your customers to receive a loan.

Advantages of the SME Mobile Lending

Here are some of the major benefits the solution offers through FintechOS:

- A higher level of personalization and attention to detail. This feature makes financial institutions a reliable partner for the long run and have flexible solutions that meet the difficult landscape that small business owners.

- **Tailored Products.** Custom products are included in the accelerator with pre-loaded filters and ranking systems. The predefined products are a great place to start, but if for some reason you need further configurations, using our ["Configuring the Banking Products" on page 109](#), financial institutions have limitless possibilities to modify, extend or define new custom offerings for their customers.
- **Digital.** In the continuously changing market, lenders need to be able to make decisions quickly and accurately to help their customers and minimize risk. The registration is 100% digital and easy to modify using Innovation Studio. The result is a fully functional loan, personalized to what the customer had selected.
- **Digital and Instant Payment.** The loan is disbursed after the customer and all the business partners sign the contract.
- **Time-efficient.** The process has only a few steps to find out if you are qualified.
- **Personalized with advanced formula for calculation.** This digital journey is highly configurable using micro-services such as the ["Configuring the Formulas" on page 124](#) processor that offers an intricate method to build a formula that can calculate the monthly payment, **DTI**¹, and more.
- **Integrations.** The solution leverages third-party data seamlessly and enables critical data to be collected (KYC process is done using Companies House integration) and decisions upon (fetching credit scores from Experian). Pre-integrations with third-parties are available, but can be easily modified to accommodate the financial institution's current providers for scoring, risk management, KYC, security or any other service they need.
- **Unassisted.** The journey does not require the assistance of a bank employee for the SME to apply for a loan. It can be done by any representative with legal rights.

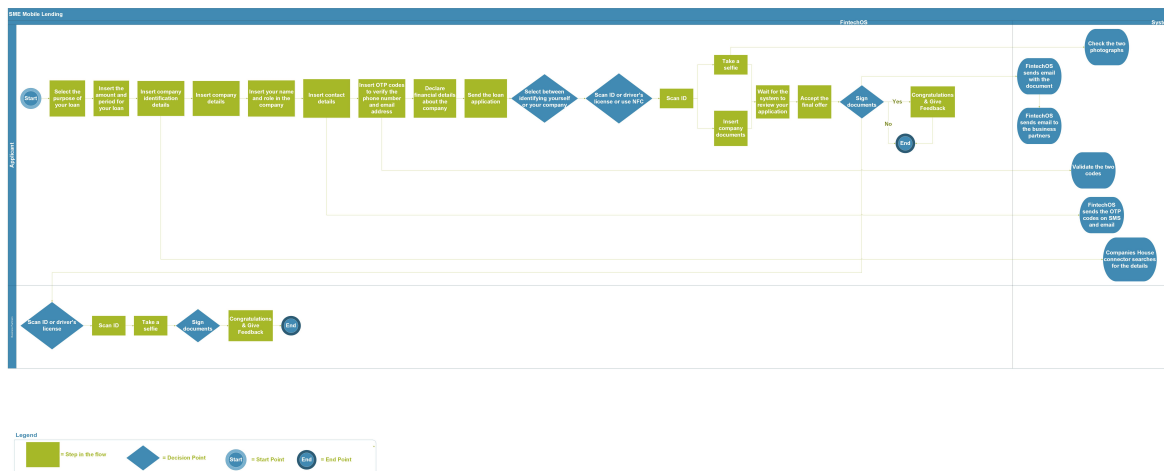
¹The Debt-to-Income ratio (DTI) is a personal indicator of a good balance between debt and income. Monthly debt payment amount / Monthly gross amount (before taxes and other deductions).

Solution Walkthrough

The SME Mobile Lending digital journey enables a user to apply for a loan. If the company they represent qualifies for it, after signing the contract the system instantly makes a disbursement request to the Core Banking system. The contract is generated by "Digital Documents Processor" on page 121 and saved in the database. It is signed via a One-Time-Password.

It is powered by automation processors such as "Configuring the Banking Products" on page 109, "Configuring the Formulas" on page 124, and "Configuring the Business Workflows Processor" on page 105. It is configurable to fit the business needs of any financial institution by use of such micro-services.

Below is a UML diagram showing the main actions that the user takes to apply for a loan.



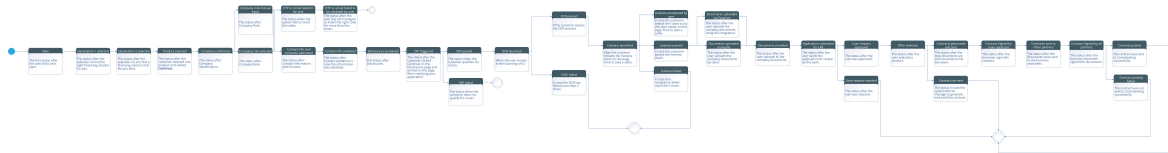
To download the diagram, click [here](#).

The image below describes a detailed SME Mobile Lending workflow containing the statuses the journey passes through. For each status, there is an explanation as to what action it corresponds to. The transitions between statuses are displayed as well.

NOTE

The statuses and transitions between them were created no-code using "Configuring the Business Workflows Processor" on page 105. This automation processor offers

advanced configurations and rules with validations for the evolution from a status to another.



Click [here](#) to download the diagram.

The solution includes a navigation button . It is present on the majority of steps, allowing the customer to click back to return to the previous step, exceptions are the pages:

- "Verifying Your Application" on page 43
- "Take a photo of my ID" on page 54
- "Reviewing Your Application" on page 65.

Each screen contains a progression bar to inform you of the step you are at:

- Decision in principle: until the "Verifying Your Application" on page 43 step.
- Application approval: beginning with "Document Hub" on page 50 until the "Reviewing Your Application" on page 65 step.
- Contracts signing: beginning with "Final Offer" on page 68 until "Thank You for Banking with Us" on page 94.

Frequently Asked Questions

The solution contains a **Frequently Asked Questions** section at the top of the screen:

NOTE

The FAQs was configured as presented in "Configuring the Flow Settings" on [page 142](#). There you can modify the text and order, add or delete questions/

answers. Additionally, in the After Events of each form driven flow, the system imports the client script FTOS_BASME_SMEFAQ and displays the FAQs.

Q: What is the classification of SMEs?

A: SMEs are classified according to the National SME Development Council definition on SME business size category, that is micro, small, and medium size of businesses.

Q: I am running a business overseas. Am I eligible to apply for financing to finance my business over there?

A: FintechOS Bank is a development financial institution mandated with the role of nurturing and meeting the needs of UK-owned and controlled Small and Medium Enterprises (SMEs). However, FintechOS Bank does not finance companies doing business overseas.

Q: How many branches does SME Bank have?

A: Currently FintechOS Bank has 27 branches located in the UK. You can find the respective branch address [here](#).

Q: What products does SME Bank offer?

A: FintechOS Bank offers extensive products mainly for the SMEs entrepreneurs which include Business Financing for working capital and assets, Contract Financing and Business Premise Financing Scheme.

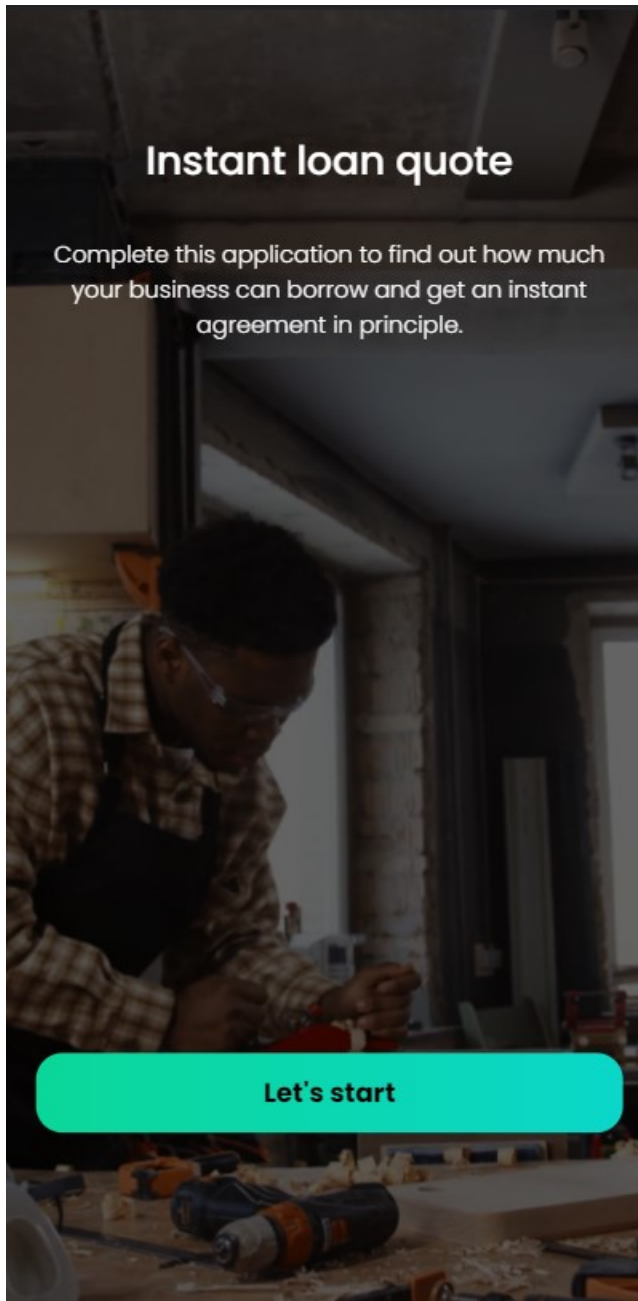
Q: How do I apply for business financing?

A: For more details about business financing application, you may call our Customer Service Contact Centre at 03-2603 7700 during business hours or visit our nearest Branch.

Welcome Screens

1 Instant Loan Quote

The journey starts with the **Instant Loan Quote** page.



It depicts an animation showing a business environment, followed by the message: *Complete this application to find out how much your business can borrow and get an instant agreement in principle.*

To launch the loan application, click the **Let's start** button found at the bottom of the page.

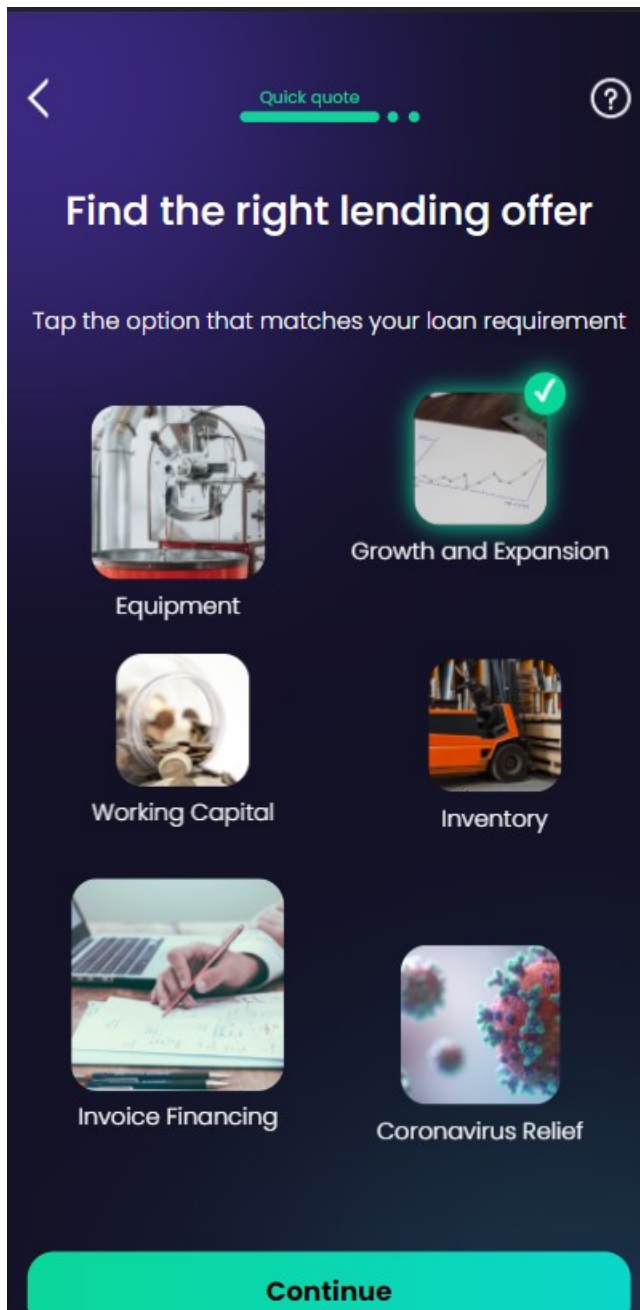
2 Find the right financing offer

This step is designed to collect the destination of the loan, the reason why the SME wishes to borrow funds. Step 2 and 3 are meant to offer you a customized experience. By selecting your needs first, the system ranks banking products for you. The bank can modify the options displayed.

The pre-defined options available are:

NOTE

The list is set in `FTOS_BASME_Loan_FinancingSolution` form, in the step `FinancingSolution`, in the section tab 4 Advanced in After Events.



- Machines
- Growth and expansion
- Working capital
- Inventory

- Invoice financing
- Coronavirus relief.

Without an option selected, you cannot move to the following step as the **Continue** button is disabled. Click **Growth and expansion**, then click **Continue**.

NOTE

The bank can modify these options within "[Configuring the Banking Products](#)" on [page 109](#). They are examples. These options are tied together with a banking product, therefore, when selecting an option, a banking product is selected as well. At this stage of development, only one option *Growth and expansion* allows you to continue the flow.

3 Let's find a financing offer

This screen displays the message and the option selected previously: *To help us better understand your needs, please choose one or more of the options below. Growth and Expansion*. This screen contains a specific reason for contracting a loan. In this screen, the bank can accommodate more options targeted at special reasons for the service. The value of this screen is that it targets a higher level of personalization and attention to you as a customer.

NOTE


The list is set in `FTOS_BASME_SelectDestinations` form, in the step `SelectDestinations`, in the section tab 4 Advanced in After Events.

Choose at least one from the list, otherwise, you cannot continue the flow:

Quick quote

Find the right lending offer

Select one or more options below to provide further detail



Growth and Expansion

Stock Purchase

☒

Debt Refinancing

☐

Bill or Tax payment

☐

Facilities improvement

☐

Cashflow headroom

☐

Equipment Purchase

☐

Seasonal Trading

☐

Continue

- Stock Purchase
- Debt Refinancing
- Bill or Tax payment
- Facilities improvement

- Cashflow headroom
- Equipment Purchase
- Seasonal Trading.

It is possible to select more than one option. Click **Continue**. The screen refreshes with the simulation step.

Simulation

The page **Quick quote calculator** refreshes to display sliders for the amount and period. To configure their desired loan amount and tenor and offer them some product choices bases on the filters from the previous step.

The screenshot shows a mobile app interface for a 'Quick quote calculator'. At the top, there is a back arrow, a 'Quick quote' header with a progress indicator, and a help icon. The main title is 'Quick quote calculator'. Below it, a message says 'Move the two sliders to change the loan amount and the loan repayment period'. There are two sliders: 'Loan amount' with a value of €50,500.00 (range Min. 500 to Max. 100000) and 'Repayment period (months)' with a value of 30m (range Min. 1 to Max. 60). A large orange 'Calculate' button is at the bottom.

The page displays the message *Please enter your desired loan amount and length and we'll find the best options for you.* followed by the sliders:

- Loan amount
- Loan tenure.

Slide the values in the two fields labeled **Amount** and **Period**. The amount is the value borrowed from the bank and the period is the interval of time when the person is expected to pay off the amount borrowed with an interest. The period is measured in months. By default, the period slider is set at maximum and the amount slider is set in the middle of the road between the max and min amount values. The **Continue** button is disabled until you click **Calculate**.

NOTE

For details on how the sliders were configured, see "[Sliders_Parameters](#)" on [page 154](#).

The min and max values for the sliders for amount and tenor are calculated as:

- the minimum amount: the minimum amount from all the remaining available products after the destination filter is applied
- the maximum amount: the maximum amount from all the products after the filter is applied
- the minimum tenor: the minimum tenor from all the remaining available products after the destination filter is applied
- the maximum amount: the maximum tenor from all the products after the filter is applied.

The system now calculates the input values to return a suggestion to the customer. In Innovation Studio, the values inputted by the customer are registered, the system introduces in pricing all the products that respect: the destination, the class, the category, and more. Finally, based on the banking product code, the top two products are displayed.

Click **Calculate** to return a selection of products for the SME. A list of products, maximum two, is displayed with the details:

NOTE

The system registers the input, and using the endpoint "[FTOS_BASME_GetAmountAndTenure](#)" on [page 170](#) it determines the products for offering.

and the loan repayment period

Loan amount

€50,500.00

Min. 500 Max. 100000

Repayment period (months)

30m

Min. 1 Max. 60

Calculate

Start-up Unsecured Loan ⓘ

Monthly rate: € 1782.95

APR: 4.59%

Total payable amount: € 53498.42

Flexib

Monthly

APR: 5.12%

Total pa

Continue

- **APR¹**
- Monthly instalment
- Payable amount.

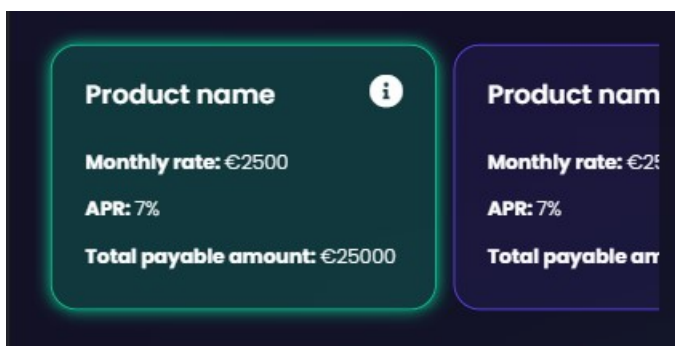
¹Annual percentage rate. APR is an annualized representation of your interest rate.

To navigate between products swipe left and right. The first product is pre-selected by default by the system.

NOTE

For details on how the products were created, see ["Configuring the Banking Products" on page 109](#).

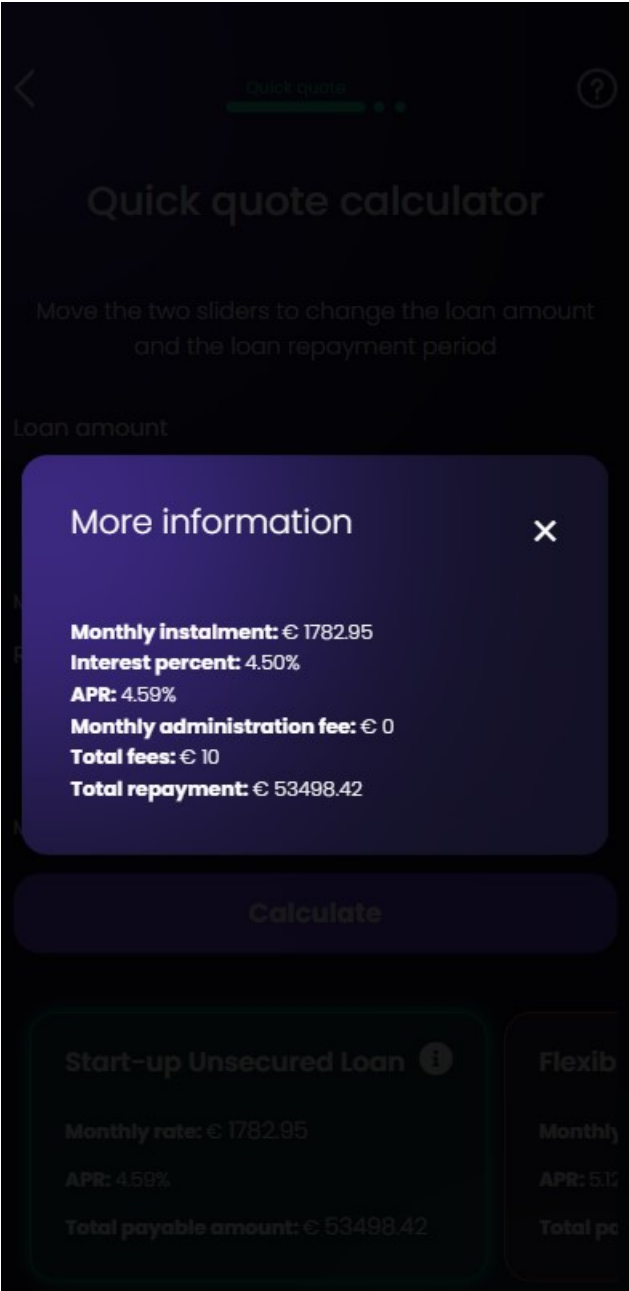
To view the details of each product, select a card by tapping on it, then tap the information symbol to display a pop-up with the details. The information symbol is only displayed on the selected card. It opens the details:



- Monthly instalment: Small sums of money paid at regular intervals over a period of time, rather than paying the whole amount at once.
- Interest percent: The interest rate is defined as the proportion of an amount loaned which a lender charges as interest to the borrower.
- **APR¹**
- Monthly insurance cost (only for products with insurance): The payment for the insurance.
- Monthly administration fee: The payment charged by the bank for administration.
- Total insurance cost (only for products with insurance): The price of the insurance.
- Total fees: The entire cost.

¹Annual percentage rate. APR is an annualized representation of your interest rate.

- **Total repayment:** The sum of all scheduled or projected payments of funds that the borrower agrees to pay to the bank.



Click the **X** symbol to close the pop-up and return to the initial screen. To navigate between the two products displayed, click and hold one of the products and drag left or right. A scroll bar is displayed.

Based on the results of the calculations, the system displays the first product that can satisfy your needs. Choose a product, then click **Continue**. The system registers the product selected and after the next steps begins to determine whether you qualify for it. You can go back to this step and choose a different product using the back arrow.

Company Identification

The **Company Identification** screen helps you to find the SME company's identification details in an automated ways: using a connector to return data from a third-party software or using Open Banking.

< Decision in principle ?

Company Identification

In order for us to process your application further we need a few details about your company.

Company Identification Field

A

OR

If you are an existing client of another bank, you can enter your IBAN and your data will be filled automatically

Account Number

Sort Code

Next

By using a connector, the solution incorporates an endpoint that calls the API to bring data from an external source. Such an external source can be the [Companies House Connector](#). This connector queries the Companies House database to find public information about companies. However, the solution can accommodate any other third-party software, this is one such software integration developed by FintechOS. Depending on localization, other connectors produced by FintechOS may be used: [KeysFin](#) (for the Romanian market), [Dun&Bradstreet](#) (available world-wide).

IMPORTANT!

The connector is not included in the package. Download it separately. See [Installation](#) for details.

Steps to Identify the Company

To identify the company on the **Let's find your company** screen, choose one of the two methods:

- by adding the company identification name, and clicking **Next**
or
- by adding the **IBAN**¹, if the SME already has an account with the bank, i.e. **Open Banking**².

Identify by IBAN Number

As an alternative to scanning the ID document, Open Banking is an option. It shortens the time for filling in the data manually.

IMPORTANT!

The Open Banking section has not been developed. Configure it as needed.

Insert the **Account Number** and **Sort Code**³. Click **Next**.

The **Confirm your company** page is displayed. It shows the data found on the company: *Based on the information you've entered, we've*

¹International Bank Account Number

²Open banking connects banks, third-parties and technical providers to securely exchange data.

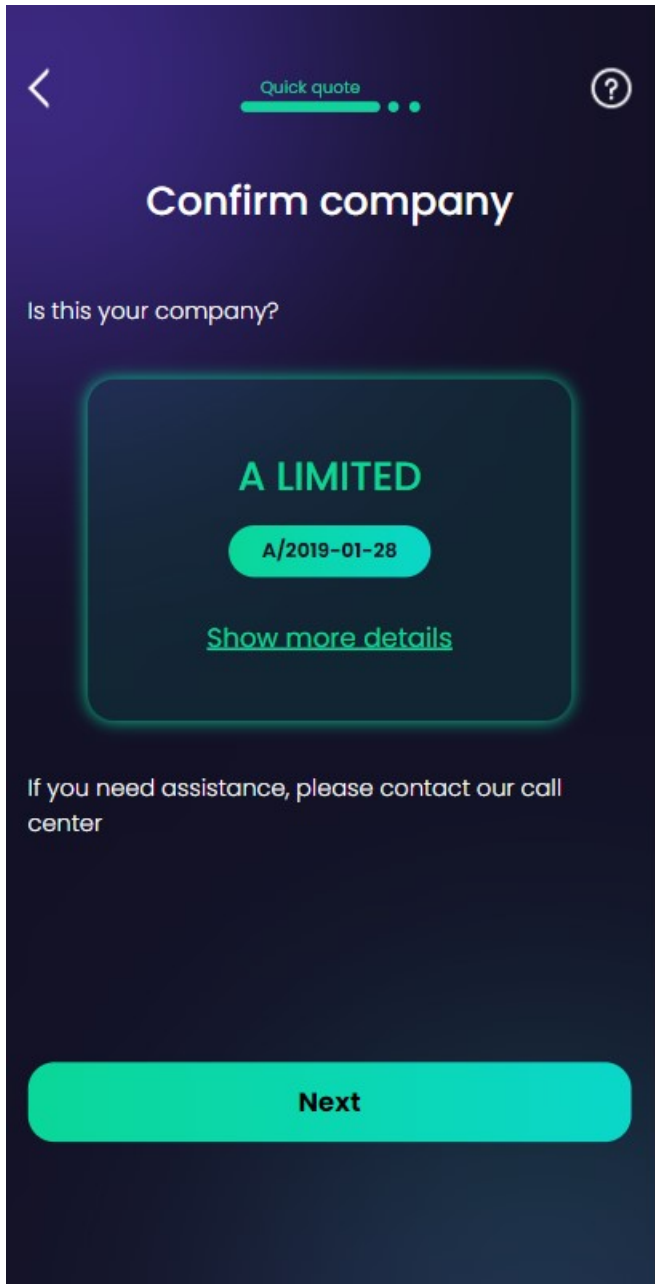
³A sort code is an important factor of your bank account. A sort code is a 6 digit number that identifies your bank.

identified the following result. Is this your company? ABC company. Show more details. If you need assistance, please contact our call center: +0000000000. The process is the same as described above.

For this query to be made, add either the company identification number or the company name. Press **Next** to begin the query.

Confirm your company

The **Confirm your company** page is displayed. It shows the data found on the company: *Based on the information you've entered, we've identified the following result. Is this your company? ABC company. Show more details. If you need assistance, please contact our call center: +0000000000.*



After the query is made, the connector returns the following information:

- Company Name
- Incorporated on (date of incorporation).

NOTE

If there is no match in Companies House, an error message is displayed: *Company not found, please make sure the Company Identification Code is correct.*

Three actions can be performed:

- click the back arrow to return to the "[Company Identification](#)" on page 23 page
or
- click **Next** to move to the step "[Company Details](#)" on page 30
or

- click **Show more details** to display additional information about the company, such as:

The screenshot shows a mobile app interface with a dark blue background. At the top, there is a back arrow on the left, a progress bar labeled 'Decision in principle' in the center, and a help icon (question mark in a circle) on the right. Below this, the company name 'A LIMITED' is displayed in large white capital letters. The details are organized into sections with bold headers: 'Registered office address' (38 Springfield Road England Gillingham ME7 1YJ), 'Company status' (active), 'Company type' (ltd), 'Incorporated on' (2019-01-28), 'Accounts' (Next accounts made up to Mon Jan 31 2022 due by Mon Oct 31 2022; Last accounts made up to Sun Jan 31 2021), 'Confirmation statement' (Next statement date Thu Jan 27 2022 due by Thu Feb 10 2022; Last statement dated Wed Jan 27 2021), and 'Nature of business (SIC)' (68310). At the bottom, there is a large orange button labeled 'Next'.

- Social capital
- Number of employees
- Turnover.

NOTE

Depending on the number of directors that the connector finds, the same number of signatures must be present on the contract for it to be approved in the flow "[Business Partners Signatures](#)" on page 75.

The page contains the message: *The company details below will be used for the underwriting process. Please review the existing information and answer all questions before you continue.*

This data is read-only, nonetheless, it is paramount that you read it to make sure that the system identified the right SME, as it is possible for multiple companies to be named the same and have similar identification data. These details help you to select the correct SME that you are representing.

Click **Next** to continue.

Company Details

This page collects data for the "[Scoring criteria](#)" on page 127 used in the "[Configuring the Formulas](#)" on page 124. With the use of this processor, the scoring calculations can be modified easily within Innovation Studio.

The page displays the message: *The company details below will be used for the **underwriting**¹ process. Please answer all questions before you continue.*

Fill in the fields:

¹Underwriting is the process by which your lender verifies your income, assets, debt and property details in order to issue final approval on your loan application.

Decision in principle

?

Company Details

The company details below will be used for the underwriting process. Please answer all questions before you continue.

What is your company's social capital?

€ 7,654,327

How many employees do you have?

321

What is your turnover over the last 12 months?

€ 654,321

How established is your company?

Revenues of 4-5 years

Do your trade with customers on credit?

select...

Never

It's a small part of my sales

Question	Required	Description
What is your company's social capital?	Mandatory	Insert the value. The default currency is the euro.
How many employees do you have?	Mandatory	Insert the value.
What is your turnover over the last 12 months?	Mandatory	Insert the value. The default currency is the euro.

Question	Required	Description
How established is your company?	Mandatory	Select between: <ul style="list-style-type: none"> • Revenues of 9-12 months • Revenues of 1-2 years • Revenues of 2-3 years • Revenues of 3-4 years • Revenues of 4-5 years • More than 5 years of revenue.
Do your trade with customers on credit?	Mandatory	Select between: <ul style="list-style-type: none"> • Never • It's a small part of my sales • It's a significant part of my sales.
What are your total expected annual debt repayments over the last 12 months?	Mandatory	Insert the value. The default currency is the euro.
What is your net profit over the past 12 months?	Mandatory	Insert the value. The default currency is the euro.

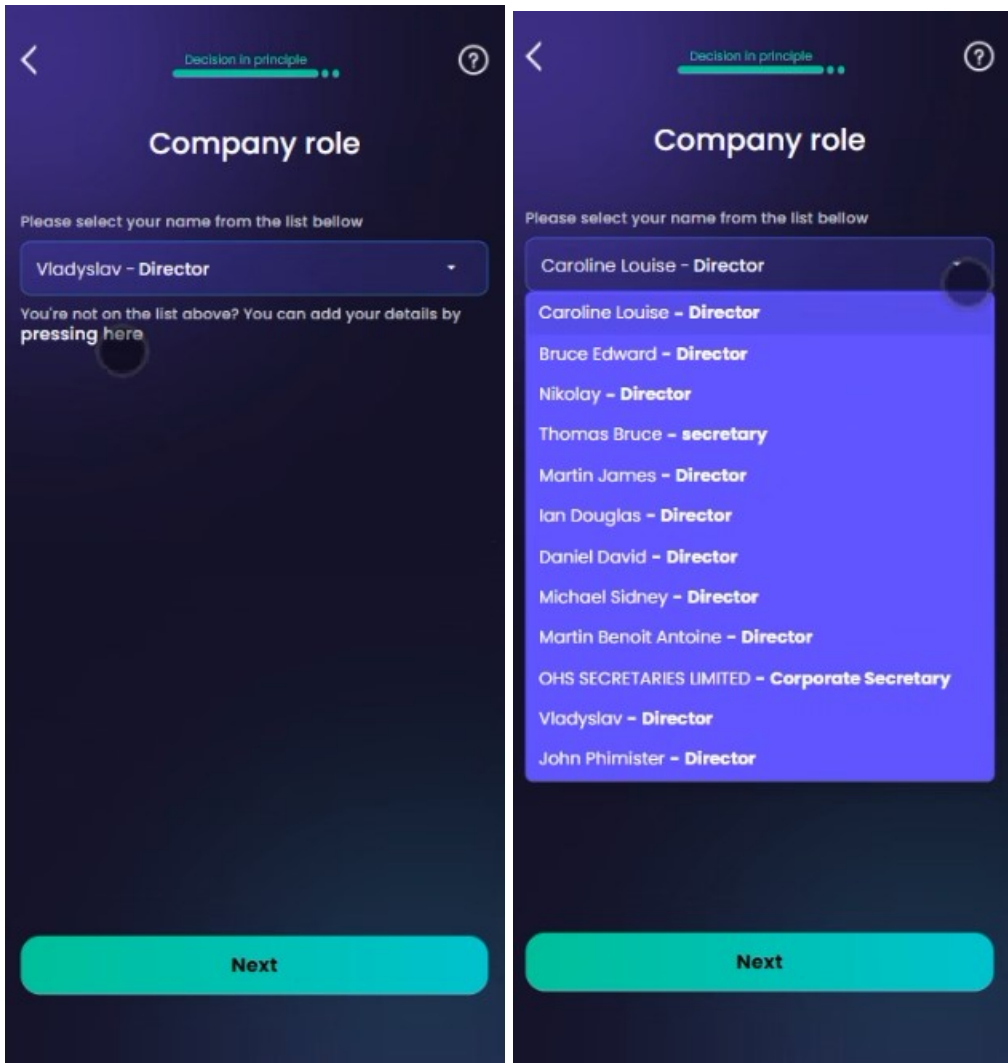
Click **Confirm and submit** to continue the process. The database saves the values inserted and uses them in the Business Formulas to determine the scoring for the company.

Applicant Details

To continue with this digital journey and open a business account, you as the SME company representative must provide information about your role within the company. The screen **Applicant Details** offers you the option to select from a drop-down list your identity: *We found several people with company signatory rights. Please select your name and role from the list below.*

Depending on what the connector finds as information, there are two possibilities:

- Select your name from the field **Please select your name from the list below** (when the connector finds a list of people)



or

- **Add new details manually** (when the connector does not find anything).

< Quick quote . . ?

Applicant details

Please input your data below

First Name

Last Name

Role

Select...

Confirm and continue

Click **Next** to continue.

The solution can accommodate any other third-party software, this is one such software integration developed by FintechOS. The **Companies House Connector**

collects publicly available information about all the company associates. However, if the list of options is insufficient, there is also the option to manually add an associate. For details, see [Company House Connector](#).

IMPORTANT!

The connector is not included in the package. Download it separately. See [Installation](#) for details.

Choosing an associate from the list is mandatory in order to continue.

NOTE

The endpoints are used in order to get information about corporate representatives, add an extra associate, or associate the representative with the current application. For details, see "[Server Automation Scripts and Libraries](#)" on page 167.

Contact Information and Consent

The purpose of the **Contact Info** screen is for you to provide an email address and phone number. This is part of the process for validating contact details. This screen uses the name selected by you in the previous screen, from the list of results pulled up by the [Companies House Connector](#), and displays the message: *Hello, firstName! We need to verify your phone number and e-mail address before we proceed.*

< Quick quote ?

Contact Info

Hello, Angela!

We need to verify your phone number and e-mail address before we proceed.

Phone Number

+40 712 034 567

Email Address

Marketing Consent ☒

GDPR Consent ☒

Biometrics Consent ☒

Next

You, as the applicant, must provide a valid phone number and email address. A validation is enforced on the email address field, meaning that the address must follow the standard pattern. Click **Next** to trigger the OTP verification codes generation. They are sent to the phone number and email address. These codes must be introduced on the next screen.

NOTE

Within Innovation Studio, there are configurations for the OTP codes using the processor settings "[FTOS_DFP_ContactOTP](#)" on [page 143](#). You can modify the settings there (e.g., the number of digits, the number of retries, etc.).

Consent

GDPR¹ consent is mandatory in many operations when dealing with personal information. Therefore, in order to proceed with the SME Mobile Lending digital journey, you must consent to GDPR and Biometric consents. The list contains:

- **GDPR Consent**: mandatory consent that must be provided in order to proceed. The time stamp of when the consent was given is saved.
- **Marketing Consent**: optional consent that refers to whether or not the applicant would like to receive marketing materials.
- **Biometric Consent**²: mandatory consent that must be provided in order to proceed.

Toggle on and off on each consent.

To proceed to the next screen, click the **Next** button. Upon clicking this button, a number of actions are triggered:

- the timestamp for the action is recorded in case the bank might later need information on when the GDPR consent was given ([GDPRTimestamp](#));
- the digital journey progresses to the next step, the [Contact Validation](#) screen;

¹The General Data Protection Regulation is a regulation in EU law on data protection and privacy in the European Union and the European Economic Area.

²Certain laws require banks to provide you a notice to agree that the bank can collect, use and disclose your biometric data, e.g. biometric identifiers are fingerprints, facial patterns, voice or typing cadence.

- **One-Time-Password (OTP)**¹ codes are automatically sent to your email address and phone number.


Contact Validation

For security purposes, the email address and phone number must be validated against the two One-Time-Passwords (OTPs) codes sent in the previous step. Two different codes are sent, one to the email address and one to the phone number. Both are needed to complete the validation process.

The validation process is timed. A timer is displayed on the screen with the default values of 60 seconds for the text message to the phone number, and 120 seconds for the OTP code sent to the email address. Both timers start after you access the page. You have five retries.

NOTE

For details on how the email and SMS validations were created, see ["Configuring the Flow Settings" on page 142](#).

To change the email and phone number, click the **Edit contact information** or the back button  to return to the previous screen.

1 SMS

The screen displays the message: *We have sent two validation codes to *****312 and *****@gmail.com. Please fill out the forms below.*

The first code sent is to the phone number provided. You have 60 seconds to fill it in. After you write it in the field, click anywhere outside the box to validate it. The timer stops and displays validated. If the code inserted was wrong, it does not stop the clock.

¹It is a password generated by the system to validate a piece of information or sign a document.

If the time expires, the button's label changes to **Resend**, and you can set the application to resend the codes on both the email address and the phone number. Afterward, the timer starts again. A toast message is displayed to inform that a new SMS was sent.

2 Email

After the SMS code was certified, insert the code received on your email address. After the email code was inserted and validated, click anywhere outside the field to validate.

If the wrong code has been inserted more than five times, you fail the validation and the flow ends. In this case, you must visit a branch to initiate the process.

To continue to the next step, the system automatically redirects you, if both codes were validated.

Disclosures

The **Disclosures** step asks you several questions regarding eligibility and scoring purposes. The answers are essential to the bank for the loan application. Depending on national regulations, banks may have various questions placed here.

NOTE

These questions are configured in the Banking Product Questions List in Innovation Studio. To add more or modify them, access **Product Factory > Banking Product Dimensions > Questions**. For details on the configurations done, see ["Questions" on page 119](#). In addition, banks can modify the logic for the calculation of the answers as they are used in the underwriting process of approving a loan. For details, see ["Knockout_CML" on page 126](#).

Answer the following questions:

Quick quote

Disclosures

How many signatures are or will be associated with the business?

Just me

2

3+

Have you, your business or your partners been declared bankruptcy in the past 6 years?

Yes

No

Have you or your business partners had any County Court Judgements registered against you?

Yes

No

Continue

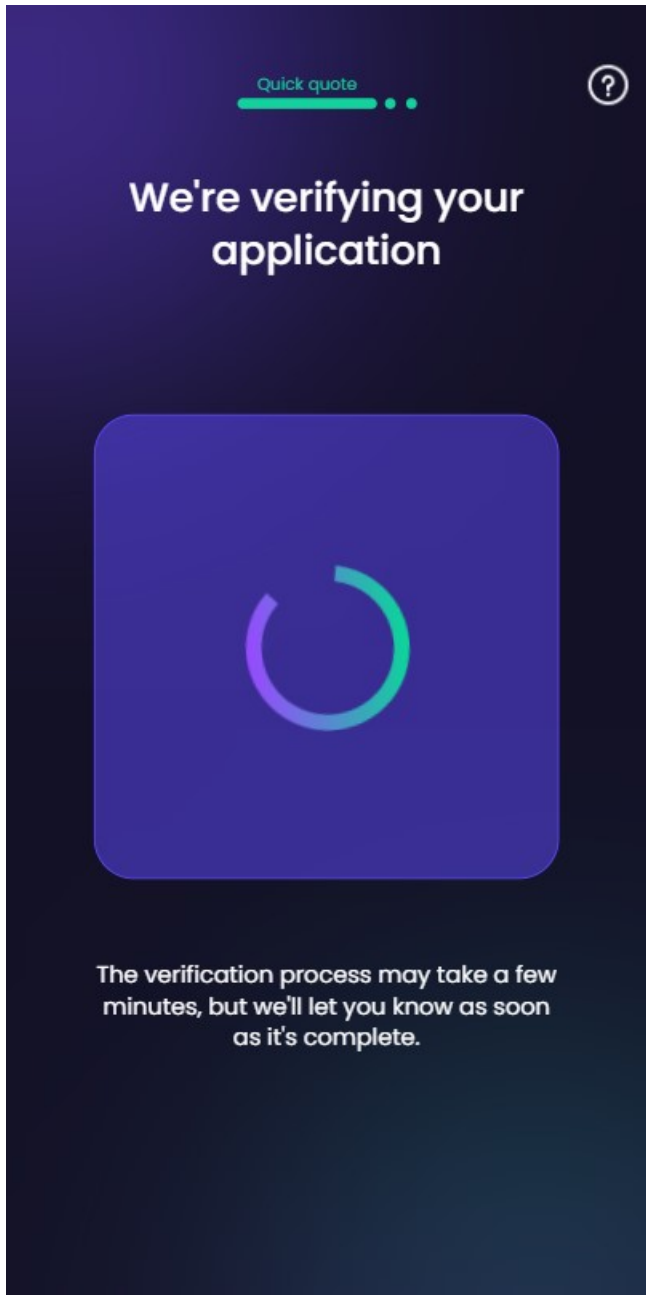
Field	Mandatory	
How many signatures are or will be associated with the business?	Yes	<p>Select between Just me/ 2/ 3+.</p> <div> <p>NOTE</p> <p>The number selected here does not influence the number of signatures at the end of the flow.</p> </div>
Have you or your business partners had any County Court Judgements ¹ registered against you in the past 3 years?	Yes	<p>Select between Yes/ No.</p> <div> <p>NOTE</p> <p>If you select yes, the application is rejected.</p> </div>
Have you, your business or your partners been declared bankruptcy in the past 6 years?	Yes	<p>Select between Yes/ No.</p> <div> <p>NOTE</p> <p>If you select yes, the application is rejected. If the connector returns that the company is bankrupt, then the application fails regardless of what you insert here.</p> </div>

After all the questions have been answered, click the **Continue** button. This button sends the application to the bank for analysis to return an answer to the request made by you, the borrower.

¹You may get a county court judgment (CCJ) or high court judgment if someone takes court action against you (saying you owe them money).

Verifying Your Application

The **We're verifying your application** step is a transition step between the sending of the application to the answer returned by the bank. It contains the message: *The verification process may take a few minutes, but we'll let you know as soon as it's complete.*

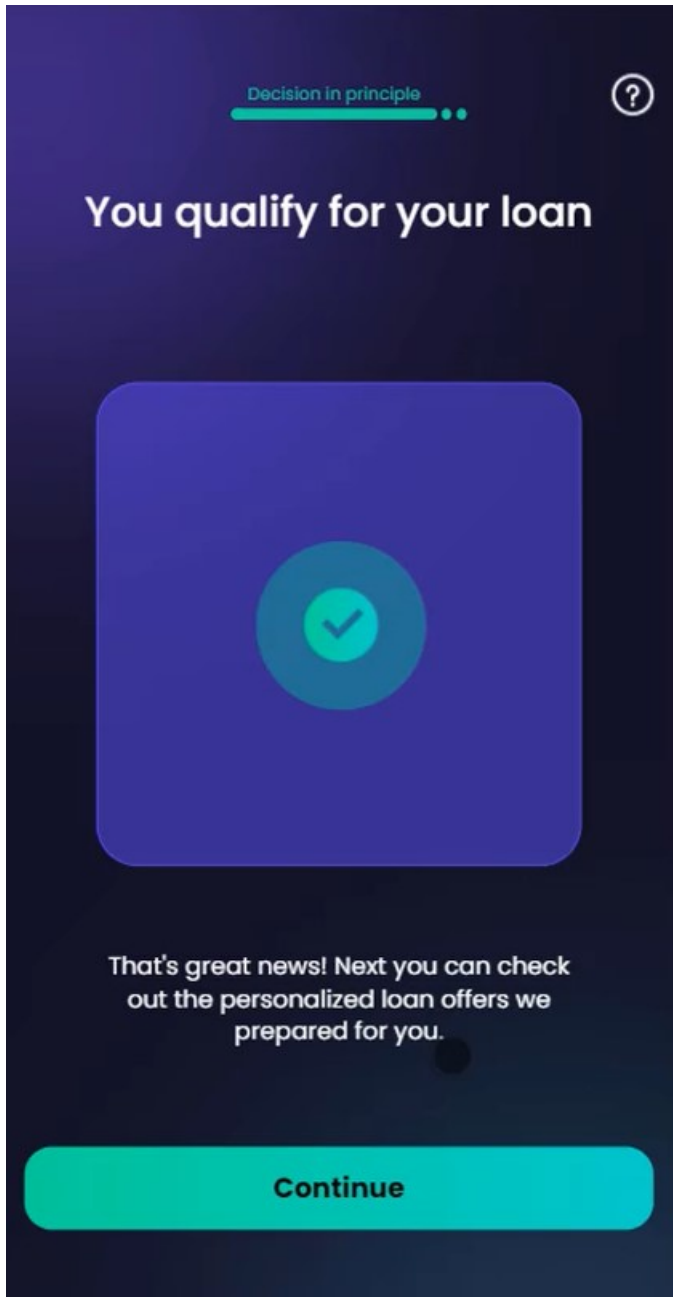


The system uses automation processors to conduct the analysis to check the eligibility of the borrower. They have to be approved for at least one offer from the bank, otherwise, the application is rejected for all banking products.

NOTE

Three formulas are calculated here from "[Configuring the Formulas](#)" on page 124.

- Knockout_CML (calculates the values for the elimination of the applicant)
- Scoring_CML (calculates the scoring of the customer)
- OfferCalculation_CML (calculates the possible offers in case the customer passed the first formula).



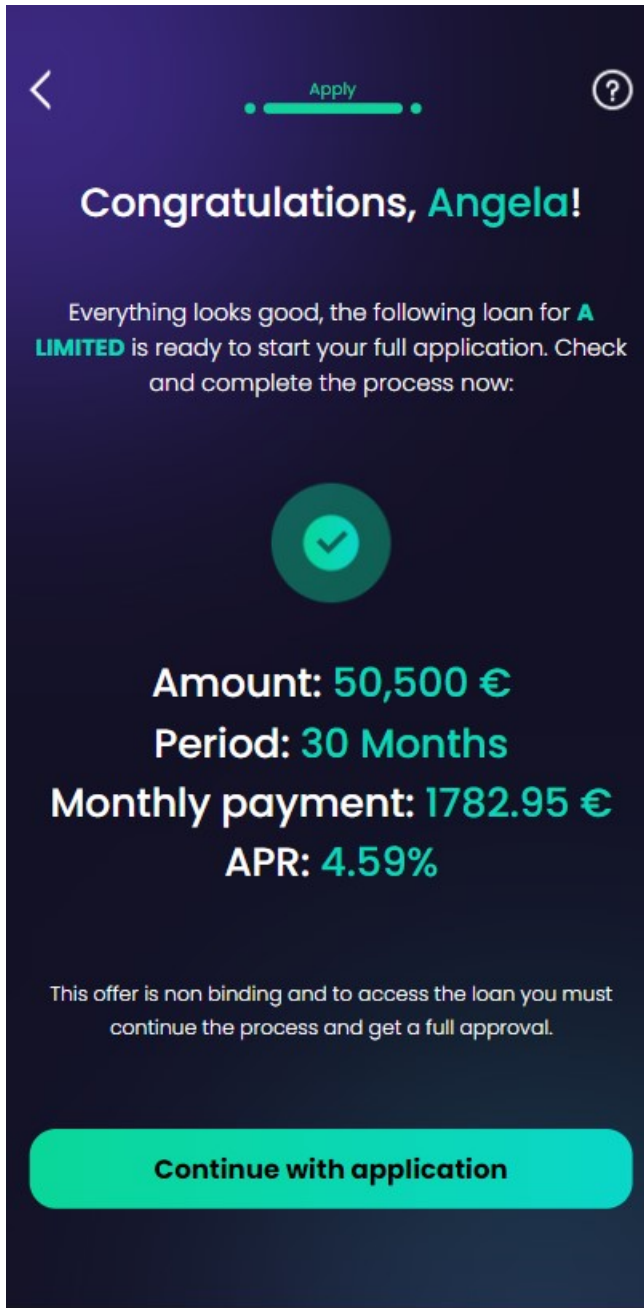
If the loan was approved the message is displayed: *You qualify for your loan. That's great news! Next, you can check out the personalized loan offers we prepared for you.* Click **Continue**.

Congratulations!

Based on the outcome of the formula "[OfferCalculation_CML](#)" on [page 139](#), the system calculates whether the customer is eligible for the loan requested by calculating the eligibility for the requested offer (the DTI including the monthly instalment of the proposed loan). Two scenarios are possible:

- you are eligible for the loan requested, then, that is the offer displayed
- you are not eligible, then the system calculates what could be the maximum offer for which you would qualify, and then, it displays that offer.

For details on what values are displayed here, see "[response](#)" on [page 140](#).



Our calculations did not meet your requested values, but we managed to come back with another offer. This offer is non-binding and to access the loan you must continue the process and get full approval.

The details of the loan are displayed:

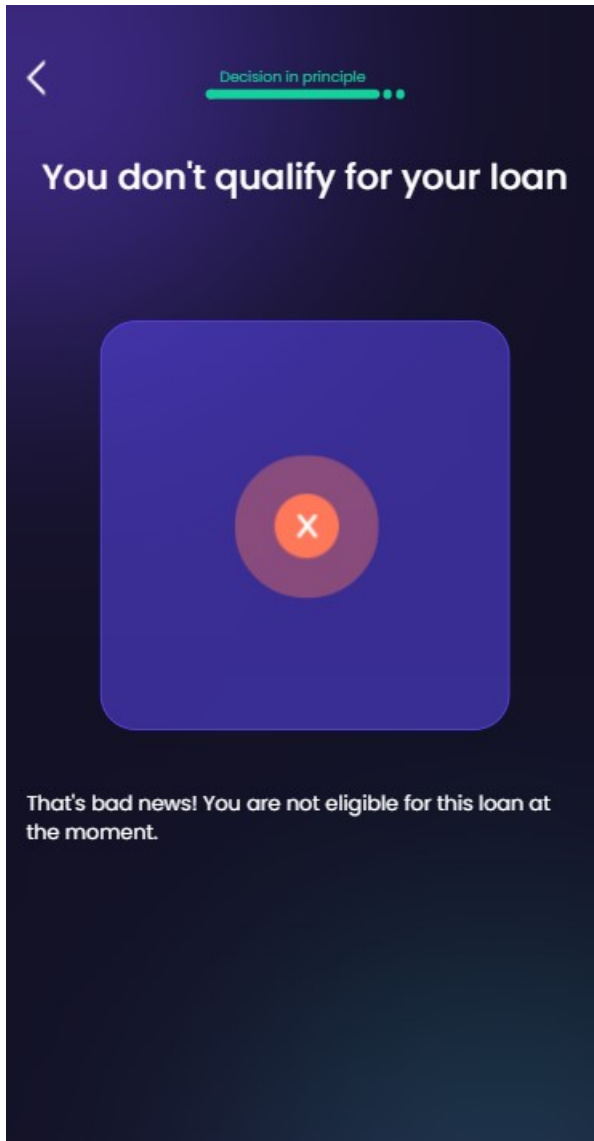
- Amount (measured in euro)
- Tenure (measured in months)
- Monthly payment (measured in euro)
- **APR¹**.

Click **Get full approval** if you agree to the details displayed.

You don't qualify for your loan

If the criteria are not met, then the system displays this screen to inform the customer that they cannot receive a loan. The flow ends here. An email is sent to the given email address informing the customer again about the status of their application: *Your Decision in Principle had been rejected.*

¹Annual percentage rate. APR is an annualized representation of your interest rate.

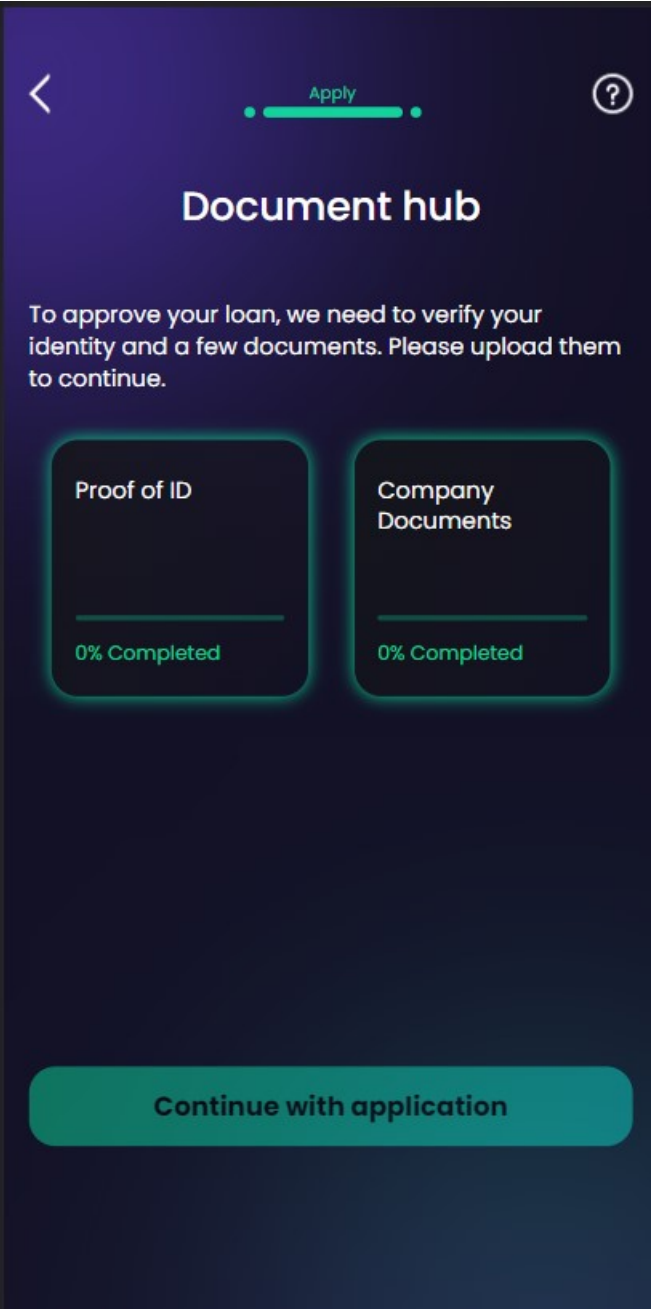


Click **Home** to return to the initial page.

Document Hub

Until this point, you navigated through the decision in principle part, where based on what you declared, the system calculated the eligibility. However, financial data and the identity of the SME representative need to be confirmed and proved with

documents. This screen informs you that two additional requirements must be performed for the bank to confirm the loan for the SME. *To approve your loan, we need to verify your identity and a few documents. Please upload them to continue:*



- Proof of ID: a document to identify the SME representative (see ["Identity Card" below](#) and ["Time to Take a Selfie" on page 58](#)).

It contains two steps: the scanning of the ID representing 50%, and the selfie representing 100%.

- Company documents: documents to verify the SME (see ["Company Documents" on page 61](#)).

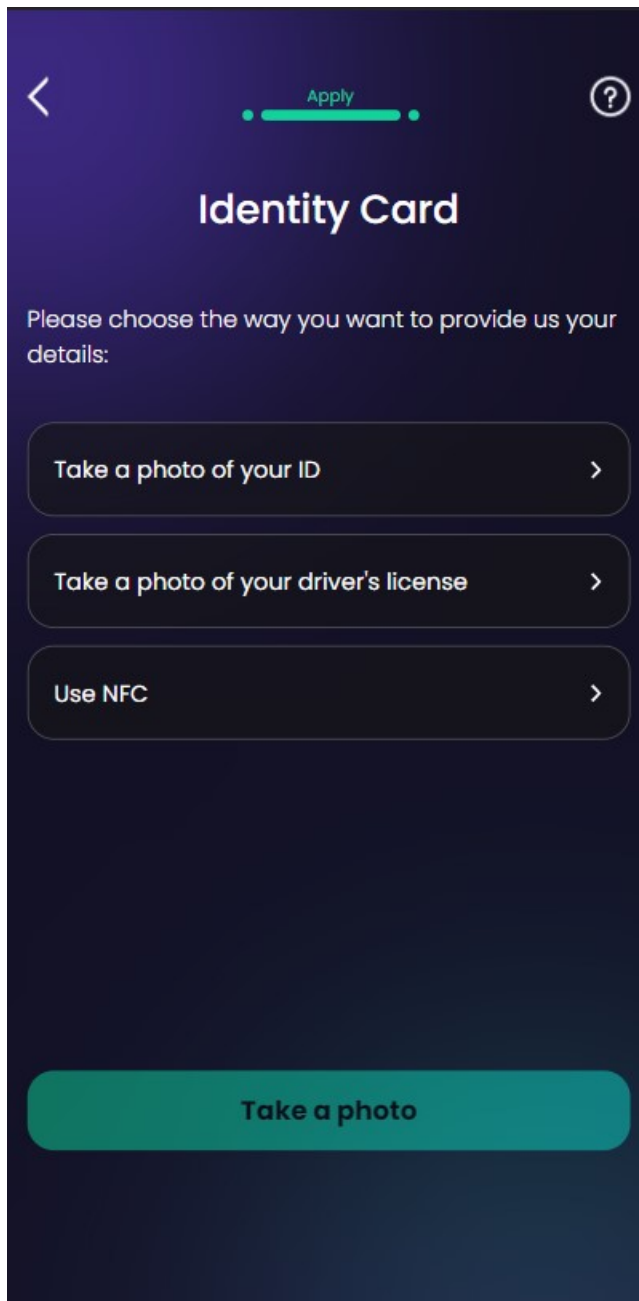
Insert the three documents: for the first document, the progress bar shows 33%, the second 66%, the third 100%. Once the company documents have been inserted 100%, it is not possible to go back and upload others/more files.

An email is sent at this stage with a link to continue the process.

To start verifying your identity and that of your company, click on either one of the two containers. After choosing one of the two streams of action, and completing each to 100%, the system returns you to this page where the button **Submit for full approval** becomes available. Click it to continue to ["Reviewing Your Application" on page 65](#).

Identity Card

The **Identity Card** screen allows you to provide personal identification documents to prove your identity. A card or any bank product cannot be issued without verifying the identity of the applicant. The following ways of providing identification proof are available. Select one by clicking on the corresponding field:



- **Take a photo of your ID:** requires you to take a photo of your ID
or
- **Take a photo of your driver's license:** requires you to take a photo of your driver's license

or

- **Use NFC¹ if you have a compatible ID card:** to be used if you have a compatible ID card.

IMPORTANT!

This option was not developed. When selecting it, the button is unavailable.

It is mandatory to choose at least one way of providing identification information, otherwise the button is not available. You have five retries.

Take a photo of my ID

This option allows you to open the camera and take a photo of the front of the ID card. The photo is taken by our automation processor [Computer Vision](#), which gathers the data from the document and saves the photo of the customer's face. This photo is later compared with the selfie to match the appearance of the customer. Allow your browser to take photos when the pop-up appears.

NOTE

For details on how the OCR was configured, see ["Configuring the Flow Settings" on page 142](#).

If the first attempt to take the photo is unsuccessful, then you have five more tries. Once the final attempt has failed, the flow ends. This number of retries can be modified within Digital Flow Settings.

Click **Take a photo** to continue the flow.


¹Near-field communication is a set of communication protocols for communication between two electronic devices over a distance of 4 cm or less.

Take a photo of your driver's license

This option allows you to open the camera and take a photo of the driver's license. Select the option and click **Take a photo** to continue.

Identification

Please select an identification method from the ones below:



Please place your ID inside the frame

[Retake photo](#)

Take the photo

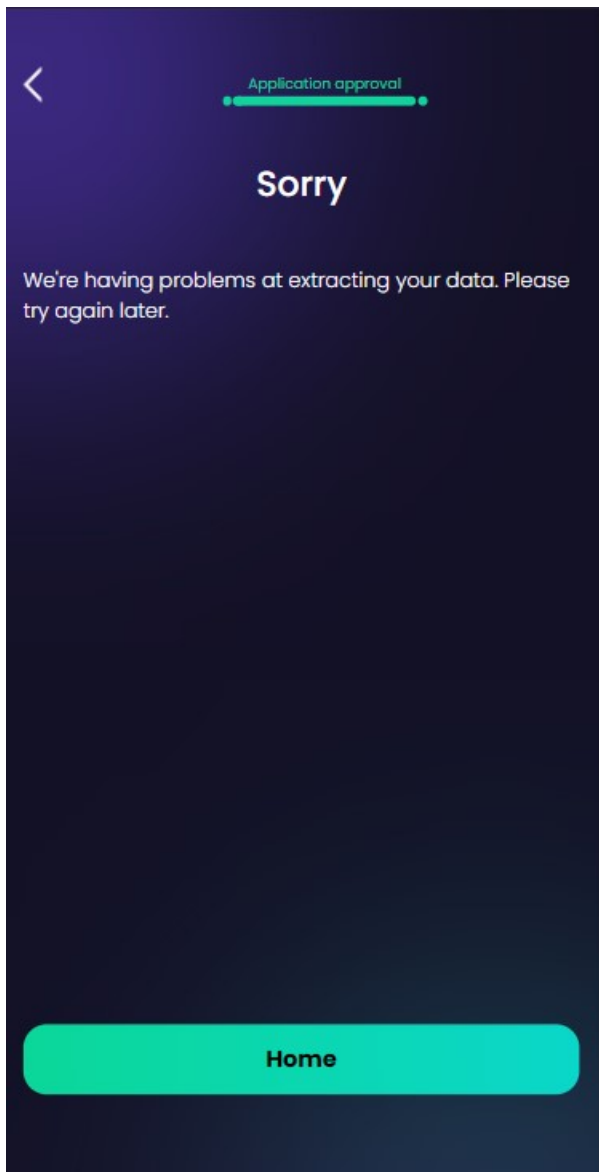
Place the license inside the frame and click **Take the photo**. If the photo is not successful, click **Retake photo** to reinitiate the process.

Near Field Communication

If you choose the **NFC**¹ option, you must tap your NFC compatible ID card to the back of the phone. This alternative is a proposal to scan the ID card, however, it was not developed within this solution.

If any of those methods fail, the system informs you that it could not retrieve the information.

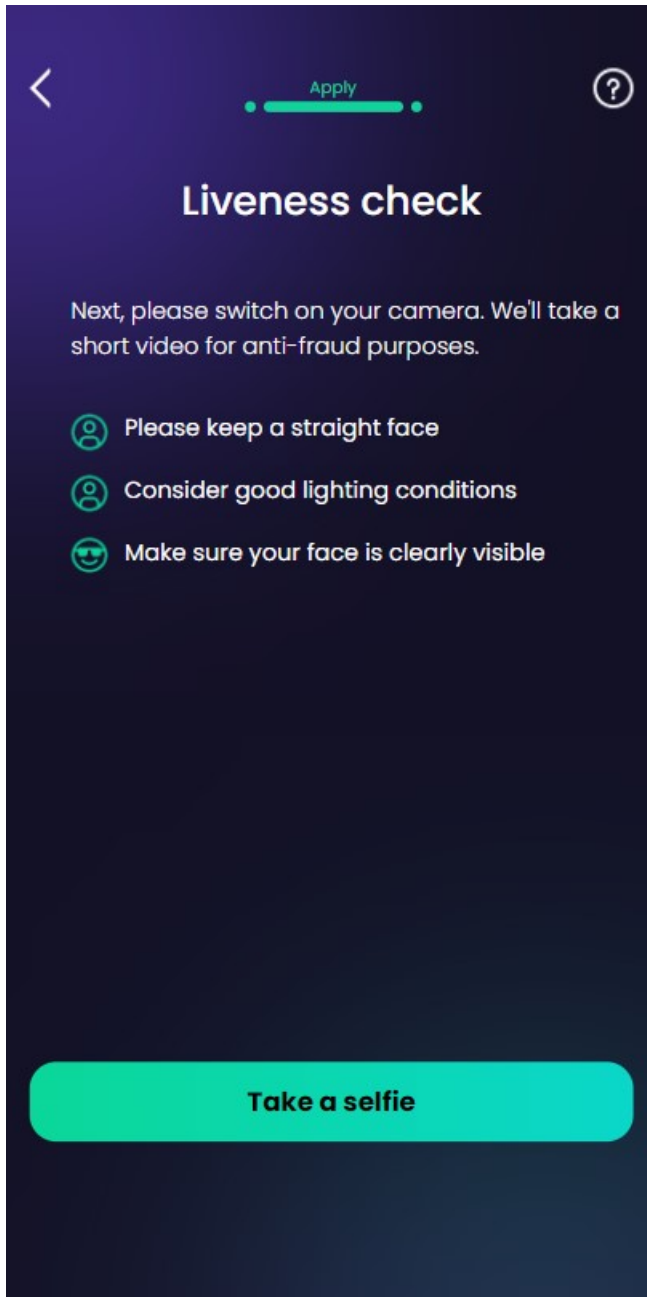
¹Near-field communication is a set of communication protocols for communication between two electronic devices over a distance of 4 cm or less.



Click **Home** to abandon or click the back button to return to **Identity card** and try again.

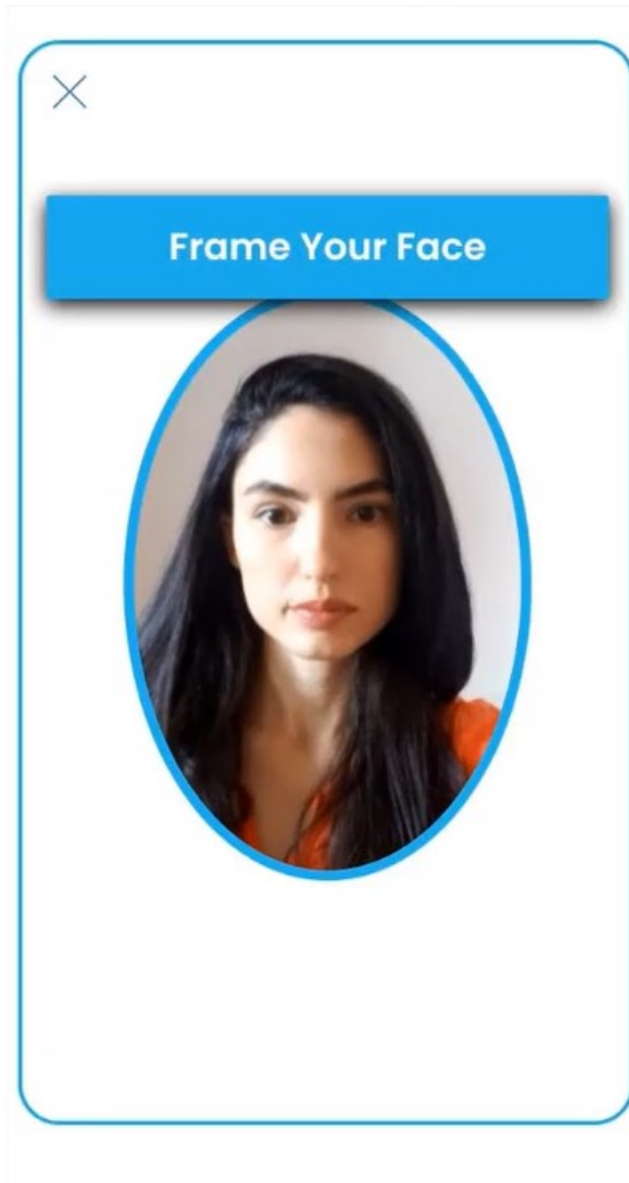
Time to Take a Selfie

The **Time to take a selfie** screen allows you to confirm your identity by taking a selfie. However, you need to follow a few conditions:



- Keep a straight face;
- Consider good lighting conditions;
- Make sure the face is clearly visible.

Click **Take a selfie**.



This option allows you to open the camera and take a photo. The photo is taken by our automation processor [Face Recognition](#) with [Liveness](#). This photo of the ID is later compared with this selfie, to match the appearance of the customer:

- If the first attempt to take the selfie is successful, the system directs you to the "[Document Hub](#)" on [page 50](#). From there, choose **Company documents**.

- If the first attempt to take the selfie is unsuccessful, then you have five more tries. Once the final attempt has failed, you cannot continue the process and a rejection screen is displayed.

NOTE

This number of retries can be modified within "[SMEL_Liveness](#)" on page 143.

Company Documents

This screen asks you to upload company documents needed as proof for the bank to open an account with the message *We managed to identify a part of the required company documents. Please upload the missing documents to continue.*

Apply

Company Documents

We managed to identify a part of the required company documents. Please upload the missing documents to continue.

1

Proof of incorporation

Upload

2

P&L Statement

Upload

3

Balance sheets for last 4 quarters

Upload

Select a provider to connect to your software account and automatically upload company documents.

xero

sage

Now working with the accounting software from the list above? Search your provider in the list below.

Accounting Software

Select...

Done

The following documents are mandatory:

- Proof of incorporation
- **P&L Statement**¹
- Balance sheets for the last four quarters.

Three options are available to get the documents:

- get the documents from the connector used in the step "[Company Identification](#)" on [page 23](#)

The system fetches the document(s) from a third-party provider. In case the documents are found, they are automatically uploaded and marked as checked.

- get the documents from the accounting software

The page displays a list of accounting software. Additionally, a search bar exists. Insert the name of the software you are looking for.

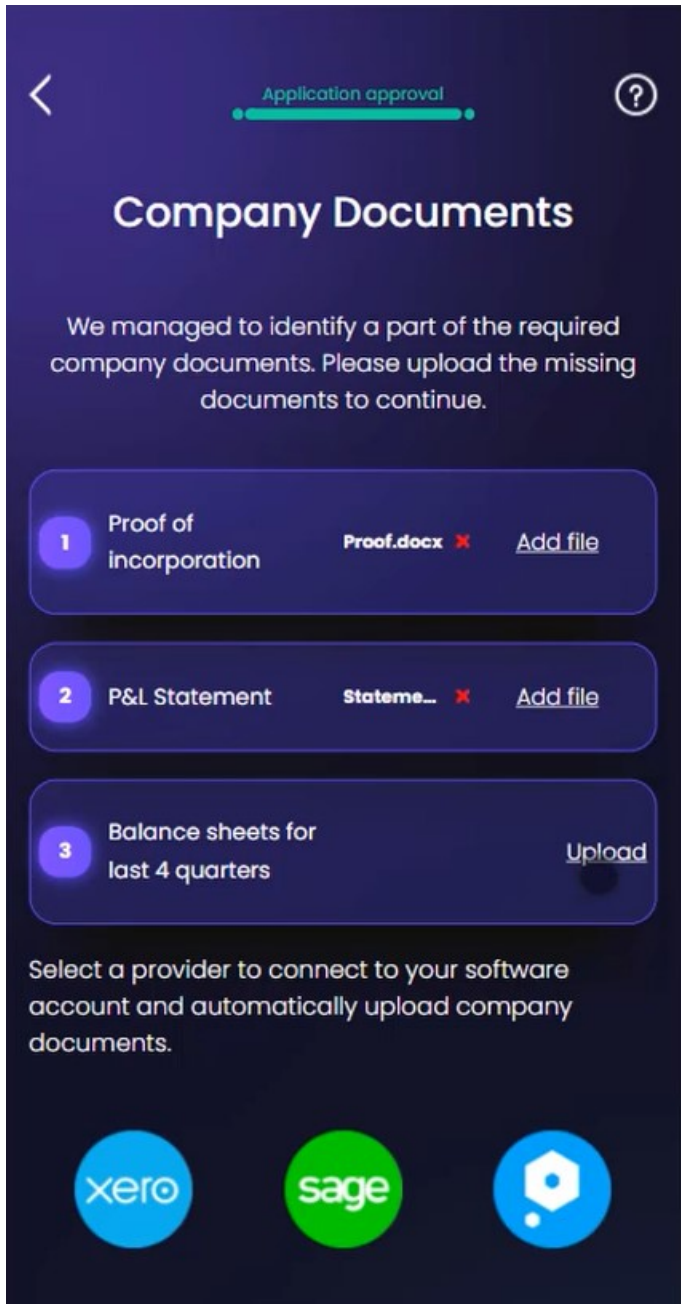
IMPORTANT!

This option was not developed. Configure it as needed.

- upload the documents as pdf

You can upload the documents in pdf format or take a picture. Up to 20 photos of documents can be uploaded. To upload the document, click **Upload**. The system opens the file explorer. After the first file was uploaded, a new button **Add file** is displayed to attach more files.

¹The P&L statement refers to a financial statement that summarizes the revenues, costs, and expenses incurred during a specified period, usually a quarter or fiscal year.



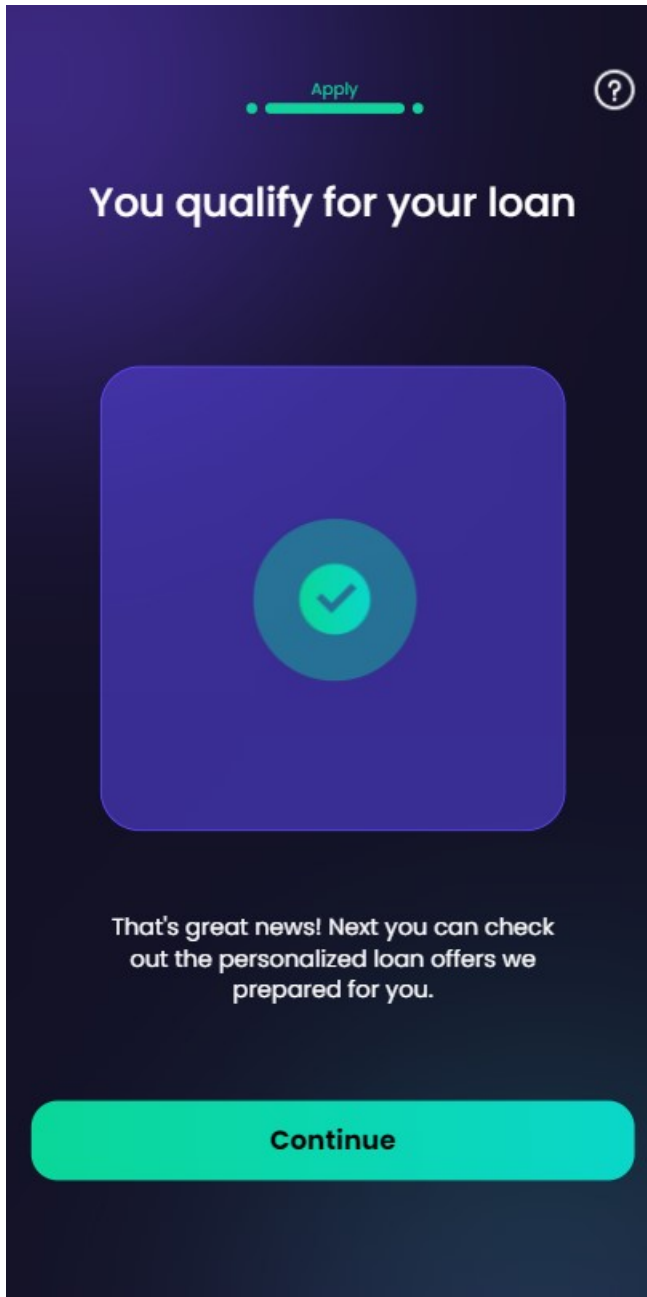
NOTE

For details on the documents, see "[SME_RequestedCompanyDocuments](#)" on page 143.

Once you are ready, click **Done**.

Reviewing Your Application

The **We're reviewing your application** step is a transition step between the sending of the application to the answer returned by the bank. It contains the message: *The verification process may take a few minutes, but we'll let you know as soon as it's complete.*



The system uses automation processors to conduct the analysis to check the eligibility of the loan request made by the borrower. They have to be approved for at least one offer from the bank, otherwise, the application is rejected for all banking products.

NOTE

For details on the formulas used for calculation, see "[Configuring the Formulas](#)" on

page 124. In the form driven flow FTOS_BASME_FinalAnalysis, in the step FinalAnalysis > Advanced > After Events, the system calls the script "FTOS_BASME_FinancialCalculations" on page 169 to determine whether the application is approved or rejected.

The analysis of the application

Below, there is a list with the data needed:

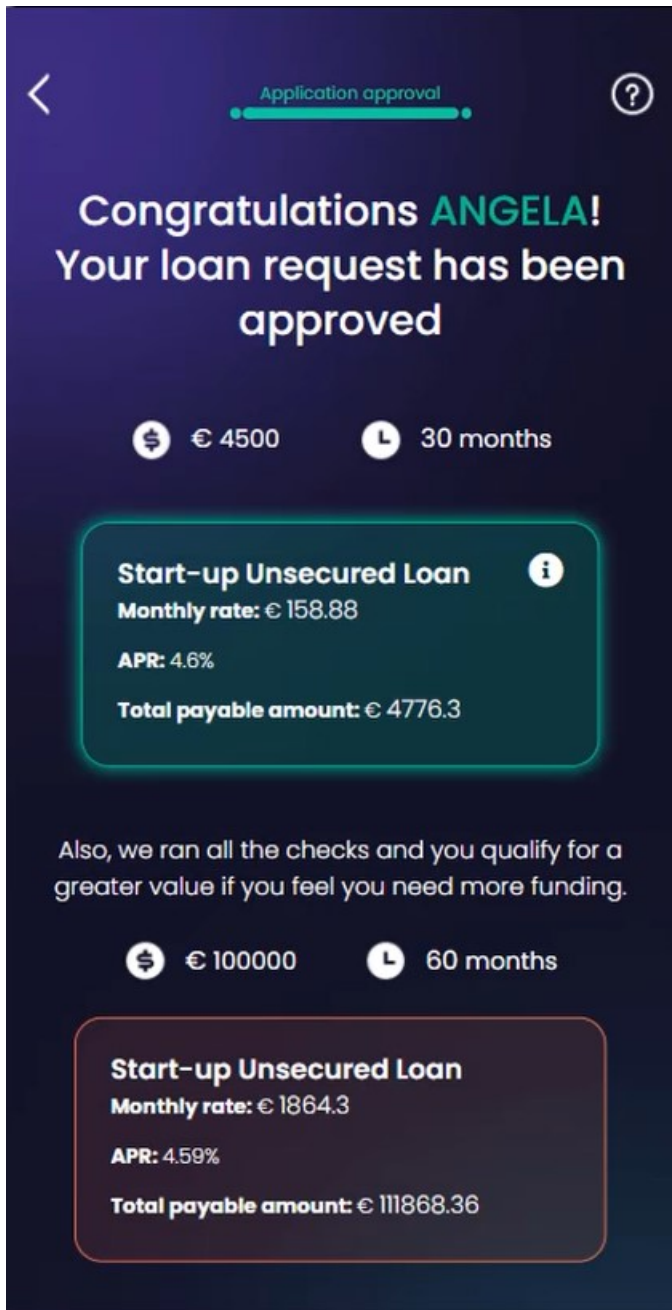
Attribute	Source of data
Social capital	Balance sheets
Number of employees	Balance sheets
Turnover over the past 12 months	P&L statement
Business legal status	Companies House
Company establishment	P&L statement
Trading on credit	Balance sheets
Expected annual debt repayments over the last 12 months?	P&L statement
Industry	Company House
CCJ	Experian
Bankruptcy	Companies House

The system uses the Company House and Experian connectors. The connector does not come within the package, therefore, you have to install it separately. However, the solution can accommodate any other third-party software, this is one such software integration developed by FintechOS. Depending on localization, other connectors produced by FintechOS may be used: [KeysFin](#) (for the Romanian market), [Dun&Bradstreet](#) (available world-wide).

After the system fetched the data, the application data is updated with the new information (if any). In case the new information is the same as the one from the DIP application, the data and score result do not change. In case there are differences in the data, the system overrides the existing data with the new data obtained. In case any data is overwritten, the system recalculates the scoring matrix and all the needed offers.

Final Offer

This screen displays to you the answer from the bank for the application with the message: *Your loan request has been approved!*



NOTE

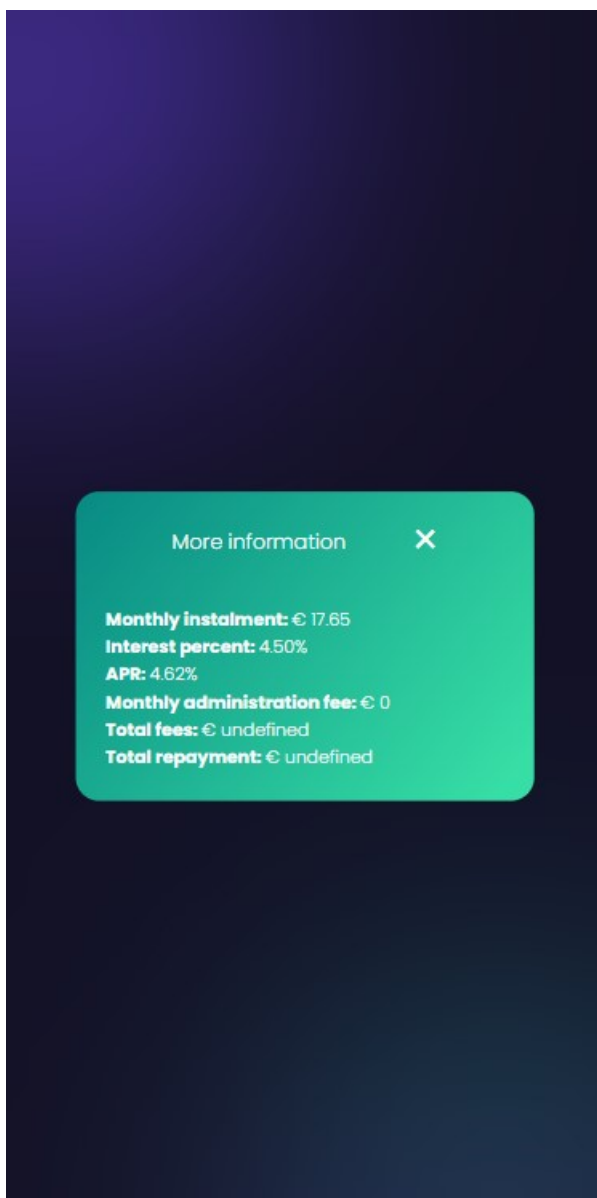
In the form driven flow `FTOS_BASME_FinalOffers`, in the step `FinalOffers > Advanced > After Events`, the script "[FTOS_BASME_GetEligibleLoans](#)" on page 171 is called. Then, the system displays the requested amount and, if applicable, the maximum offer. In the same form driven flow and step in `Advanced > After Section Save`, the system generates the loan documents and repayment schedule and sends the email with these documents to the customer.

The requested offer is displayed with the following details:

- product name
- monthly instalment
- **APR¹**.
- total payable amount.

In the top right corner of the card, the user has a tooltip with a pop-up detailing the entire loan details.

¹Annual percentage rate. APR is an annualized representation of your interest rate.



The fields depicted in the **See details** tab are:

- Interest percent
- **APR**¹
- Monthly instalment

¹Annual percentage rate. APR is an annualized representation of your interest rate.

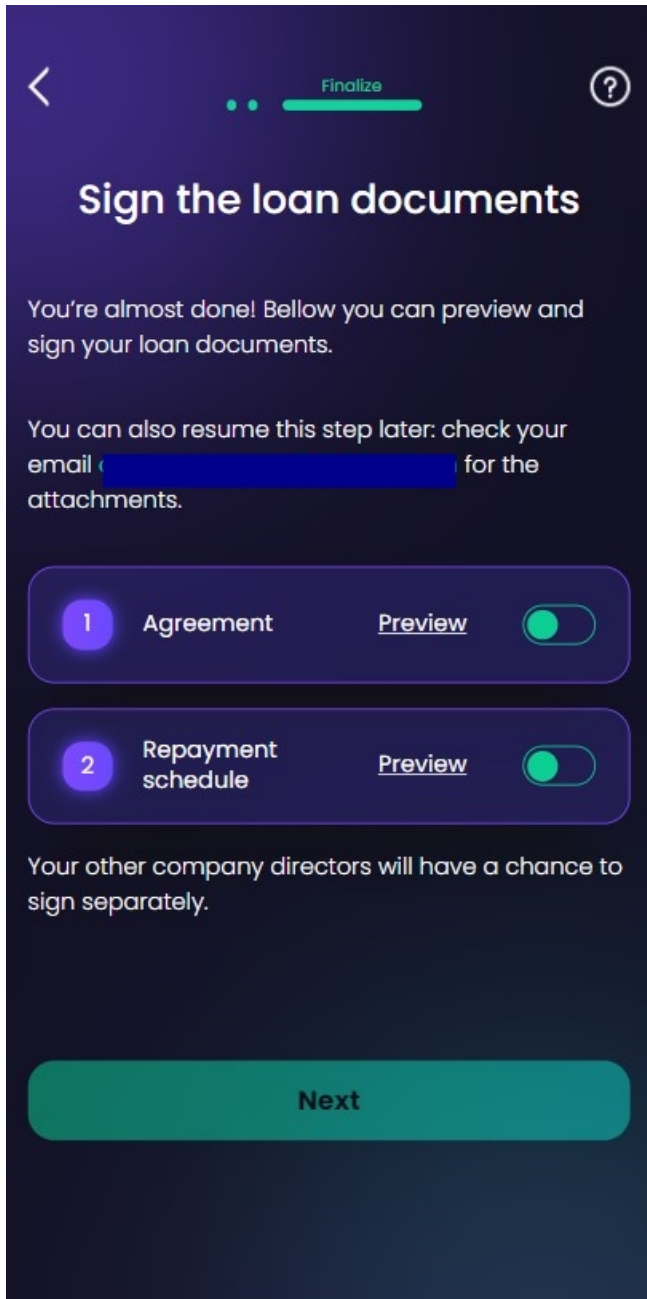
- Monthly insurance cost (only for products with insurance)
- Monthly administration fee
- Total insurance cost (only for products with insurance)
- Total fees
- Total repayment.

The system displays the maximum offer with the message *Also, we ran all the checks and you qualify for a greater value if you feel you need more funding.* You can choose to switch to it. The page displays the amount and period for the respective offer.

To select one, click the card and then click **Sign loan documents**. This button triggers a script to send an email with the documents to be signed (loan documents from the banking product selected and the repayment schedule).

Sign the Loan Documents

For the amount to be disbursed and the loan to be contracted, you need to sign both documents *You're almost done! Below you can preview and sign your loan documents. A copy of the contracts was also sent to your email address.*



- Agreement (all the documents on the banking product selected)
- Repayment schedule (PDF format).

The process can continue only if the two documents are signed. These documents are sent to your email address as well. If you choose to sign them at a later date, the email contains the link from where to resume the journey. This page allows you to preview the documents and download them on your local drive.

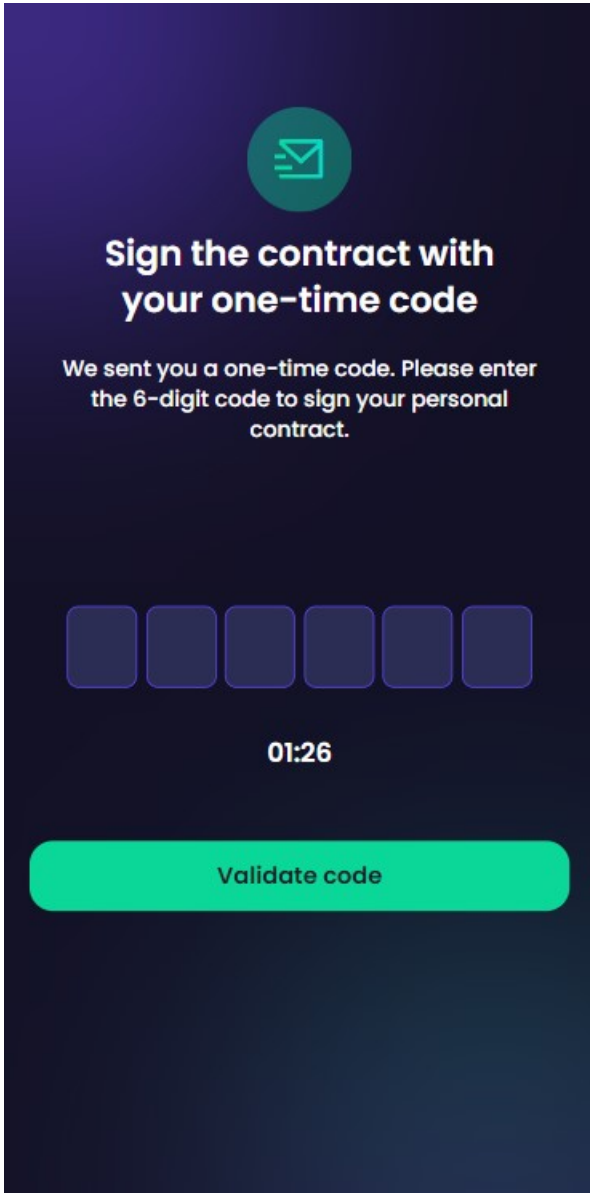
Toggle the two documents and click **Next**.

NOTE

For details on how the documents are generated, see .

Insert the One-Time-Password

The signing process is done by sending a One-Time-Password (OTP) code in a text message to your phone number and you are required to input the code on another screen. All documents are mandatory to be signed, but this can be configured by the bank. You have five retries.



The image shows a mobile app interface with a dark blue gradient background. At the top, there is a circular icon with a white envelope and a checkmark. Below the icon, the text "Sign the contract with your one-time code" is displayed in white. Underneath, a message states: "We sent you a one-time code. Please enter the 6-digit code to sign your personal contract." Below this message is a row of six empty, rounded square input fields. Under the input fields, a timer shows "01:26". At the bottom, there is a large, rounded rectangular button with a teal gradient and the text "Validate code" in white.

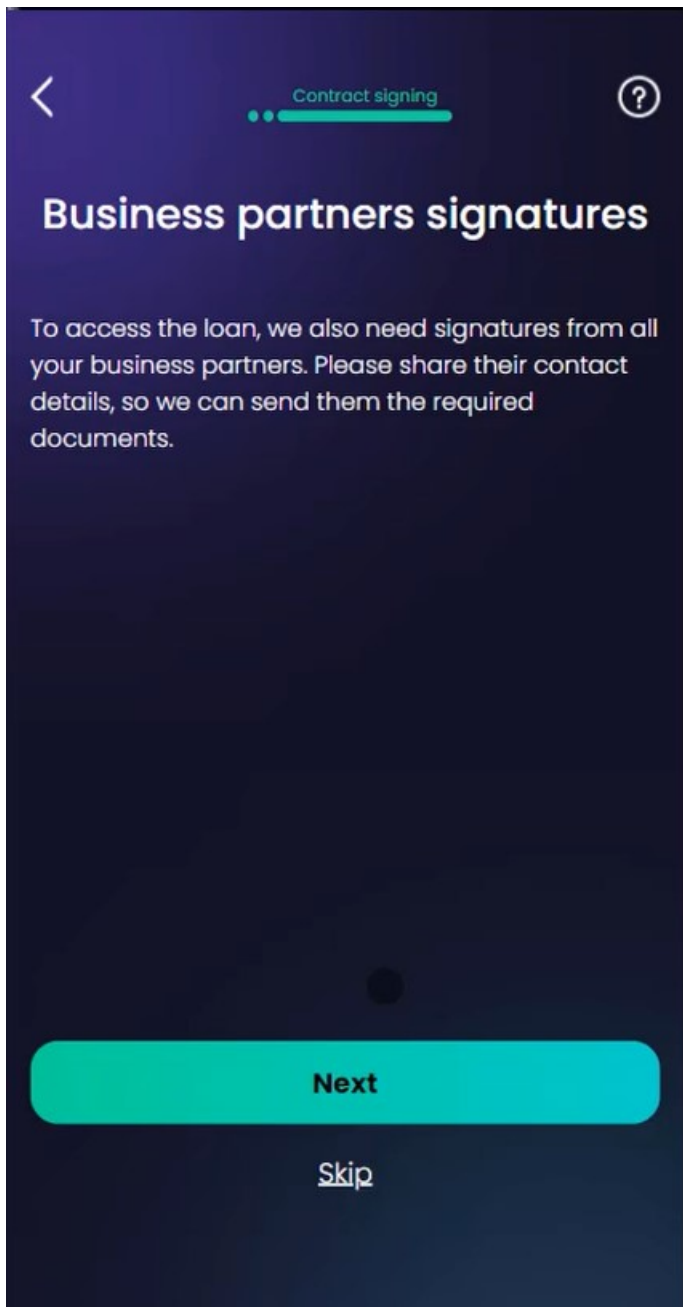
NOTE

For details on how the OTP is generated, see "[Configuring the Flow Settings](#)" on page 142.

Insert the six digits in the designated field, and click **Validate code**.

Business Partners Signatures

This step is optional. It applies only to those SMEs that have more than two partners. The loan cannot be contracted without all the partners' signatures. Using the connector, the system identifies the other people involved. You are asked to insert the contact details of each partner of the company, the page informs you through the following message: *To access the loan, we also need signatures from all your business partners. Please share their contact details, so we can send them the required documents.*



All partners must sign in maximum 3 days.

Business partners signatures

To access the loan, we also need signatures from all your business partners. Please share their contact details, so we can send them the required documents.

Caroline Louise BRITTON's phone

Caroline Louise BRITTON's email

Bruce Edward WALLACE's phone

Bruce Edward WALLACE's email

Nikolay STORONSKY's phone

Nikolay STORONSKY's email

Martin James GILBERT's phone

IMPORTANT!

The system does not check the stakeholders' identity on any black list. It does not run anti-money laundry verification on their identity.

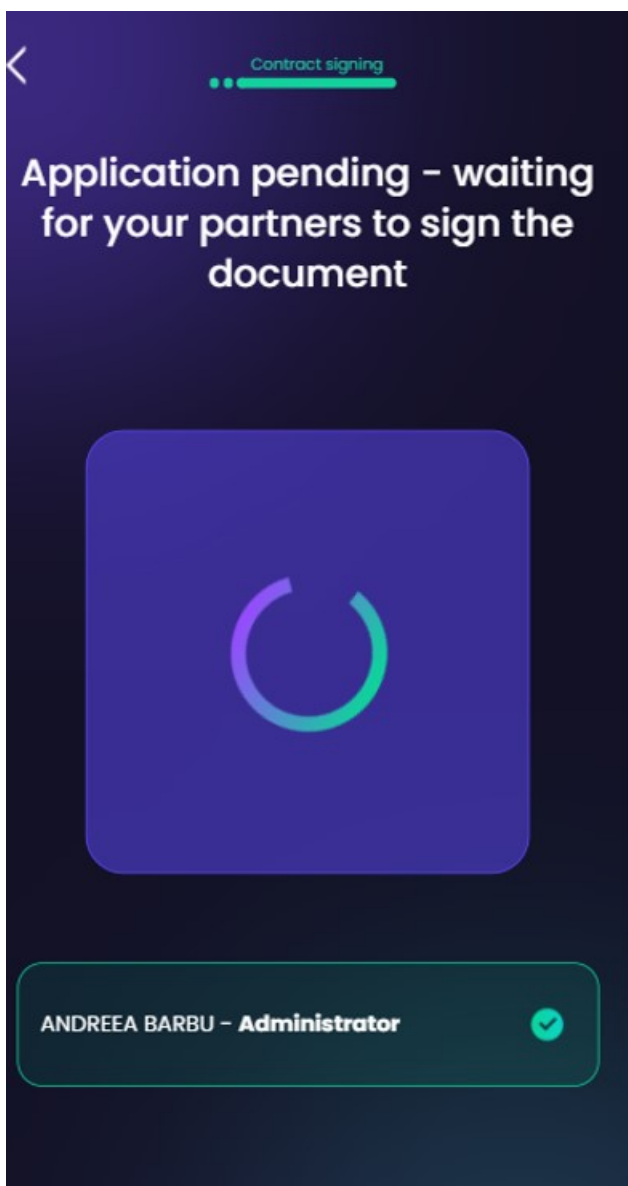
NOTE

This part of the flow is configurable as per the national requirements in place.

The two documents are sent to each person for signature after you click **Next**. If it is not applicable, click **Skip**.

Application Pending

In case there are multiple partners who have to sign the documents, the person who applied for the loan in the name of the SME, has to wait for the rest to sign. The page displays the list of people who have to sign with the status of each, whether they have signed or not. The green icon symbolizes they have signed. The red icon symbolizes they have not.



Once all the partners have signed, the applicant can proceed.

Partners' Flow

Each partner has to achieve some tasks before signing the documents:

1 Greetings!

This is a landing page for the business partners to be informed about the situation:
Your business partner <main applicant name> applied for a loan in the name of the <the applicant company> company from us, <Bank name>. He provided us with all the necessary steps, including your email address.

Your approved loan characteristics:

- The name of the product,
- The loan amount
- The value of the monthly repayment
- APR
- The period of the loan
- The value for the total repayable amount.

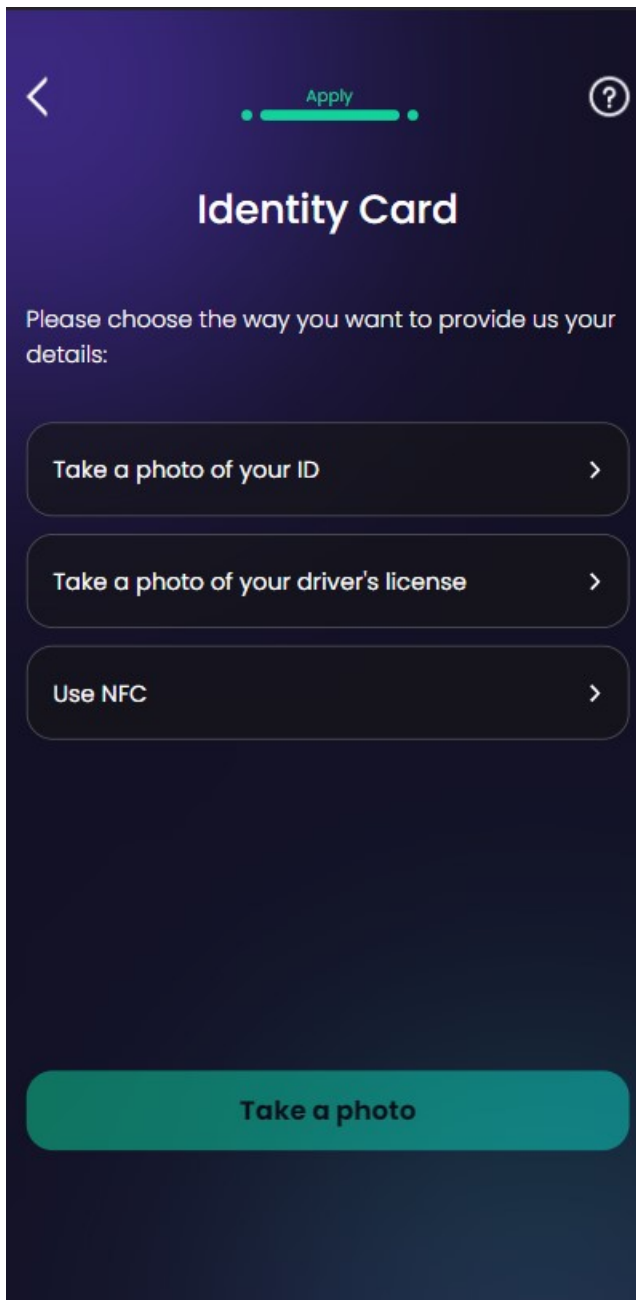
For compliance reasons, all the stakeholders of the company <company name> must sign the loan contract. As a security measure, your identity must be certified in the next 72h through three easy steps:

- Identity Proof
- Take a selfie
- Sign the Documents

Click the button **Let's start!**.

2 Verify Your Identity

The **Verify Your Identity** screen allows you to provide personal identification documents to prove your identity. A card or any bank product cannot be issued without verifying the identity of the applicant. The following ways of providing identification proof are available:



- **Take a photo of your ID:** requires you to take a photo of your ID
or
- **Take a photo of your driver's license:** requires you to take a photo of your driver's license
or
- **Use NFC¹ if you have a compatible ID card** - to be used if you have a compatible ID card.

NOTE

It is mandatory to choose at least one way of providing identification information.

Take a photo of my ID

This option allows you to open the camera and take a photo of the front of the ID card. The photo is taken by our automation processor [Computer Vision](#), which gathers the data from the document and saved the photo of the customer's face. This photo is later compared with the selfie to match the appearance of the customer.

NOTE

For details on how the OCR was configured, see "[Configuring the Flow Settings](#)" on [page 142](#).

If the first attempt to take the photo is unsuccessful, then you have five more tries. Once the final attempt has failed, the flow ends. This number of retries can be modified within Digital Flow Settings.

Click **Take a photo** to continue the flow.

¹Near-field communication is a set of communication protocols for communication between two electronic devices over a distance of 4 cm or less.

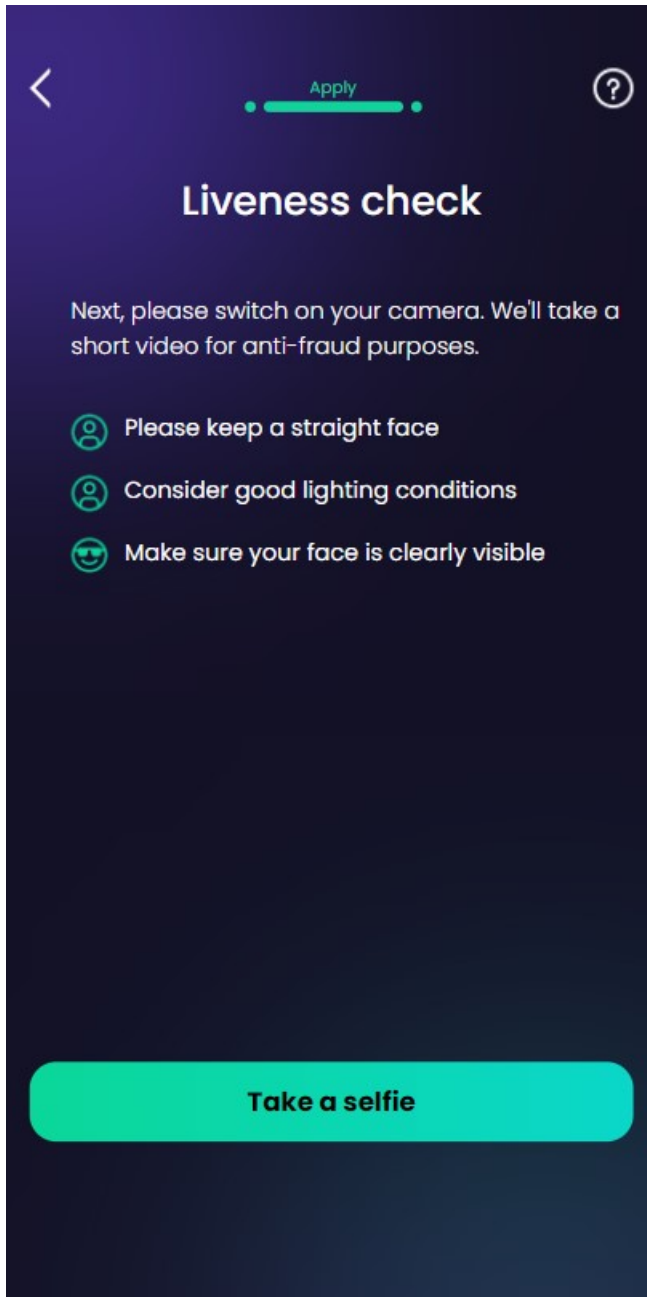
Near Field Communication

If you choose the **NFC**¹ option, you must tap your NFC compatible ID card to the back of the phone. This alternative is a proposal to scan the ID card, however, it was not developed within this solution.

3 Time to take a selfie

The **Time to take a selfie** screen allows you to confirm your identity by taking a selfie. However, you need to follow a few conditions:

¹Near-field communication is a set of communication protocols for communication between two electronic devices over a distance of 4 cm or less.



- Keep a straight face;
- Consider good lighting conditions;
- Make sure the face is clearly visible.

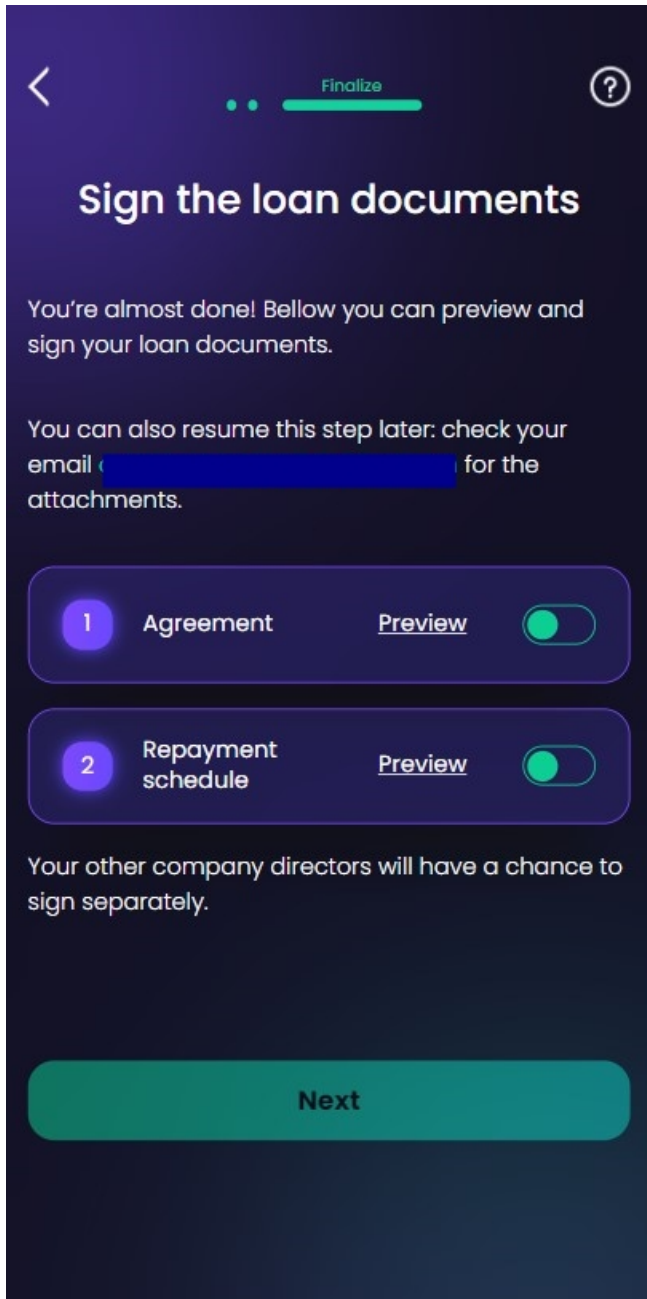
This option allows you to open the camera and take a photo. The photo is taken by our automation processor [Face Recognition](#) with [Liveness](#). This photo of the ID is later compared with this selfie, to match the appearance of the customer. If the first attempt to take the selfie is unsuccessful, then you have five more tries. Once the final attempt has failed, the flow ends.

NOTE

This number of retries can be modified within "[Configuring the Flow Settings](#)" on [page 142](#).

4 Sign the Documents

For the amount to be disbursed and the loan to be contracted, you need to sign both documents *You're almost done! Below you can preview and sign your loan documents. A copy of the contracts was also sent to your email address.*



- SME Loan contract
- Repayment schedule.

The process can continue only if the two documents are signed. These documents are sent to your email address as well. If you choose to sign them at a later date, the email contains the link from where to resume the journey.

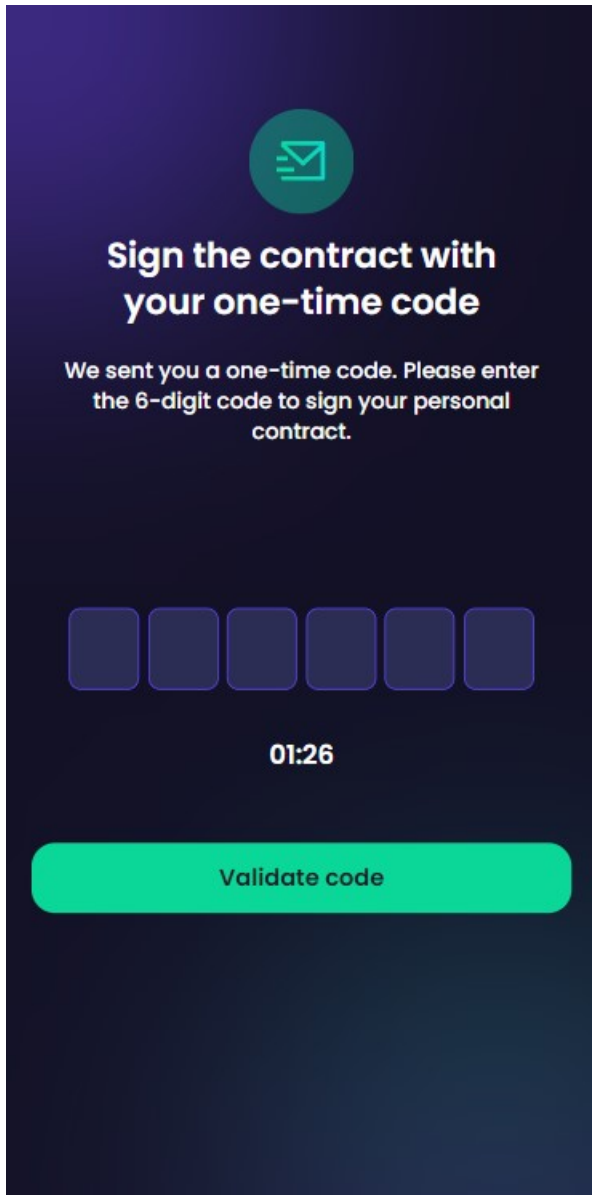
This page allows you to preview the documents and download them on your local drive.


NOTE

For details on how the documents are generated, see .

Insert the One-Time-Password

The signing process is done by sending a One-Time-Password (OTP) code in a text message to your phone number or email and you are required to input the code in another screen. All documents are mandatory to be signed, but this can be configured by the bank.





Sign the contract with your one-time code

We sent you a one-time code. Please enter the 6-digit code to sign your personal contract.

01:26

[Validate code](#)

NOTE

For details on how the OTP is generated, see ["Configuring the Flow Settings" on page 142.](#)

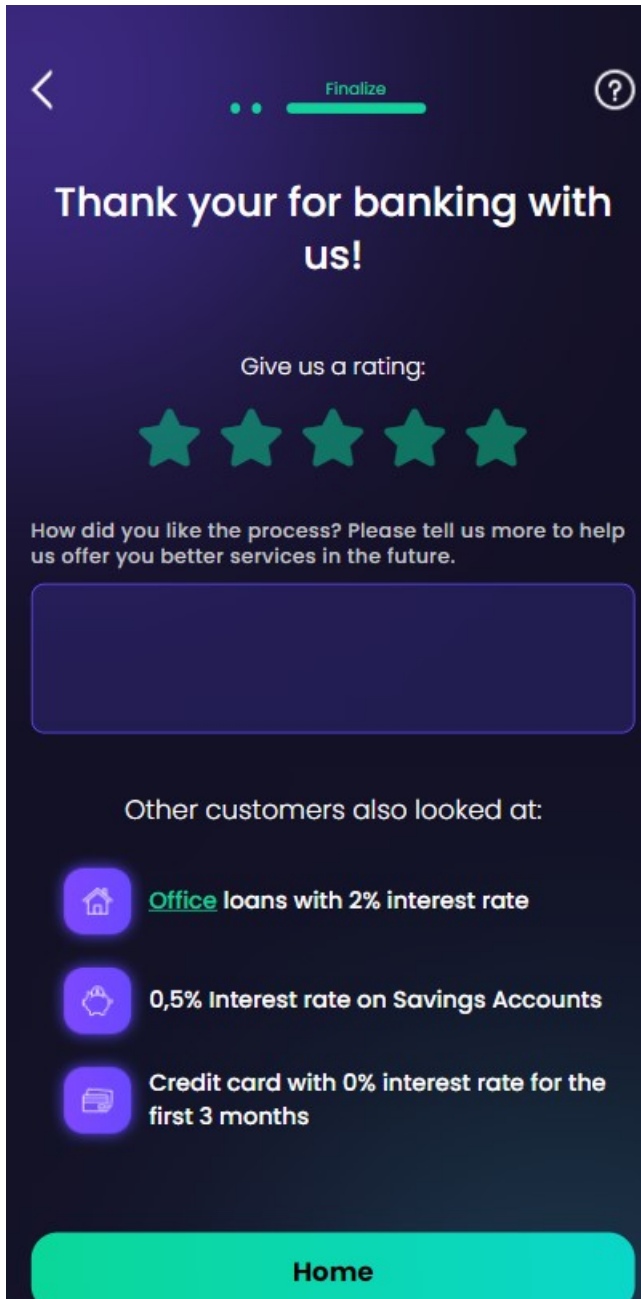
Insert the six digits in the designated field, and click **Continue**.

5 Thank you for your trust

The **Thank You** screen allows you to provide feedback on your experience with the SME Mobile Lending.

This feedback is provided using a rating system of 1 to 5 stars. This step is not mandatory. In addition, you can type in your opinion in the text box. Moreover, this screen also recommends complementary products and services, including loans, savings accounts, cards.

Additionally, there is a list of products as a recommendation. A bank can accommodate the popular products here.



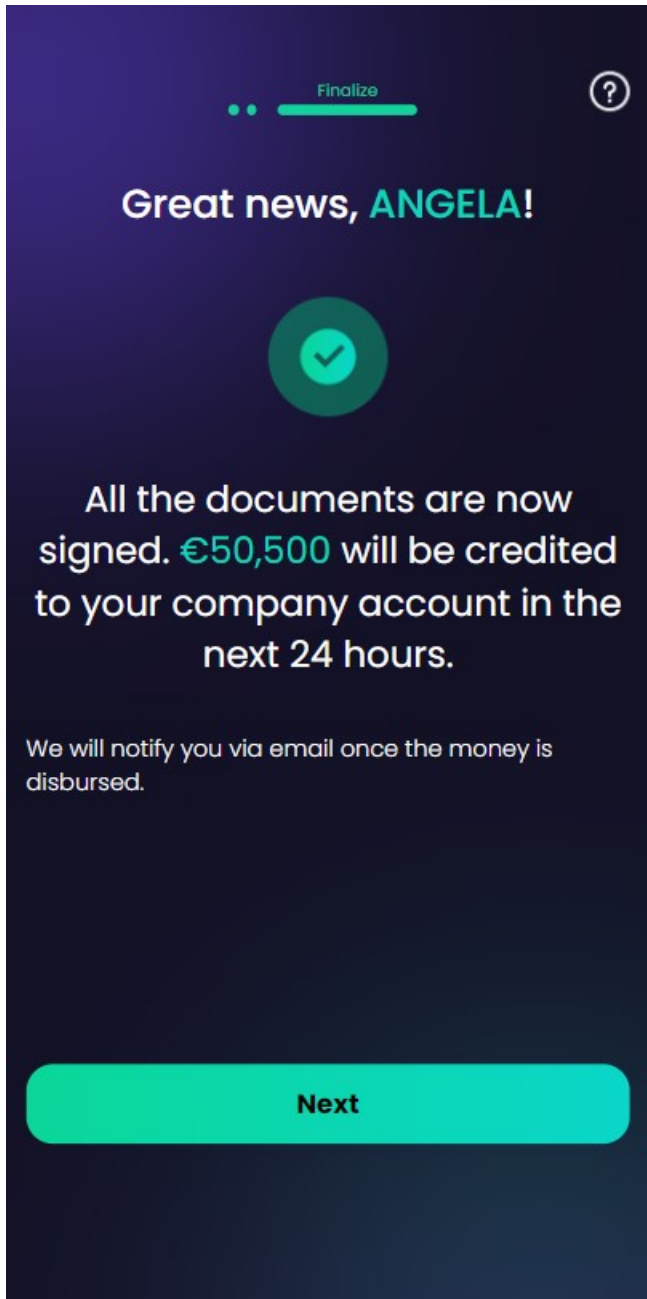
Other customers also looked at:

- Office loans with a 2% interest rate
- 0,5% Interest rate on Savings Accounts
- Credit card with 0% interest rate for the first 3 months.

Click **Home** to return to the first screen.

Great News

This screen is a confirmation that all the documents are signed by all parties and the loan disbursement is underway with the message: *All the documents are now signed.<Loan amount> <loan currency> will be credited to your company account in the next 24 hours. We will notify you via email once the money is disbursed.* This message may be different here depending on the day of the week you reach this step. For details, see "[DisbursementMessages](#)" on page 154.



If this screen is triggered from Monday to Thursday, the screen displays: *All the documents are now signed.<Loan amount> <loan currency> will be credited to your company account in the next 24 hours.*

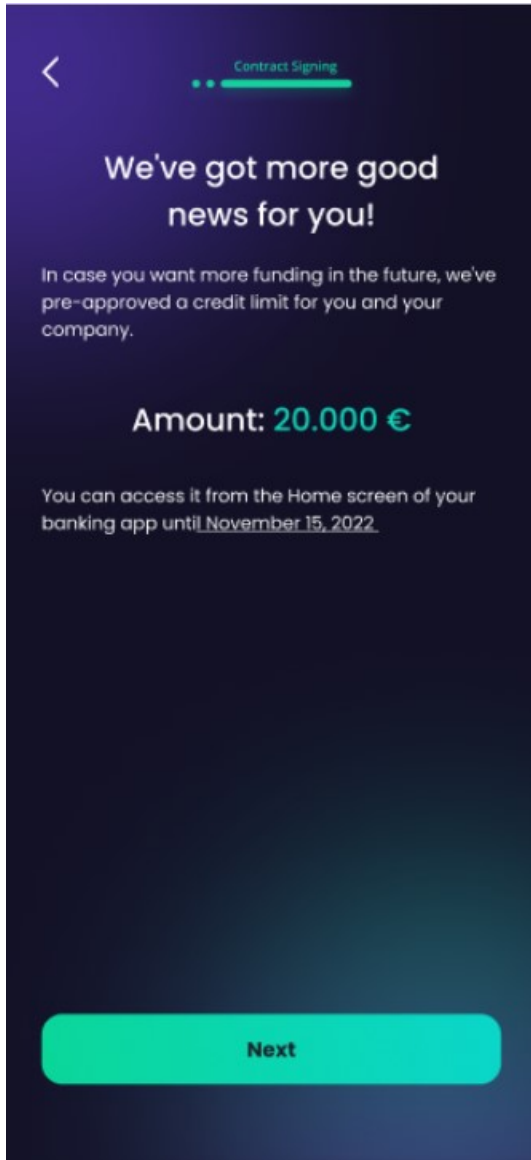
If this screen is triggered from Friday to Sunday, the screen displays: *All the documents are now signed.<Loan amount> <loan currency> will be credited to your company account in the next working day.*

Click **Next**.

Cross-Selling Step

This optional step presents a revolving credit limit accessible in the future for the customers that are eligible after the calculation of the "[CrossSell_CML](#)" on [page 141](#) based on the available **DTI**¹, if the offer amount is bigger than 5000 EURO. In case you are not eligible, the screen is not displayed.

¹The Debt-to-Income ratio (DTI) is a personal indicator of a good balance between debt and income. Monthly debt payment amount / Monthly gross amount (before taxes and other deductions).



The page **We've got more good news for you!** contains the message: *In case you want more funding in the future, we've pre-approved a credit limit for you and your company.* followed by the amount expressed in EURO.

The expiration date for the revolving credit card limit is the current day plus six months. The screen displays it as: *You can access it from the Home screen of your banking app until "Month Day, Year"*

NOTE

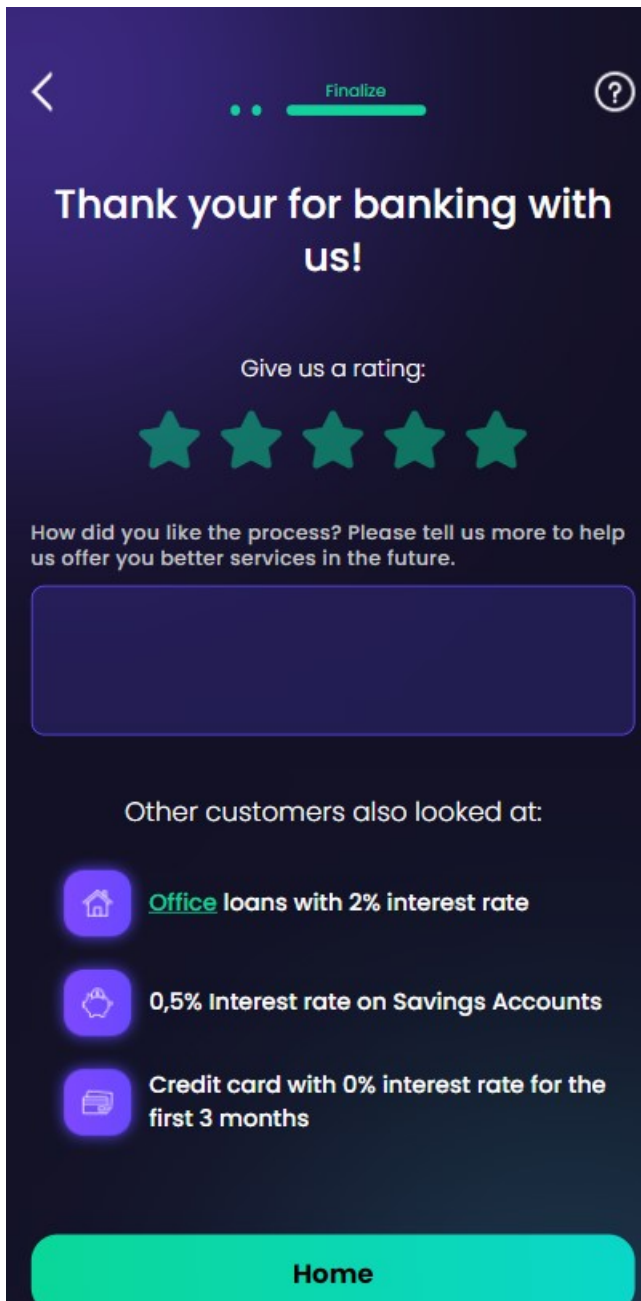
The product here is taken from the associated products list from ["Configuring the](#)

Banking Products" on page 109 and compared with the list of products in "CrossSellParams" on page 154.

Click **Next** to continue.

Thank You for Banking with Us

The **Thank You** screen allows you to provide feedback on your experience with the SME Mobile Lending.



This feedback is provided using a rating system of 1 to 5 stars. This step is not mandatory. In addition, you can type in your opinion in the text box. Moreover, this screen also recommends complementary products and services, including loans, savings accounts, cards.

Additionally, there is a list of products as a recommendation. A bank can accommodate the popular products here.

Other customers also looked at:

- Office loans with a 2% interest rate
- 0,5% Interest rate on savings accounts
- Credit card with 0% interest rate for the first 3 months.

Click the **Home** button to return to the initial page.

Installation

NOTE

The solution 1.1.0 replaces the version 1.0. The following instructions are dedicated to the version 1.1.0.

Prerequisites:

1. Download the package from the [Marketplace](#).
2. Install and configure:
 - Standard FTOS infrastructure (with B2CPortal, B2CProxy, JobServer, MessageBus, MessageComposer for the "[Contact Validation](#)" on page 39) v21.2.2 as explained [here](#)
 - [Banking Product Factory v3.0.2](#)
 - OTP project (found in the folder SME Mobile Lending-v1.1.0.zip > prereq)
 - Connectors: [Company House](#) is required to be installed and [Experian](#) is optional to be installed or other third-party platforms
 - B2C Setup project (found in the folder SME Mobile Lending-v1.1.0.zip > prereq) or a manually configured B2C security role assigned to the Guest user and a front-end domain named B2C.

After the FintechOS environment is installed, proceed with the next steps.

Package

Once you downloaded the package SME Mobile Loan - v1.1.0.zip, unzip the package. It contains the following set-up:

- **prereq:**
 - B2C Setup-v1.zip
 - One-Time-Password - v1.zip
- **solution** (the solution with the templates for the B2C Portal, containing the digital assets):
 - BAN-SDK
 - CML-SDK
 - async install.bat
 - BAN-CML.zip
- **additional-files** (the library with custom controls; the custom files and the report document templates):
 - custom: css, img, js, slick
 - cutom-on-demand: common, liveness, usermedia, video, zoom
 - UploadEBS: several images
 - keys-for-b2c.txt:

Keys for B2C portal

```
<add key="B2CProxy" value="LinkToProxy" />
<add key="CB-use-integration" value="0" />
<add key="CB-URL" value="core-banking-api-baseurl" />
```

```

<add key="CB-user" value="core-banking-api-username" />
<add key="CB-pass" value="core-banking-api-password" />
<add key="CB-bank-code" value="core-banking-api-
defaultBank" />

<add key="CONN-BaseUrl" value="ftos-conn-api-baseurl" />
<add key="CONN-user" value="ftos-conn-username" />
<add key="CONN-pass" value="ftos-conn-password" />

```

- proxy-routs.js

versionSelect.js

```

function setOption() {

    // Version selector element used to select the
    release number.
    let versionSelector = document.getElementById
('versionSelect');
    // Invisible dummy selector used to set up the width
    of the real version selector.
    let dummy = document.getElementById('dummySelect');

    // Clear the version selector.
    versionSelector.options.length = 0;
    // Populate the options available in the version
    selector.
    versionSelector.options
[versionSelector.options.length] = new Option
('21.2.2000',
'https://docs.fintechos.com/BCs/WelcomeBack/21.1.2000/Ho
me.htm');

    // Synchronize the option displayed in the version
    selector with the corresponding documentation version
    (based on the current path).
    let options = versionSelector.getElementsByTagName
('option');
    for (var i = 0, optionsLength = options.length; i <
optionsLength; i++) {
        if (options[i].value == window.location.href) {
            // Resize the width of the version selector
            based on the currently selected option.

```

```

        // Populate only the current option into the
        invisible dummy selector. This ensures the dummy
        selector width matches the current selection.
        // Then use the dummy selector width as
        reference for the real version selector.
        dummy.options[0] = new Option
        (versionSelector.options[i].text, 'value');
        $(versionSelect).width
        ($("#dummySelect").width());
        // Update the option currently displayed in
        the version selector.
        versionSelector.selectedIndex = i;
    }
};

// Navigate to the corresponding page when selecting
an option from the version selector.
versionSelector.onchange = function () {
    window.location.href = versionSelector.value
}
}

```

- **default-products** (the banking products):
 - CML-DP
 - async-install.bat
 - CML-DBP.zip
- **reset** (it contains SQL procedures to delete records from the database):
 - BAN-DMY
 - async-install.bat
 - BAN-RST.zip
- An installation guide labelled `install-notes.txt`.

1 Import the Packages

Import the packages using [Digital Solutions Packages](#) found within the `solution` folder.

2 Install the Solution

1. In the `reset` folder, add the latest syspackdeployer.
2. Edit the installer and run it in admin mode. The `reset` folder resets the security roles in B2C.
3. In the `solution` folder, add the latest syspackdeployer.
4. Edit the installer and run it in admin mode.

3 Set up the additional files

Open the `additional-files` folder. It contains the folders: `custom`, `custom-on-demand`, `UploadEBS` and the files: `keys-for-b2c-txt`, `proxy-routes.js`, and `staticcontent-keys.text`.

Copy/upload the `custom` folder in the B2CPortal folder.

Copy/upload the content of the `UploadEBS` in your UploadEBS folder.

Add the keys from `keys-for-b2c` file in the `web.config` file of the B2CPortal and change it with your values.

Core Banking Integration

For the Core Banking integration, set the value to 1 (true).

If you don't want to integrate the core banking system, set the key `CB-use-integration` to 0 (false) and you can leave the other keys with the default values.

Keys

```
<add key="B2CProxy" value="LinkToProxy" />
<add key="CB-use-integration" value="1" />
<add key="CB-URL" value="core-banking-api-baseurl" />
<add key="CB-user" value="core-banking-api-username" />
<add key="CB-pass" value="core-banking-api-password" />
<add key="CB-bank-code" value="core-banking-api-defaultBank" />
```

Add the keys needed for the Cognitive Processors and SMTP in the `web.config` file of the B2CPortal.

Add the keys needed for the Cognitive Processors in the serviceSettings of the Jobserver.

Add the proxy routes in proxy `config` file.

Restart the application pools/services for B2CPortal and B2CProxy.

Video

Within the web.config file, add the code:

```
<remove fileExtension=".mp4"/>
<mimeMap fileExtension=".mp4" mimeType="video/mp4" />
```

4 Install default-products to add the banking products

In the `solution` folder, add the latest syspackdeployer.

Edit the installer and run it in admin mode.

Configurations

Automation is a powerful way to make business processes more time-efficient. Automation processors can help achieve exactly that. They can be configured to be consumed by any digital journey using the FintechOS Studio. The SME Mobile Lending digital journey is comprised of several automation processors that ensure a smooth process. Several banking products were configured to offer the customer an actual product, with a tenor, maturity date, interest, and commission. This section of the user guide unveils information about which code snippet was used where, and what it enables in the journey.

Furthermore, there are different statuses to let the user know at which stage they are during the journey. To create a personalized SME Mobile Lending digital journey to fit your banking requirements and offerings, more automation processors and other features are available in the Innovation Studio to build a customer-centric digital flow.

Additionally, you can modify the user interface to fit your brand. There are several modifications that can be made without the need for writing code. For more details, see [Digital Experience Portals](#). However, if you need advanced modifications editing the CSS file found by accessing Innovation Studio > Digital Experience > Digital Journeys > Form Driven Flow > the record you need to modify > General, and scroll down to the field Style Sheets.

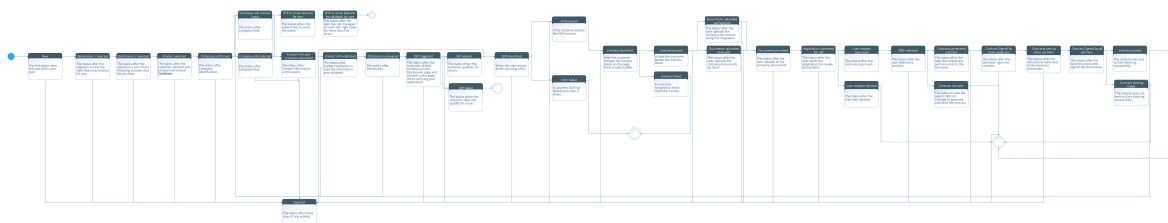
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Configuring the Business Workflows Processor

The Business Workflows Processor uses rules-driven business transitions between statuses to help a bank employee see the status of the application. With this data, a institution can review analytics for performance or customer experience such as a **sales funnel**¹. It renders the status of a record in the workflow and provides processing that must occur for it to move to the next step in its life-cycle. For the SME Mobile Lending, there is an end-to-end, self-service flow.

Access Innovation Studio > Automation Blocks > Business Workflows > **FTOS_BASME_CorporateLoan**. It is attached to the entity **FTOS_BASME_Loan**. These are the following configurations:



Click [here](#) to download the diagram.

The statuses are changed by the server script named "FTOS_BASME_ChangeStatusApplicationLoan" on page 168.

Status	Description
New	The first status after the user clicks Let's start .
Destination 1 selected	The status after the selection in " 2 Find the right financing offer" on page 13 .

¹It is the process prospects go through to become a customer. Each stage of the funnel takes the buyer one step closer to making a purchase.

Status	Description
Destination 2 selected	The status after the selection in "3 Let's find a financing offer" on page 15 .
Product selected	The status after the customer selected one product and clicked Continue.
Company confirmed	The status after "Company Identification" on page 23 .
Company questions answered	The status after "Company Details" on page 30 .
Company role selected/ Company role manual input	The status after "Applicant Details" on page 33 depending on how the role was selected automatically or manually.
Contact info and consents submitted	The status after "Contact Information and Consent" on page 36 .
Contact info validated	The status after "Contact Validation" on page 39 in case the information was validated.
OTP or email failed to be sent	The status when the system fails to send the codes.
OTP or email failed to be validated by user	The status after the user has not managed to insert the right code for more than five times.
Disclosures answered	The status after "Disclosures" on page 40 .
DIP triggered	The status after the customer clicked Continue on the Disclosures page and arrived on the page We're verifying your application.
DIP passed	The status when the customer qualifies for a loan.
DIP failed	The status when the customer does not qualify for a loan.
OCR launched	When the user arrives at the scanning of ID.
OCR passed	The status after the user passes the OCR.
OCR failed	The status after the scanning of the ID has failed more than five times.
Liveness launched	The status after the user launches the step "Time to Take a Selfie" on page 58 .
Liveness passed	The status after the user passes the selfie.
Liveness failed	The status after the user does not pass the selfie more than five times.
Documents uploaded manually	The status after the user uploads the company documents by hand.
Documents uploaded via Experian	The status after the user uploads the company documents using the integration.

Status	Description
Documents provided	The status after the user uploads all the company documents.
Application submitted for UW	The status after the user sends the application for review by the bank.
Loan request approved	The status after the loan was approved.
Loan request rejected	The status after the loan was rejected.
Offer selected	The status after the user selected a product.
Contracts generated and sent	The status after the step documents are sent via email to the borrower.
Contract not sent	The status in case the system did not manage to generate and send the contract.
Contract Signed by main applicant	The status after the borrower signs the contract.
Contracts sent to other partners	The status after the documents were sent to the business associates.
Contract Signed by all partners	The status after the business associates signed the documents.
Contract posted	The contract was sent to Core Banking successfully.
Contract posting failed	The contract was not sent to Core Banking successfully.

Status	Description
Expired	<p>The status when an application passes the time allocated for its finish.</p> <p>The scheduled job <code>FTOS_BASME_SetSMELoanApplicationExpired</code> runs at 12 a.m. to turn the applications that are older than three days with the statuses:</p> <ul style="list-style-type: none"> • New • Destination 1 selected • Destination 2 selected • Product selected • Company confirmed • Company questions answered • Company role selected/ Company role manual input • Contact info and consents submitted • Contact info validated • Disclosures answered • DIP triggered • DIP passed • OCR launched • OCR passed • Liveness launched • Liveness passed • Documents uploaded manually • Documents uploaded via Experian • Documents provided

Status	Description
	<ul style="list-style-type: none"> • Application submitted for UW • Loan request approved • Offer selected • Contracts generated and sent • Contract Signed by main applicant • Contracts sent to other partners • Contract posted • Contract posting failed.

For more details, see [Business Workflow](#).

Configuring the Banking Products

This processor creates and maintains products that are used in FintechOS form driven flows and later in digital journeys. To visualize and to administer them, access the dedicated menu for **Product Factory** within the Innovation Studio. The four custom products are included in the solution with pre-loaded filters and ranking systems. They are a great place to start, but if for some reason you need further configurations, you have limitless possibilities to modify, extend or define new custom offerings for your customers. It offers configurations such as product dimensions for commissions, interests, and product filters to navigate through the list of products created based on a filtering scope. The SME Mobile Lending journey has:

- BP_SMEL_01 Seasonal Trading Loan
- BP_SMEL_02 Start-up Unsecured Loan
- BP_SMEL_03 Flexible Unsecured Loan
- BP_SMEL_CS Revolving Credit Limit.

1 BP_SME_01 Seasonal Trading Loan

This banking product has the following configurations:

Main Info

Fields	Description	Example
Product Type	Select from the list the entry bank account.	Term Loan
Banking Product code	Insert a unique code.	BP_SME_01
Name	Insert a suggestive name.	Seasonal Trading Loan
Start date	Select the date when to have the product valid.	11/17/2021
End date	Select the date when the product availability ends.	11/29/2029
Description	The depiction of the product.	For seasonal needs with flexible repayments.

Details

Fields	Description	Example
Banking Account Type	Choose Loan Term Account from the list.	Loan Term Account
Autodisbursement	The amount is automatically disbursed in the account.	True.
Interest Payment Type	Choose one from the following: <ul style="list-style-type: none"> • Monthly • Maturity • Yearly • Daily • Quarterly. 	Monthly

Fields	Description	Example
Payment Schedule Types	The type of payments had by the borrower for the loan.	Equal Installment Monthly 360
Product Destination Types	The destination of the loan.	Seasonal Trading
Associated Products	The additional products correlated.	Revolving Credit Limit

Availability

Fields	Description	Example
Currency	Choose the currency for this banking product.	EUR
Period Type	Choose one: <ul style="list-style-type: none"> • Days • Weeks • Months • Years 	Months
Minimum Period	This is the minimum duration of the product mentioned in the contract.	1
Maximum Period	This is the maximum duration of the product mentioned in the contract.	60
Minimum Amount	This is the minimum amount of the product for which the bank opens a contract.	1000
Maximum Amount	This is the maximum amount of the product for which the bank opens a contract.	10000

Dimensions

Grid	Value
Interests & Commissions	Seasonal Trading Loan
Discounts	Income Receiving SMEL

Grid	Value
Questions	<ul style="list-style-type: none"> • How many signatures are or will be associated with the business? • Have you, your business or your partners been declared bankruptcy in the past 6 years? • Have you or your business partners had any County Court Judgements registered against you?

2 BP_SME_L_02 Start-up Unsecured Loan

This banking product has the following configurations:

Main Info

Fields	Description	Example
Product Type	Select from the list the entry bank account.	Term Loan
Banking Product code	Insert a unique code.	BP_SME_L_02
Name	Insert a suggestive name.	Start-up Unsecured Loan
Start date	Select the date when to have the product valid.	16/11/2021
End date	Select the date when the product availability ends.	29/11/2029
Description	The depiction of the product.	Fixed rates with grace period.

Details

Fields	Description	Example
Banking Account Type	Choose Loan Term Account from the list.	Loan Term Account
Autodisbursement	The amount is automatically disbursed in the account.	True.

Fields	Description	Example
Interest Payment Type	<p>Choose one from the following:</p> <ul style="list-style-type: none"> • Monthly • Maturity • Yearly • Daily • Quarterly. 	Monthly
Payment Schedule Types	The type of payments had by the borrower for the loan.	Equal Installment Monthly 360
Product Destination Types	The destination of the loan. These are used for the profiling of the customer and to offer them a tailored product for their financing needs.	<ul style="list-style-type: none"> • Bill or Tax payment • Cashflow headroom • Debt Refinancing • Equipment Purchase • Facilities improvement • Seasonal Trading • Stock Purchase
Associated Products	The additional products correlated.	Revolving Credit Limit

Availability

Fields	Description	Example
Currency	Choose the currency for this banking product.	EUR
Period Type	Choose one: <ul style="list-style-type: none"> • Days • Weeks • Months • Years 	Months
Minimum Period	This is the minimum duration of the product mentioned in the contract.	1
Maximum Period	This is the maximum duration of the product mentioned in the contract.	60
Minimum Amount	This is the minimum amount of the product for which the bank opens a contract.	1000
Maximum Amount	This is the maximum amount of the product for which the bank opens a contract.	10000

Dimensions

Grid	Value
Interests & Commissions	Start-up Unsecured Loan
Discounts	Income Receiving
Questions	<ul style="list-style-type: none"> • How many signatures are or will be associated with the business? • Have you, your business or your partners been declared bankruptcy in the past 6 years? • Have you or your business partners had any County Court Judgements registered against you?

3 BP_SME_L_03 Flexible Unsecured Loan

This banking product has the following configurations:

Main Info

Fields	Description	Example
Product Type	Select from the list the entry bank account.	Term Loan
Banking Product code	Insert a unique code.	BP_SME_L_03
Name	Insert a suggestive name.	Flexible Unsecured Loan
Start date	Select the date when to have the product valid.	11/17/2021
End date	Select the date when the product availability ends.	11/29/2029
Description	The depiction of the product.	Floating rates with low interest fees

Details

Fields	Description	Example
Banking Account Type	Choose Loan Term Account from the list.	Loan Term Account
Autodisbursement	The amount is automatically disbursed in the account.	True.
Interest Payment Type	Choose one from the following: <ul style="list-style-type: none"> • Monthly • Maturity • Yearly • Daily • Quarterly. 	Monthly
Payment Schedule Types	The type of payments had by the borrower for the loan.	Equal Installment Monthly 360

Fields	Description	Example
Product Destination Types	The destination of the loan. These are used for the profiling of the customer and to offer them a tailored product for their financing needs.	<ul style="list-style-type: none"> • Bill or Tax payment • Cashflow headroom • Debt Refinancing • Equipment Purchase • Facilities improvement • Seasonal Trading • Stock Purchase
Associated Products	The additional products correlated.	Revolving Credit Limit

Availability

Fields	Description	Example
Currency	Choose the currency for this banking product.	EUR
Period Type	Choose one: <ul style="list-style-type: none"> • Days • Weeks • Months • Years 	Monthly
Minimum Period	This is the minimum duration of the product mentioned in the contract.	1

Fields	Description	Example
Maximum Period	This is the maximum duration of the product mentioned in the contract.	60
Minimum Amount	This is the minimum amount of the product for which the bank opens a contract.	500
Maximum Amount	This is the maximum amount of the product for which the bank opens a contract.	100000

4 BP_SMEL_CS Revolving Credit Limit

This banking product has the following configurations:

Main Info

Fields	Description	Example
Product Type	Select from the list the entry bank account.	Term Loan
Banking Product code	Insert a unique code.	BP_SMEL_CS
Name	Insert a suggestive name.	Revolving Credit Limit
Start date	Select the date when to have the product valid.	11/17/2021
End date	Select the date when the product availability ends.	11/29/2029
Description	The depiction of the product.	Hassle-free accessible cash for daily needs

Details

Fields	Description	Example
Banking Account Type	Choose Loan Term Account from the list.	Loan Term Account
Auto disbursement	The amount is automatically disbursed in the account.	True.

Fields	Description	Example
Interest Payment Type	Choose one from the following: <ul style="list-style-type: none"> • Monthly • Maturity • Yearly • Daily • Quarterly. 	Monthly
Payment Schedule Types	The type of payments had by the borrower for the loan.	Equal Installment Monthly 360
Product Destination Types	The destination of the loan. These are used for the profiling of the customer and to offer them a tailored product for their financing needs.	<ul style="list-style-type: none"> • Bill or Tax payment • Cashflow headroom • Debt Refinancing • Equipment Purchase • Facilities improvement • Seasonal Trading • Stock Purchase
Associated Products	The additional products correlated.	Revolving Credit Limit

Availability

Fields	Description	Example
Currency	Choose the currency for this banking product.	EUR
Period Type	Choose one: <ul style="list-style-type: none"> • Days • Weeks • Months • Years. 	Monthly
Minimum Period	This is the minimum duration of the product mentioned in the contract.	1
Maximum Period	This is the maximum duration of the product mentioned in the contract.	60
Minimum Amount	This is the minimum amount of the product for which the bank opens a contract.	500
Maximum Amount	This is the maximum amount of the product for which the bank opens a contract.	20000

Questions

Access Innovation Studio > **Product Factory > Banking Product Dimensions > Questions > Banking Product Questions List**. These questions are used to determine the eligibility of the customer in the ["Disclosures" on page 40](#) step. They are used in the formula ["Knockout_CML" on page 126](#).

Question 1

Fields	Value
Question	Have you or your business partners had any County Court Judgements registered against you?
Question Type	Eligibility Questions
Is for solicitant?	true

Fields	Value
Is for coborrower?	null
Answer Entity	FTOS_BNKAP_CorporateApplicantData
Answer Field	haveCourtJudgements

Question 2

Fields	Value
Question	How many signatures are or will be associated with the business?
Question Type	Eligibility Questions
Is for solicitant?	true
Is for coborrower?	null
Answer Entity	FTOS_BNKAP_CorporateApplicantData
Answer Field	numberSignaturesAssociatedId

Questions 3

Fields	Value
Question	Have you, your business or your partners been declared bankruptcy in the past 6 years?
Question Type	Eligibility Questions
Is for solicitant?	true
Is for coborrower?	null
Answer Entity	FTOS_BNKAP_CorporateApplicantData
Answer Field	haveDeclaredBankruptcy

For more details about this automation processor, see [Banking Product Factory v3.0](#).

Digital Documents Processor

The SME Mobile Lending solution uses in the flow documents which are signed by the customer and business partners at the end of the journey. The templates are imported with the package. Furthermore, these files are attached to the digital documents which use SQL procedures as source and finally, reports are attached to the entity pointing to the documents. They are used in the flow via ["Configuring the Banking Products" on page 109](#) and via actions of generating digital documents and added to the UI, where they become accessible to the customer.

1. Open Innovation Studio.
2. Click the main menu icon at the top left corner.
3. Click **Automation Blocks > Digital Documents**. The **Digital Documents List** page appears.

Name	Data Source Type	Stored Procedure	Template
SMELoan Agreement	Entity	N/A	Unsecured SME Loan Agreement
CorporateLoanScheduleDoc	SQL Stored Procedure	[ebs].[FTOS_BASME_LoanScheduleDoc]@Id	schedule-template

4. Attach a report to the entity pointing to the document by navigating to **Analytics**.
5. Select **Reports**. The **Reports List** page appears.

Name	Scope	Type	Entity	Output Method	Destination Field	Destination File Name	Report Render Format	Report Item
SME Loan Agreement	Entity	Document	FTOS_BNKAP_ApplicationDocument	Attachment	document File	contract	PDF	SMELoan Agreement

Name	Scope	Type	Entity	Output Method	Destination Field	Destination File Name	Report Render Format	Report Item
CorporateLoanSchedule Doc	Entity	Document	FTOS_BNKAP_ApplicationDocument	Attachment	document File	schedule	PDF	CorporateLoanSchedule Doc

Configuring the Formulas

Business Formulas processes different inputs from your digital journey in order to generate desired outputs. By inserting arguments and using them in steps, the system creates complex calculations to be triggered in a flow. The formulas take data either from what the SME representative has declared in "[Company Details](#)" on page 30 or from a third-party connector. FintechOS has developed several connectors with access to platforms that hold financial information. For this solution, FintechOS recommends installing [Company House](#) and [Experian](#) to collect additional data that is accurate. The list with all the connectors developed by the company is found [here](#). Choose the most suitable for your needs.

Business Formulas

For this solution, five formulas were developed to determine whether or not the potential customer is eligible for the amount requested and for even a bigger amount and a credit limit as well.

Access Innovation Studio > Automation Blocks > Business Formulas > Formulas.

- Knockout_CML
- Scoring_CML
- OfferCalculation_CML
- FinancialAnalysis_CML
- CrossSell_CML.

The first formula executed is Knockout_CML triggered after the step "[Disclosures](#)" on [page 40](#). Then, the system calculate the **scoring**¹ of the customer. If the score of the customer matches the minimum value needed, the system calculates the offers for

¹Credit scoring is a statistical analysis performed by lenders and financial institutions to determine the creditworthiness of a person or a small, owner-operated business.

the requested offer and the maximum offer. Then, the **DTI**¹ is calculated within the FinancialAnalysis_CML and a decision is made. Lastly, depending on the maximum debt the customer can take on a credit limit is approved or denied.

Rejection Criteria

Based on the answers from the step ["Disclosures" on page 40](#), for the questions:

- Have you or your business partners had any **County Court Judgements**² registered against you in the past 3 years?
- Have you, your business or your partners been declared bankruptcy in the past 6 years?

If the borrower selected **Yes** for both, the system rejects the application.

County Court Judgment has two statuses:

- Settled
- Not settled (the loan is denied).

If it is settled, then the system needs to record the number of County Court Judgment in the past 12 months.

If there are two more County Court Judgments, then the system registers the total value. If the total value is bigger than 1000, the loan is denied.

The date and the amount to be paid are recorded as well from a connector. For this solution, a series of connectors are possible to be integrated: [KeysFin Connector](#)/ [Dun and Bradstreet Connector](#)/ [Experian](#) or even other third-party platforms.

¹The Debt-to-Income ratio (DTI) is a personal indicator of a good balance between debt and income. Monthly debt payment amount / Monthly gross amount (before taxes and other deductions).

²You may get a county court judgment (CCJ) or high court judgment if someone takes court action against you (saying you owe them money).

Knockout_CML

Execution Order	Name	Source of Data	Master Type	Subtype	Calculation Type	Formula
1	KNOCKOUT_HaveCourtJudgements	It is taken from a third-party connector. Fintech OS suggests using Experian.	Simple Type	Text	Normal	result = DataSet ("KNOCKOUT_CML_HaveCourtJudgements", ("haveCourtJudgements", haveCourtJudgements));
2	KNOCKOUT_HaveDeclaredBankruptcy	It is taken from a third-party connector. Fintech OS suggests using Company House.	Simple Type	Text	Normal	result = DataSet ("KNOCKOUT_CML_HaveDeclaredBankruptcy", ("haveDeclaredBankruptcy", haveDeclaredBankruptcy));

Execution Order	Name	Source of Data	Master Type	Subtype	Calculation Type	Formula
3	KNOCKOUT_Decision	It is calculated by Business Formulas.	Simple Type	Text	Normal	<pre> if (KNOCKOUT_ HaveCourtJudge ments == "Approved" && KNOCKOUT_ HaveDeclaredBan krupcy == "Approved") result = "Approved"; else result = "Rejected"; </pre>

Eligibility Criteria

The result of whether or not an SME may take on a loan is comprised of the **FICO**¹ score and the application score. The FICO score must be equal or over 700 to be approved, and the application score must be equal or over 160, otherwise the SME is not eligible for the sum.

Scoring criteria

Based on the values for the following information, an SME may be eligible for a loan:

NOTE

These values can be changed using the Innovation Studio to fit the bank's requirements.

- Social capital
- Number of employees
- Turnover in the past 12 months

¹The FICO score is an algorithm used internationally, mainly by banks, to determine the degree of risk for a person who applies for a loan, and is collected by the Credit Bureau.

- Business legal status
- Company establishment
- Trading on credit
- Expected annual debt repayments over the last 12 months
- Type of industry.

Scoring_CML

Execution Order	Name	Source of Data	Master Type	Subtype	Calculation Type	Formula
1	SCORE_SocialCapital	<p>Input from the customer from the "Company Details" on page 30 page.</p> <p>Verified with the third-party connector of your choice (FintechOS used Company House).</p> <p>Additionally, a bank employee can check using the</p>	Simple Type	Whole Number	Normal	<pre>result = DataSet ("SCORING_CML_SocialCapital", ("socialCapital", socialCapital));</pre>

Execution Order	Name	Source of Data	Master Type	Subtype	Calculation Type	Formula
		balance sheet.				
2	SCORE_EmployeesNo	<p>Input from the customer from the "Company Details" on page 30 page.</p> <p>Verified with the third-party connector of your choice (FintechOS used Company House).</p>	Simple Type	Whole Number	Normal	<pre>result = DataSet ("SCORING_CML_EmployeesNo", ("numberOfEmployees", employeesNo));</pre>

Execution Order	Name	Source of Data	Master Type	Subtype	Calculation Type	Formula
3	SCORE_Turnover	Input from the customer from the "Company Details" on page 30 page. Verified from the Profit and Loss Statement ¹ .	Simple Type	Whole Number	Normal	result = DataSet ("SCORING_CML_Turnover", ("turnover", turnover));
4	SCORE_LegalStatus	Verified with the third-party connector or of your choice (Fintech OS used Company House).	Simple Type	Whole Number	Normal	result = DataSet ("SCORING_CML_LegalStatus", ("legalStatusId", legalStatus));

¹The P&L statement refers to a financial statement that summarizes the revenues, costs, and expenses incurred during a specified period, usually a quarter or fiscal year.

Execution Order	Name	Source of Data	Master Type	Subtype	Calculation Type	Formula
5	SCORE_CompanyEstablishment	Verified from the Profit and Loss Statement.	Simple Type	Whole Number	Normal	result = DataSet ("SCORING_CML_CompanyEstablishment", ("companyEstablishmentId", companyEstablishment));
6	SCORE_TradeCreditCustomer	Input from the customer from the "Company Details" on page 30 page. Verified from the Balance Sheet.	Simple Type	Whole Number	Normal	result = DataSet ("SCORING_CML_TradeCreditCustomers", ("tradeCreditCustomerId", tradeCreditCustomer));

Execution Order	Name	Source of Data	Master Type	Subtype	Calculation Type	Formula
7	SCORE_ExpectedAnnualDebt	Input from the customer from the "Company Details" on page 30 page. Verified from the Profit and Loss Statement.	Simple Type	Whole Number	Normal	result = DataSet ("SCORING_CML_ExpectedAnnualDebt", ("expectedAnnualDebt", expectedAnnualDebt/netProfit));
8	SCORE_SicCodes	Data set imported in Business Formula.	Simple Type	Text	Normal	result = DataSet ("SCORING_CML_SICCodes", ("sicCodes", sicCodes));
9	SCORE_Industry	Data set imported in Business Formula.	Simple Type	Whole Number	Normal	result = DataSet ("SCORING_CML_Industry", ("industry", SCORE_SicCodes));

Execution Order	Name	Source of Data	Master Type	Subtype	Calculation Type	Formula
10	ApplicationScore	It is calculated by Business Formulas.	Simple Type	Whole Number	Normal	$\text{result} = \text{SCORE_SocialCapital} + \text{SCORE_EmployeesNo} + \text{SCORE_Turnover} + \text{SCORE_LegalStatus} + \text{SCORE_CompanyEstablishment} + \text{SCORE_TradeCreditCustomer} + \text{SCORE_ExpectedAnnualDebt} + \text{SCORE_Industry};$
11	SCORE_FICOScore	For this solution, it is hardcoded, but it should be taken from FICO or a third-party connect or such as Experian.	Simple Type	Text	Normal	$\text{if (FICOScore} \neq 0) \\ \text{result} = \text{DataSet ("FICOScoreDecision", ("FICOScore", FICOScore));} \\ \text{else result} = \text{"Approved"};$
12	ApplicationScore Decision	It is calculated by Business Formulas.	Simple Type	Text	Normal	$\text{result} = \text{DataSet ("SCORING_CML_ApplicationScore", ("ApplicationScore", ApplicationScore));}$

Execution Order	Name	Source of Data	Master Type	Subtype	Calculation Type	Formula
13	Decision	It is calculated by Business Formulas.	Simple Type	Text	Normal	<pre> if (SCORE_ FICOScore == "Rejected" ApplicationScoreDe cision == "Rejected") result = "Rejected"; else if (SCORE_ FICOScore == "Derogation" ApplicationScoreDe cision == "Derogation") result = "Derogation"; else result = "Approved"; </pre>

The SME Matrix Calculations

Steps for the scoring matrix

1. The system calculates the applicant score by adding the attributes that the customer declared and matching them to the values in the matrix.
2. The system fetches the FICO from the data set, but it should be taken from FICO or a third-party connector such as Experian score.
3. The formula is triggered to see if the scoring value is valid for approval of the loan.
4. Fit the applicant score into the scoring category (from A to D).
5. Using the scoring result, the system determines the maximum DTI for the customer by reading the DTI matrix.

DTI Calculations and Offers

Two calculations are done for the offers:

- Requested offer: the amount and period inserted by the user in the "Simulation" on [page 17](#) step.
- Maximum offer: the maximum amount that the DTI allows by the system and the maximum period for the loan.

NOTE

The income for the SME used in the calculations is the monthly net profit.

The calculations are:

1. Determine the current DTI using the expected annual debt repayments over the last 12 months. This info is given on the disclosures screen. The system divides that value by 12 (since it's annualized) and compares it to the monthly net profit, i.e. $\text{monthly profit} / \text{monthly repayments}$.
2. Check if the current DTI is above the maximum DTI permitted by the matrix.
 - If it is bigger, then the application is rejected.
 - If it is smaller, the system calculates the offer's eligibility.

The maxDTI has as input:

- client category (performance)
- currency amount
- interest type
- loan maturity.

FinancialAnalysis_CML

Execution Order	Name	Master Type	Subtype	Calculation Type	Formula
1	ClientCategory	Simple Type	Text	Normal	result = DataSet ("FINCALC_CML_ClientCategory", ("ApplicationScore", applicationScore));
2	MaxDTI	Simple Type	Decimal	Normal	result = DataSet ("FINCALC_CML_MaxDTI", ("InterestType", interestType), ("Currency", currency), ("ClientCategory", ClientCategory));
3	DTI	Simple Type	Decimal	Normal	result = loansMonthlyPayment / income;
4	Decision	Simple Type	Text	Normal	if (MaxDTI < DTI) result = "Rejected"; else if (scoringDecision == "Rejected" scoringDecision == "Derogation") { result = "Rejected"; } else result = "Approved";

Calculating offers**Requested offer**

It represents the exact amount over the requested period of time. The system calculates:

- the new proposed DTI that includes the monthly instalment determined by the requested offer. The new DTI is calculated by adding all the monthly repayments of the user (calculated in "[Disclosures](#)" on page 40). The system adds the new repayment for the current offer, then, it divides this number to the monthly net profit.
- If the NewDTI is smaller than MaxDTI, then the offer is eligible, and it is displayed to the customer.

Maximum offer

It represents the maximum amount the bank can offer over the maximum period of time. The maximum monthly instalment available for the customer is calculated using the formula:

$$\text{MaxInstallment} = \text{Income} * \text{maxDTI} - (\text{Other installments} + \text{Monthly payments for Credit limits})$$

Afterward, the loan amount is determined. The period is set at the maximum value available for the product. The loan amount is calculated using the formula:

$$\text{PV}(\text{interest rate} / 12, \text{tenor}, -\text{maxInstallment})$$

The result is the maximum amount the SME is eligible over the max tenure.

OfferCalculation_CML

Execution Order	Name	Master Type	Subtype	Calculation Type	Formula
1	newDTI	Simple Type	Decimal	Normal	result = (loansMonthlyPayment + monthlyInstallment)/income;
2	maxInstallment	Simple Type	Decimal	Normal	result = income * maxDTI - loansMonthlyPayment;

Execution Order	Name	Master Type	Subtype	Calculation Type	Formula
3	maxOffer	Simple Type	Decimal	Normal	<pre> var value = maxInstallment * ((1 - (1 / (POWER(1 + interestRate / 12, loanPeriod)))) / (interestRate / 12)); if (value < maxLoanAmountProd) result = value; else result = maxLoanAmountProd; </pre>
4	response	Simple Type	Text	Normal	<pre> if (newDTI <= maxDTI) { if (loanAmount >= maxOffer) result = "New offer"; else result = "Max offer"; } else if (maxOffer >= minLoanAmountProd) result = "New offer"; else result = "No offer"; </pre>

Revolving Credit Limit

For this product, the system calculates the maximum offer using the **DTI**¹ limitations from the scoring matrix. When the maximum offer amount is bigger than 5000 EURO, then the revolving credit limit is displayed in the journey.

¹The Debt-to-Income ratio (DTI) is a personal indicator of a good balance between debt and income. Monthly debt payment amount / Monthly gross amount (before taxes and other deductions).

CrossSell_OVL

It determines if the customer is eligible (Approved or Rejected) to get the associated product of the main banking product based on the available DTI, the system calculates the max amount they can get, based on min and max defined at product level and return Approved if the calculated financed amount is at least equal to the minimum defined at product level.

Input

```
{
  "income": 50000,
  "maxProductAmount": 100000,
  "maxDTI": 0.2,
  "minProductAmount": 1000,
  "DTI": 0.1,
  "interestRate": 0.12
}
```

Execution Order	Name	Master Type	Subtype	Calculation Type	Formula
1	availableDTI	Simple Type	Decimal	Normal	result = maxDTI - DTI;
2	maxInstallment	Simple Type	Decimal	Normal	result = income * availableDTI;
3	offer	Simple Type	Whole Number	Normal	var value = maxInstallment * ((1 - (1 / (POWER(1 + interestRate / 12, 12)))) / (interestRate / 12)); if (value < maxProductAmount) result = value; else result = maxProductAmount;

Execution Order	Name	Master Type	Subtype	Calculation Type	Formula
4	decision	Simple Type	Text	Normal	<pre> if (offer >= minProductAmount) { result = "Approved"; } else result = "Rejected"; </pre>

For more details, see [Business Formulas](#).

Configuring the Flow Settings

This menu part of Innovation Studio is used to build processors used in the journey for specific actions that are triggered such as Face Recognition and Computer Vision and contact validation. It is easy to modify any parameter of the processor by accessing the dedicated processor settings and changing the value from the key-value pair.

Access **Innovation Studio > Digital Experience > Digital Journeys > Processor Settings > SMELoan**.

Flow settings	Name	Description	Digital Processor Type
SMELoan	BusinessPartnersSignaturesRoles	It maps the roles of the company representative.	
	Defaults	It sets the default currency symbol to euro.	
	FTOS_DFP_ContactOTP	It is used for the validation of the contact information.	OTP
	FTOS_DFP_OTP_SignPapers	It is used for the signature of the final document.	OTP
	Sliders_Parameters	It is used for the simulation step for the sliders.	
	SME_RequestedCompanyDocuments	It has the list with the documents the representative must upload.	
	SMEL_Liveness	It is used for the selfie step.	Face Recognition
	SMEL_Liveness_BP	It is used for the selfie during the "Partners' Flow" on page 79.	Face Recognition
	SMEL_OCR_DL	It is used for Computer Vision, for the scanning of the driver's license.	OCR
	SMEL_OCR_DL_BP	It is used for Computer Vision, for the scanning of the driver's license during the "Partners' Flow" on page 79.	OCR
	CrossSellParams	It contains the value for the minimum amount for offering and the list of products displayed in the step "Cross-Selling Step" on page 92.	
	DisbursementMessages	It contains the messages displayed on the last screen depending on the day of the week.	

Flow settings	Name	Description	Digital Processor Type
	FAQ	It is used for the Frequently Asked Questions. You can add or delete existing text. It is called in the client library FTOS_BASME_SMEFAQ.	
	FTOS_DFP_OTP_SignPapers_BP	It contains the settings for signing the documents via SMS for the business partners.	OTP
	FTOS_DFP_OTP_SignPapers_BP_Email	It contains the settings for the signature via email for the business partners.	OTP
	SMELOCR_ID	It contains the settings for the scanning of the identity document.	OCR
	SMELOCR_ID_BP	It contains the settings for the scanning of the identity document of the business partners.	OCR

BusinessPartnersSignaturesRoles

The roles needed by the business associates to sign on the loan contract. It is used in ["FTOS_BNKAP_GetBusinessSignaturesSMELoan"](#) on page 174.

```
{
  "roles": ["director"]
}
```

Defaults

The currency of the loan. It is used in:

- CML-I in the form driven flow FTOS_DFP_OTP_SMELOCR
- CML-I in the form driven flow FTOS_DFP_OTP_SmsContractSMELOCR

- CML-I in the form driven flow FTOS_DFP_SMEL_ContactOTP
- CML-I in the form driven flow FTOS_BASME_Loan in the step CompanyDetails.

```
{
  "defaultCurrencySymbol": "€"
}
```

FTOS_DFP_ContactOTP

The **Name** is the channel used to send the OTP. It contains four digits. The maximum retries for the insertion of the OTP is 5. The time the borrower has to insert the code is 60 seconds for the SMS code and 120 for the email code. In case of success, they are presented with the form driven flow named FTOS_BNKAP_ContactInfoSMEL, the step Redirect. In case of failure, with the form driven flow FTOS_BNKAP_ContactInfoSMEL, the step Fail.

```
{
  "SourceEntityName" : "FTOS_BNKAP_RetailApplicantData",
  "Channels": [
    {
      "Name": "Sms",
      "RelatedEntityName": "FTOS_BNKAP_RetailApplicantData",
      "RelatedAttribute": "mobilePhone",
      "LookupAttribute": "FTOS_BNKAP_RetailApplicantDataid",
      "OTPDigitsNumber": 4,
      "MaxRetry": 5,
      "MaxResendRetry": 5,
      "MaxResendRetryIntervalSeconds": 60
    },
    {
      "Name": "Email",
      "RelatedEntityName": "FTOS_BNKAP_RetailApplicantData",
      "RelatedAttribute": "email",
      "LookupAttribute": "FTOS_BNKAP_RetailApplicantDataid",
      "OTPDigitsNumber": 4,

```

```

        "MaxRetry": 5,
        "MaxResendRetry": 5,
        "MaxResendRetryIntervalSeconds": 120
      },
    ],
    "ValidTimeIntervalMinutes": 3,
    "maskNextStepURLChanged": {
      "entity": "FTOS_BNKAP_RetailApplicantData",
      "form": "FTOS_BNKAP_ContactInfoSME",
      "section": "Contact Info SME"
    },
    "maskNextStepURLSuccess": {
      "entity": "FTOS_BNKAP_RetailApplicantData",
      "form": "FTOS_BNKAP_ContactInfoSMEL",
      "section": "Redirect"
    },
    "maskNextStepURLFail": {
      "entity": "FTOS_BNKAP_RetailApplicantData",
      "form": "FTOS_BNKAP_ContactInfoSMEL",
      "section": "Fail"
    },
    "businessWorkflow": {
      "entity": "FTOS_BASME_Loan",
      "bwAttribute": "corporateLoanId",
      "successStatus": "",
      "failedStatus": ""
    }
  }
}

```

FTOS_DFP_OTP_SignPapers

It contains the settings for the generation of the One-Time-Password sent to sign the documents. Modify the key-pair values such as the maximum number or retries the customer has. It is used in the:

- CML-I journey FTOS_BASME_Loan in the step ContractSigning
- CML-I journey FTOS_BNKAP_RetailApplicantData in the step BusinessPartenerSign.

```
{
```

```

    "SourceEntityName" : "FTOS_BNKAP_RetailApplicantData",
    "Channels": [
      {
        "Name": "Sms",
        "RelatedEntityName": "FTOS_BNKAP_
RetailApplicantData",
        "RelatedAttribute": "mobilePhone",
        "LookupAttribute": "FTOS_BNKAP_
RetailApplicantDataid",
        "OTPDigitsNumber": 6,
        "MaxRetry": 5,
        "MaxResendRetry": 5,
        "MaxResendRetryIntervalSeconds": 90
      }
    ],
    "ValidTimeIntervalMinutes": 3,
    "maskNextStepURLChanged": {
      "entity": "FTOS_BNKAP_RetailApplicantData",
      "form": "FTOS_BASME_OTPRedirect",
      "section": "Redirect"
    },
    "maskNextStepURLSuccess": {
      "entity": "FTOS_BNKAP_RetailApplicantData",
      "form": "FTOS_BASME_OTPRedirect",
      "section": "Redirect"
    },
    "maskNextStepURLFail": {
      "entity": "FTOS_BNKAP_RetailApplicantData",
      "form": "FTOS_BASME_OTPRedirect",
      "section": "Fail"
    },
    "businessWorkflow": {
      "entity": "FTOS_BASME_Loan",
      "bwAttribute": "corporateLoanId",
      "successStatus": " ",
      "failedStatus": " "
    }
  }
}

```

SME_RequestedCompanyDocuments

These are the documents needed to be uploaded by the borrower. It is used in the form driven flow FTOS_BNKAP_CompanyDocumentsSMEL in the step

Company Documents.

```
{
  "requestedDocumentsAttrs":
  ["businessFormationDocuments", "lastQuartersBalanceSheets",
  "plStatement"]
}
```

SME_Liveness

isLiveness marks the usage of the **Liveness** feature to detect the face of a human being with the use of a camera either smart-phone, webcam or any incorporated camera.

The maximum number of retries is five. In case of success, the user is directed to the form driven flow named FTOS_BNKAP_BusinessParterFR, the step Redirect, in case of failure to the form driven flow FTOS_BNKAP_BusinessParterFR the step Fail.

The minimum acceptance score can be 0.1 and the maximum is 1.

Settings

```
{
  "isLiveness": true,
  "DestinationEntityName": "FTOS_BNKAP_
RetailApplicantData",
  "SourceEntityName": "FTOS_BNKAP_RetailApplicantData",
  "SourceLookupDestinationName": "FTOS_BNKAP_
RetailApplicantDataid",
  "FileAttributeName": "picture0cr",
  "MaxRetry": 5,
  "MinimumAcceptedConfidence": 0.1,
  "maskNextStepURLSuccess": { "entity": "FTOS_BNKAP_
RetailApplicantData", "form": "FTOS_BNKAP_
FaceRecognitionSMEL", "section": "VideoRecording-Redirect"
},
  "maskNextStepURLFail": { "entity": "FTOS_BNKAP_
RetailApplicantData", "form": "FTOS_BNKAP_
FaceRecognitionSMEL", "section": "Fail" }
}
```


The minimum confidence value that the Face Recognition process has to generate in order to consider the compare result a success.

Mapping

```
{
  "Confidence": "confidence"
}
```

SME_Liveness_BP

isLiveness marks the usage of the **Liveness** feature to detect the face of a human being with the use of a camera either smart-phone, webcam or any incorporated camera.

The maximum number of retries is five. In case of success, the user is directed to the form driven flow named FTOS_BNKAP_BusinessParterFR, the step Redirect, in case of failure to the form driven flow FTOS_BNKAP_BusinessParterFR the step Fail.

The minimum acceptance score can be 0.1 and the maximum is 1.

```
{
  "isLiveness": true,
  "DestinationEntityName": "FTOS_BNKAP_
RetailApplicantData",
  "SourceEntityName": "FTOS_BNKAP_RetailApplicantData",
  "SourceLookupDestinationName": "FTOS_BNKAP_
RetailApplicantDataid",
  "FileAttributeName": "pictureOcr",
  "MaxRetry": 5,
  "MinimumAcceptedConfidence": 0.1,
  "maskNextStepURLSuccess": { "entity": "FTOS_BNKAP_
RetailApplicantData", "form": "FTOS_BNKAP_BusinessParterFR",
"section": "Redirect" },
  "maskNextStepURLFail": { "entity": "FTOS_BNKAP_
RetailApplicantData", "form": "FTOS_BNKAP_BusinessParterFR",
"section": "Fail" }
}
```

The minimum confidence value that the Face Recognition process has to generate in order to consider the compare result a success.

```
{
  "Confidence": "confidence"
}
```

SME_L_OCR_DL

These are the configurations done for the scanning of the driver's license.

Settings

```
{
  "SourceEntityName": "FTOS_BNKAP_RetailApplicantData",
  "Entities": [{
    "DestinationEntityName": "FTOS_BNKAP_
RetailApplicantData",
    "SourceEntityName": "FTOS_BNKAP_
RetailApplicantData",
    "SourceLookupDestinationName": "FTOS_BNKAP_
RetailApplicantDataId"
  },
  {
    "DestinationEntityName": "FTOS_BNKAP_
RetailApplicantAddress",
    "SourceEntityName": "FTOS_BNKAP_
RetailApplicantData",
    "SourceLookupDestinationName": "FTOS_BNKAP_
RetailApplicantDataId"
  }
],
  "FileAttributeName": "pictureOcr",
  "WaitUserConfirmation" : true,
  "ShowUploadPhotoButton" : true,
  "ShowTakePictureButton" : true,
  "RegisterFaceFromOCR" : true,
  "SessionExpiredMins" : 15,
  "RotateImage" : false,
  "CropImage" : false,
  "MaxRetry": 5,

  "OptionSets": [{
```

```

"OptionSetName": "Gender Type",
"MappingName": "Sex",
"OptionSetItems": {
  "Male",
  "Female"
}, {
  "M":
  "F":
}

"OptionSetName": "Citizenship",
"MappingName": "Nationality",
"OptionSetItems": {
  "ROU": "Romanian",
  "GBR": "UK"
}, {
}

"LookupEntities": [{
  "MappingName": "DistrictCode",
  "EntityName": "District",
  "AttributeKey": "Code"
}, {
  "MappingName": "Country",
  "EntityName": "FTOS_CMB_Country",
  "AttributeKey": "code"
}],

"Validations": [{
  "type": "IdROM",
  "Validations": "",

```

```

"CheckScriptName": "ValidateIdROM"
    }],

"AvailableDocumentTypes": [{
  "type": "IdRom",
  "DocumentType": "IdentityCard",
  "Country": "RO",
  "Provider": "Azure"
}, {
  "type": "IdBG",
  "DocumentType": "IdentityCard",
  "Country": "BG",
  "Provider": "Abbyy"
}, {
  "type": "Passport",
  "DocumentType": "MRZ",
  "Provider": "Azure"
}, {
  "type": "DrivingLicence",
  "DocumentType": "DrivingLicence",
  "Provider": "Azure"
}],

"maskNextStepURLSuccess": {
  "entity": "FTOS_BNKAP_RetailApplicantData",
  "form": "FTOS_BNKAP_VerifyIdentitySMEL",
  "section": "IdentityCard-Redirect"
}

```

```

    },
    "maskNextStepURLFail": {
        "entity": "FTOS_BNKAP_RetailApplicantData",
        "form": "FTOS_BNKAP_VerifyIdentitySMEL",
        "section": "IdentityCard-Fail"
    },
    "DocumentType": "DrivingLicence"
}

```

This key value pair contains the attribute and the value to be stored there.

Mapping

```

{
    "DocumentsMapping": [{
        "type": "DrivingLicence",
        "Map": {
            "PictureAttribute": "pictureOcr",
            "LastName": "lastName",
            "GivenName": "firstName",
            "DocumentNumber": "IdCardSeries",
            "StreetType": "streetType",
            "PersonalNumber": "PIN",
            "BirthDate": "dateOfBirth",
            "PlaceOfBirthBody": "placeOfBirth",
            "Address": "fullAddress",
            "Sex": "gender",
            "Nationality": "citizenshipId",
            "Country": "country",
            "DistrictCode": "districtId",
            "City": "city",
            "Street": "street",
            "StreetNo": "streetNo",
            "Storey": "floor",
            "Stairway": "stairway",
            "ApartmentNo": "apartment",
            "ApHouse": "buildingNo",
            "IssuedBy": "IdIssueInstitution",
            "IssuedAt": "IdIssueDate",
            "IssuedUntil": "IdExpirationDate",
            "IssuingCountry": "cityName"
        }
    }]
}

```

Sliders_Parameters

In this solution, in the step "[Simulation](#)" on [page 17](#), the customer uses the sliders from amount and period to select the sum of money needed for the loan and the time expressed in months the user wishes to pay back the loan. These are the settings for this digital flow settings.

simAmountSlider	
id	sliderAmount
amplitude	10000
relatedAttribute	loanAmount
handleId	handleAmount
unitOfMeasure	null
simPeriodSlider	
id	sliderPeriod
amplitude	15
relatedAttribute	period
handleId	handlePeriod
unitOfMeasure	months

CrossSellParams

These are the settings for the credit limit offered only to eligible customers whose maximum DTI allows them to take on more. The minimum amount is set here and the system checks for the product inserted here. You can modify the amount and add more products you wish to offer your customers here.

```
{
  "minSignificantOfferAmount": 5000,
  "availableProductCodes": ["BP_SMEL_CS"]
}
```

DisbursementMessages

Depending on the day of the week, the disbursement of the loan can take a few hours/ days.

```
{
  "messages": [
```

```

    {
      "message": "All the documents are now signed.
<span id='offer-currency'>&nbsp;</span><span id='offer-
value'>&nbsp;</span> will be credited to your company
account in the next 24 hours.",
      "on": "Sunday"
    },
    {
      "message": "All the documents are now signed.
<span id='offer-currency'>&nbsp;</span><span id='offer-
value'>&nbsp;</span> will be credited to your company
account in the next 24 hours.",
      "on": "Monday"
    },
    {
      "message": "All the documents are now signed.
<span id='offer-currency'>&nbsp;</span><span id='offer-
value'>&nbsp;</span> will be credited to your company
account in the next 24 hours.",
      "on": "Tuesday"
    },
    {
      "message": "All the documents are now signed.
<span id='offer-currency'>&nbsp;</span><span id='offer-
value'>&nbsp;</span> will be credited to your company
account in the next 24 hours.",
      "on": "Wednesday"
    },
    {
      "message": "All the documents are now signed.
<span id='offer-currency'>&nbsp;</span><span id='offer-
value'>&nbsp;</span> will be credited to your company
account in the next 24 hours.",
      "on": "Thursday"
    },
    {
      "message": "All the documents are now signed.
<span id='offer-currency'>&nbsp;</span><span id='offer-
value'>&nbsp;</span> will be credited to your company
account in the next working day.",
      "on": "Friday"
    },
    {

```

```

        "message": "All the documents are now signed.
        <span id='offer-currency'>&nbsp;</span><span id='offer-
        value'>&nbsp;</span> will be credited to your company
        account in the next working day.",
        "on": "Saturday"
    }
  ]
}

```

FAQ

These are the questions and answers displayed "Frequently Asked Questions" on page 10. They are displayed on all steps on the form driven flow that have the code executed in Advanced > After Events.

```

{
  "FAQ":
  [
    {
      "Q": "What is the classification of SME's? ",
      "A": "SME are classified according to the
      National SME Development Council definition on SME business
      size category, that is micro, small and medium size of
      businesses."
    },
    {
      "Q": "I am running a business in overseas. Am I
      eligible to apply for a financing to finance my business
      over there?",
      "A": "FintechOS Bank is a development financial
      institution mandated with the role of nurturing and meeting
      the needs of UK-owned and controlled Small and Medium
      Enterprises (SMEs). However, FintechOS Bank does not finance
      companies doing business overseas."
    },
    {
      "Q": "How many Branches does SME Bank have?",
      "A": "Currently FintechOS Bank has 27 branches
      located in UK. You can find the respective branch address
      here."
    },
    {
      "Q": "What products does SME Bank offer?",

```



```

        "A": "FintechOS Bank offers extensive products
mainly for the SMEs entrepreneurs which include Business
Financing for working capital and assets, Contract Financing
and Business Premise Financing Scheme."
    },
    {
        "Q": "How do I apply for business financing?",
        "A": "For more details about business financing
application, you may call our Customer Service Contact
Centre at 03-2603 7700 during business hours or visit our
nearest Branch."
    }
]
}

```

FTOS_DFP_OTP_SignPapers_BP

It contains the settings for signing the documents via SMS for the business partners. Modify as needed.

```

{
    "SourceEntityName" : "FTOS_BNKAP_RetailApplicantData",
    "Channels": [
        {
            "Name": "Sms",
            "RelatedEntityName": "FTOS_BNKAP_
RetailApplicantData",
            "RelatedAttribute": "mobilePhone",
            "LookupAttribute": "FTOS_BNKAP_
RetailApplicantDataid",
            "OTPDigitsNumber": 6,
            "MaxRetry": 5,
            "MaxResendRetry": 5,
            "MaxResendRetryIntervalSeconds": 90
        }
    ],
    "ValidTimeIntervalMinutes": 3,
    "maskNextStepURLChanged": {
        "entity": "FTOS_BNKAP_RetailApplicantData",
        "form": "FTOS_BASME_OTPRedirect",
        "section": "Redirect"
    },
}

```

```

    "maskNextStepURLSuccess": {
      "entity": "FTOS_BNKAP_RetailApplicantData",
      "form": "FTOS_BNKAP_BusinessParterSign",
      "section": "Redirect"
    },
    "maskNextStepURLFail": {
      "entity": "FTOS_BNKAP_RetailApplicantData",
      "form": "FTOS_BNKAP_BusinessParterSign",
      "section": "Fail"
    },
    "businessWorkflow": {
      "entity": "FTOS_BASME_Loan",
      "bwAttribute": "corporateLoanId",
      "successStatus": " ",
      "failedStatus": " "
    }
  }
}

```

FTOS_DFP_OTP_SignPapers_BP_Email

It contains the settings for signing the documents via email for the business partners. Modify as needed.

```

{
  "SourceEntityName" : "FTOS_BNKAP_RetailApplicantData",
  "Channels": [
    {
      "Name": "Email",
      "RelatedEntityName": "FTOS_BNKAP_RetailApplicantData",
      "RelatedAttribute": "email",
      "LookupAttribute": "FTOS_BNKAP_RetailApplicantDataid",
      "OTPDigitsNumber": 6,
      "MaxRetry": 5,
      "MaxResendRetry": 5,
      "MaxResendRetryIntervalSeconds": 90
    }
  ],
  "ValidTimeIntervalMinutes": 3,
  "maskNextStepURLChanged": {
    "entity": "FTOS_BNKAP_RetailApplicantData",

```

```

        "form": "FTOS_BASME_OTPRedirect",
        "section": "Redirect"
    },
    "maskNextStepURLSuccess": {
        "entity": "FTOS_BNKAP_RetailApplicantData",
        "form": "FTOS_BNKAP_BusinessParterSign",
        "section": "Redirect"
    },
    "maskNextStepURLFail": {
        "entity": "FTOS_BNKAP_RetailApplicantData",
        "form": "FTOS_BNKAP_BusinessParterSign",
        "section": "Fail"
    },
    "businessWorkflow": {
        "entity": "FTOS_BASME_Loan",
        "bwAttribute": "corporateLoanId",
        "successStatus": " ",
        "failedStatus": " "
    }
}

```

SMEI_OCR_ID

It contains the settings for the scanning of the identity document. Modify as needed.

```

{
    "SourceEntityName": "FTOS_BNKAP_RetailApplicantData",
    "Entities": [{
        "DestinationEntityName": "FTOS_BNKAP_
RetailApplicantData",
        "SourceEntityName": "FTOS_BNKAP_
RetailApplicantData",
        "SourceLookupDestinationName": "FTOS_BNKAP_
RetailApplicantDataid"
    },
    {
        "DestinationEntityName": "FTOS_BNKAP_
RetailApplicantAddress",
        "SourceEntityName": "FTOS_BNKAP_
RetailApplicantData",
    }
}

```

```

        "SourceLookupDestinationName": "FTOS_BNKAP_
RetailApplicantDataId"
    }],
    "FileAttributeName": "pictureOcr",
    "WaitUserConfirmation" : true,
    "ShowUploadPhotoButton" : true,
    "ShowTakePictureButton" : true,
    "RegisterFaceFromOCR" : true,
    "SessionExpiredMins" : 15,
    "RotateImage" : false,
    "CropImage" : false,
    "MaxRetry": 5,

    "OptionSets": [{
    "OptionSetName": "Gender Type",
    "MappingName": "Sex",
    "OptionSetItems": {
                                                                    "M":
    "Male",                                                                    "F":
                                                                    "Female"
                                                                    }, {

    "OptionSetName": "Citizenship",
    "MappingName": "Nationality",
    "OptionSetItems": {
    "ROU": "Romanian",
    "GBR": "UK"
                                                                    },
    }
    }],

    "LookupEntities": [{
    "MappingName": "DistrictCode",
    "EntityName": "District",
    "AttributeKey": "Code"

```

```

    }, {
      "MappingName": "Country",
      "EntityName": "FTOS_CMB_Country",
      "AttributeKey": "code"
    }
  ],
  "Validations": [{
    "type": "IdROM",
    "Validations": "",
    "CheckScriptName": "ValidateIdROM"
  }],
  "AvailableDocumentTypes": [{
    "type": "IdRom",
    "DocumentType": "IdentityCard",
    "Country": "RO",
    "Provider": "Azure"
  }, {
    "type": "IdBG",
    "DocumentType": "IdentityCard",
    "Country": "BG",
    "Provider": "Abbyy"
  }, {
    "type": "Passport",
    "DocumentType": "MRZ",
    "Provider": "Azure"
  }
]

```

```

    }, {
      "type": "DrivingLicence",
      "DocumentType": "DrivingLicence",
      "Provider": "Azure"
    }],
    "maskNextStepURLSuccess": {
      "entity": "FTOS_BNKAP_RetailApplicantData",
      "form": "FTOS_BNKAP_VerifyIdentitySMEL",
      "section": "IdentityCard-Redirect"
    },
    "maskNextStepURLFail": {
      "entity": "FTOS_BNKAP_RetailApplicantData",
      "form": "FTOS_BNKAP_VerifyIdentitySMEL",
      "section": "IdentityCard-Fail"
    },
    "DocumentType": "IdRom"
  }

```

```

{
  "DocumentsMapping": [{
    "type": "IdRom",
    "Map": {
      "PictureAttribute": "pictureOcr",
      "LastName": "lastName",
      "GivenName": "firstName",
      "DocumentNumber": "IdCardSeries",
      "StreetType": "streetType",
      "PersonalNumber": "PIN",
      "BirthDate": "dateOfBirth",
      "PlaceOfBirthBody": "placeOfBirth",
      "Address": "fullAddress",
      "Sex": "gender",
      "Nationality": "citizenshipId",
      "Country": "country",
      "DistrictCode": "districtId",
      "City": "city",

```

```

        "Street": "street",
        "StreetNo": "streetNo",
        "Storey": "floor",
        "Stairway": "stairway",
        "ApartmentNo": "apartment",
        "ApHouse": "buildingNo",
        "IssuedBy": "IdIssueInstitution",
        "IssuedAt": "IdIssueDate",
        "IssuedUntil": "IdExpirationDate",
        "IssuingCountry": "cityName"
    }
  }
}

```

SMEI_OCR_ID_BP

It contains the settings for scanning the documents via SMS for the business partners. Modify as needed.

```

{
  "SourceEntityName": "FTOS_BNKAP_RetailApplicantData",
  "Entities": [{
    "DestinationEntityName": "FTOS_BNKAP_
RetailApplicantData",
    "SourceEntityName": "FTOS_BNKAP_
RetailApplicantData",
    "SourceLookupDestinationName": "FTOS_BNKAP_
RetailApplicantDataId"
  },
  {
    "DestinationEntityName": "FTOS_BNKAP_
RetailApplicantAddress",
    "SourceEntityName": "FTOS_BNKAP_
RetailApplicantData",
    "SourceLookupDestinationName": "FTOS_BNKAP_
RetailApplicantDataId"
  }
],
  "FileAttributeName": "pictureOcr",
  "WaitUserConfirmation" : true,
  "ShowUploadPhotoButton" : true,
  "ShowTakePictureButton" : true,
  "RegisterFaceFromOCR" : true,
}

```

```

        "SessionExpiredMins" : 15,
        "RotateImage" : false,
        "CropImage" : false,
        "MaxRetry": 5,

    "OptionSets": [{
    "OptionSetName": "Gender Type",
    "MappingName": "Sex",
    "OptionSetItems": {
        "Male",
        "Female"
    }, {
        "M":
        "F":
    }

    "OptionSetName": "Citizenship",
    "MappingName": "Nationality",
    "OptionSetItems": {
        "ROU": "Romanian",
        "GBR": "UK"
    }, {
    }], {

    "LookupEntities": [{
    "MappingName": "DistrictCode",
    "EntityName": "District",
    "AttributeKey": "Code"
    }, {
    "MappingName": "Country",
    "EntityName": "FTOS_CMB_Country",
    "AttributeKey": "code"
    }],

```



```

"Validations": [{
  "type": "IdROM",
  "Validations": "",
  "CheckScriptName": "ValidateIdROM"
}],

"AvailableDocumentTypes": [{
  "type": "IdRom",
  "DocumentType": "IdentityCard",
  "Country": "RO",
  "Provider": "Azure"
}, {
  "type": "IdBG",
  "DocumentType": "IdentityCard",
  "Country": "BG",
  "Provider": "Abbyy"
}, {
  "type": "Passport",
  "DocumentType": "MRZ",
  "Provider": "Azure"
}, {
  "type": "DrivingLicence",
  "DocumentType": "DrivingLicence",
  "Provider": "Azure"
}

```

```

    }],
    "maskNextStepURLSuccess": {
        "entity": "FTOS_BNKAP_RetailApplicantData",
        "form": "FTOS_BNKAP_BusinessParterOCR",
        "section": "Redirect"
    },
    "maskNextStepURLFail": {
        "entity": "FTOS_BNKAP_RetailApplicantData",
        "form": "FTOS_BNKAP_BusinessParterOCR",
        "section": "Fail"
    },
    "DocumentType": "IdRom"
}

```

```

{
    "DocumentsMapping": [{
        "type": "IdRom",
        "Map": {
            "PictureAttribute": "pictureOcr",
            "LastName": "lastName",
            "GivenName": "firstName",
            "DocumentNumber": "IdCardSeries",
            "StreetType": "streetType",
            "PersonalNumber": "PIN",
            "BirthDate": "dateOfBirth",
            "PlaceOfBirthBody": "placeOfBirth",
            "Address": "fullAddress",
            "Sex": "gender",
            "Nationality": "citizenshipId",
            "Country": "country",
            "DistrictCode": "districtId",
            "City": "city",
            "Street": "street",
            "StreetNo": "streetNo",
            "Storey": "floor",
            "Stairway": "stairway",
            "ApartmentNo": "apartment",
            "ApHouse": "buildingNo",
            "IssuedBy": "IdIssueInstitution",
            "IssuedAt": "IdIssueDate",

```

```

    "IssuedUntil": "IdExpirationDate",
    "IssuingCountry": "cityName"
  }
}]
}

```

Server Automation Scripts and Libraries

Within the Innovation Studio, there are server scripts that execute several actions, which embody a business need such as: filtering products, returning products and setting amounts or periods. On-demand automation scripts are available for being called from any object or context.

FTOS_BAN_OB_LoanContractSME

This script sets whether to use the integration with Core Banking or not. It is used in FTOS_BASME_Loan in the step Disbursement.

Input: var `corporateApplicantDataId`; var `loanId`

Output: object `finalResp`

FTOS_BASME_AddExtraRepresentative

This script sets the SME business partners from the integration. It is used in FTOS_BNKAP_CorporateApplicantData in the step CompanyRole ("[Applicant Details](#)" on page 33).

Input: var `representative`; var `corporateApplicantDataId`; var `setAsApplicant`

Output: var `retailApplicantId`

FTOS_BASME_AvailableMaxOffer

This script returns the maximum offer for a loan. It is used in FTOS_BASME_

Loan in the step Approval.

Input: var `applicationId`;

Output: N/A

FTOS_BASME_ChangeStatusApplicationLoan

This script changes the business status of the loan application. It is used in

- FTOS_BASME_Loan in the step CompanyDetails
- FTOS_BASME_Loan in the step ContractSigning
- FTOS_BASME_Loan in the step ContractSigning
- FTOS_BASME_Loan in the step DIPAnalysis
- FTOS_BASME_Loan in the step DIPAnalysis
- FTOS_BASME_Loan in the step FinalAnalysis
- FTOS_BASME_Loan in the step FinalAnalysis
- FTOS_BASME_Loan in the step FinalOffers
- FTOS_BASME_Loan in the step FinancingSolution
- FTOS_BASME_Loan in the step SelectDestinations
- FTOS_BASME_Loan in the step Simulation
- FTOS_BASME_Loan in the step Disbursement
- FTOS_BNKAP_CorporateApplicantData in the step SubmissionHub
- FTOS_BNKAP_CorporateApplicantData in the step BusinessPartnersSignatures
- FTOS_BNKAP_CorporateApplicantData in the step Company Documents
- FTOS_BNKAP_CorporateApplicantData in the step CompanyConfirmation
- FTOS_BNKAP_CorporateApplicantData in the step CompanyRole

- FTOS_BNKAP_CorporateApplicantData in the step Disclosures
- FTOS_BNKAP_CorporateApplicantData in the step Disclosures
- FTOS_BNKAP_RetailApplicantData in the step Contact Info SMEL
- FTOS_BNKAP_RetailApplicantData in the step Fail
- FTOS_BNKAP_RetailApplicantData in the step VideoRecording-Redirect
- FTOS_BNKAP_RetailApplicantData in the step IdentityCard
- FTOS_BNKAP_RetailApplicantData in the step IdentityCard-Fail
- FTOS_BNKAP_RetailApplicantData in the step IdentityCard-Redirect.

Input: var `loanId`; var `statusName`

Output: `statusId`

FTOS_BASME_FinancialCalculations

This script logs the data for the knockout formula, then the scoring formula (the month payment as well). Depending on the maxDTI, it calculates the DTI. If it is approved, it calculates the new offer and the maximum offer. It is used in FTOS_BASME_Loan in the step DIPAnalysis and in FTOS_BASME_Loan in the step FinalAnalysis.

Input: var `loanId`; var `lo`; var `cad`

Output: `result`

FTOS_BASME_GenerateLoanDocuments

This script gets the documents for the banking product, checks for existing document, and if there isn't, it generates the documents. It is used in FTOS_BASME_Loan in the step DIPAnalysis and in FTOS_BASME_Loan in the step FinalAnalysis.

Input: var `loanId`; var `bankingProductId`; var `applicationId`

Output: boolean value

FTOS_BASME_GetAmountAndTenure

This script retrieves the amount and tenor of a loan based on the maximum and minimum amounts and tenors. It is used in FTOS_BASME_Loan in the step Simulation (["Simulation" on page 17](#)).

Input: var `applicationId`; var `pr`; var `bp`; var `cr`

Output: object `data`

FTOS_BASME_GetAvailableLoanProducts

This script gets applicationID, deletes all previous entries from [FTOS_BNKAP_Pricing](#), gets data from [FTOS_BP_BankingProduct](#) based on some criteria, and calculates the total amount to be paid. It is used in FTOS_BASME_Loan in the step SelectDestinations ([" 2 Find the right financing offer" on page 13](#)).

Input: var `applicationId`; var `date`; var `productDestinationIds`; var `loanId`; var `availableProduct`; var `bp`; var `cl`; let `scl`; let `ct`; let `bs`; var `d`; var `bpdt`; var `ln`

Output: var `availableProduct`

FTOS_BASME_GetCompanyProfileLoan

It is used in FTOS_BNKAP_CorporateApplicantData in the step CompanyIdentification (["Company Identification" on page 23](#)).

Input: var `companyIdentifier`

Output: var `finalResp`

FTOS_BASME_GetCorporateApplicantByRetail

This script returns the corporateApplicantDataId based on the retailApplicantId. It is used in FTOS_BNKAP_CorporateApplicantData in the step CompanyIdentification (["Company Identification" on page 23](#)).

Input: var `retailApplicantId`; var `cad`

Output: var `corporateApplicantDataId`

FTOS_BASME_GetCorporateRepresentatives

This script retrieves the business partners. It is used in FTOS_BNKAP_CorporateApplicantData in the step CompanyRole ("[Applicant Details](#)" on [page 33](#)).

Input: var `corporateApplicantDataId`; var `ar`; var `rad`; var `osi`

Output: array `finalres`

FTOS_BASME_GetEligibleLoans

This script gets the offers the customer is eligible for including the maximum offer. It is used in FTOS_BASME_Loan in the step FinalOffers.

Input: var `applicationId`; var `pr`; var `bp`; var `curr`

Output: `offerList`

FTOS_BASME_GetRankedProductsSME

This script retrieves the banking products and displays them in "[Simulation](#)" on [page 17](#). It is used in FTOS_BASME_Loan in the step Simulation.

Input: var `applicationId`; var `amount`; var `loanPeriod`

Output: `result`

FTOS_BASME_GetRetailApplicantIdByCorporate

This script returns the retailApplicantId based on the corporateApplicantDataId. It is used in:

- FTOS_BASME_Loan in the step ContractSigning
- FTOS_BASME_Loan in the step DIPAnalysis
- FTOS_BASME_Loan in the step Approval
- FTOS_BASME_Loan in the step Disbursement.

Input: var `corporateApplicantId`; var `cad`; var `rad`;

Output: object **res**

FTOS_BASME_RegisterBusinessPartnerForSigning

This script sends the email and SMS for signing the contract with the body of the email and SMS for the business partners to sign and access the B2C environment. It is used in FTOS_BNKAP_CorporateApplicantData in the step BusinessPartnersSignatures.

Input: var **retailApplicantId**; var **action**; var **toAddress**; var **ar1**

Output: N/A

FTOS_BASME_SendDIPMail

This script sends the email depending on the decision. It is used in FTOS_BNKAP_CorporateApplicantData in the step BusinessPartnersSignatures.

Input: var **loanId**; var **decision**; var **email**

Output: N/A

FTOS_BASME_SendMailLoanApplicationDocuments

This scrip sends the email containing the documents.

Input: var **applicationId**; var **applicantDataId**; var **accountApplicationId**; var **apd**

Output: N/A

FTOS_BASME_SendMailLoanDocuments

This script sends the email with the documents. It is used in

- FTOS_BASME_Loan in the step FinalOffers
- FTOS_BNKAP_RetailApplicantData in the step Redirect.

Input: var **applicationId**; var **apd**

Output: N/A

FTOS_BASME_SendMailLoanDocumentsB

This script sends the email with the documents. It is used in FTOS_BNKAP_RetailApplicantData in the step Redirect.

Input: var `retailApplicantId`; var `arl`; var `cad`; var `lon`

Output: N/A

FTOS_BASME_SetChosenProduct

This script updates the chosen product. It is used in FTOS_BASME_Loan in the step Simulation (["Simulation" on page 17](#)).

Input: var `productId`; var `loanId`; var `applicationId`; var `amount`; var `period`; var `scheduleJson`; var `monthlyPayment`; var `APR`; var `simulationJSON`;

Output: 'message': "Banking product id updated"

FTOS_BASME_SMELFinancialChecks

This script checks for bankruptcy. It is used in FTOS_BASME_Loan in the step FinalAnalysis.

Input: var `loanId`; var `cad`

Output: var `haveUpdates`

FTOS_BNKAP_CompanyDocsSMELProgres

This script displays the progress made to uploading the company documents. It is used in FTOS_BNKAP_CorporateApplicantData in the step SubmissionHub (["Document Hub" on page 50](#)).

Input: var `corporateApplicantDataId`;

Output: `result`

FTOS_BNKAP_CompanyHouseSaveDataSME

This script updates the corporateApplicantObj. It is used in FTOS_BNKAP_CorporateApplicantData in the step SubmissionHub (["Document Hub" on page 50](#)).

Input: var `corporateApplicantId`;

Output: `corporateApplicantObj`

FTOS_BNKAP_GetApplicationByRetail

This script gets the applicationId based on the retailApplicantId. It is used in FTOS_BNKAP_RetailApplicantData in the step BusinessPartenerSign.

Input: var `retailApplicantId`; var `arl`; var `cad`; var `lon`

Output: `data`

FTOS_BNKAP_GetBusinessSignaturesSMELoan

It is used in FTOS_BNKAP_CorporateApplicantData in the step BusinessPartnersSignatures.

Input: var `corporateApplicantId`; var `retailApplicantId`

Output: array `result`

FTOS_BNKAP_GetOfficersLoanSignStatus

This script sets the status of the business partners signatures. It is used in FTOS_BNKAP_CorporateApplicantData in the step WaitingLoanSignatures.

Input: var `corporateApplicantId`; var `retailApplicantId`

Output: array `result`

FTOS_BNKAP_ProofIdSMEProgress

This script calculates the progress for the identification of the SME representative. It is used in FTOS_BNKAP_CorporateApplicantData in the step

SubmissionHub (["Document Hub" on page 50](#)).

Input: var `retailApplicantId`; var `ocr`; var `fr`;

Output: `result`

FTOS_BNKAP_SendMailWaitingSignatureLoan

This script sends the email when the system is waiting for the business partner signature. It is used in FTOS_BNKAP_CorporateApplicantData in the step BusinessPartnersSignatures.

Input: var `email`; var `reailApplicantId`

Output: N/A

FTOS_BNKAP_SetApplicantSMELoan

This script sets the loan for the customer. It is used in FTOS_BNKAP_CorporateApplicantData in the step CompanyRole (["Applicant Details" on page 33](#)).

Input: var `corporateApplicantDataId`; var `bac`; var `cad`

Output: boolean value

FTOS_BNKAP_SetBusinessPartnerSign

This script sets the signature form the business partners to true. It is used in in FTOS_BNKAP_RetailApplicantData in the step Redirect.

Input: var `retailApplicantId`; var `arl`

Output: hasSigned: true

FTOS_BASME_SetChosenOffer

This script updates the chosen product. It is used in FTOS_BASME_Loan in the step FinalOffers.

Input: var `pricingId`; var `loanId`; var `applicationId`; var `lo`; var `pc`

Output: 'message': "Banking product id updated"

Server Script Libraries

The library used is FTOS_BASME_FinancialChecks. It contains the server automation script named ["FTOS_BASME_SMELFinancialChecks" on page 173](#). This library imports the WebAPIClient named **BANFintechOS** and registers the value whether the company has declared bankruptcy.

Glossary

A

ANAF/NAFA

Agenția Națională de Administrare Fiscală (ANAF) or National Agency of Fiscal Administration (NAFA).

It is the specialized body of the central public administration in Romania. It has its own legal persona, by detaching the directions with attributions in the administration of the state revenues within the Ministry of Public Finance. It ensures the resources for the public expenses of the state by collecting and administering effectively and efficiently the taxes, taxes, contributions and other amounts due to the general consolidated budget.

APR

Annual percentage rate. APR is an annualized representation of your interest rate.

B

Biometric Consent

Certain laws require banks to provide you a notice to agree that the bank can collect, use and disclose your biometric data, e.g. biometric identifiers are fingerprints, facial patterns, voice or typing cadence.

Business associate

A business associate is a person or entity that performs certain functions or activities that involve the use or disclosure of protected health information on behalf of, or provides services to, a covered entity.

C

County Court Judgements

You may get a county court judgment (CCJ) or high court judgment if someone takes court action against you (saying you owe them money).

Credit Bureau

The Credit Bureau provides financial institutions real and aggregated information regarding individuals who have outstanding loans with banks or financial companies, have purchased an asset via leasing or have been insured against default risk with an insurer.

D

Debt-to-income (DTI)

The Debt-to-Income ratio (DTI) is a personal indicator of a good balance between debt and income.

Monthly debt payment amount / Monthly gross amount (before taxes and other deductions).

Decision in principle

It offers an easy way for customers to view product requirements before advancing to the next step in the digital journey.

F

FICO

The FICO score is an algorithm used internationally, mainly by banks, to determine the degree of risk for a person who applies for a loan, and is collected by the Credit Bureau.

Financial institution (FI)

A financial institution (FI) is a company that manages financial and monetary transactions such as deposits, loans, investments, and currency exchange, i.e business operations within the financial

services sector including banks, trust companies, insurance companies, brokerage firms, and investment dealers.

G

GDPR

The General Data Protection Regulation is a regulation in EU law on data protection and privacy in the European Union and the European Economic Area.

I

IBAN

International Bank Account Number

N

NFC

Near-field communication is a set of communication protocols for communication between two electronic devices over a distance of 4 cm or less.

O

OCR

The employability of technology to recognize scanned documents.

Onboarding process

Formal onboarding encompasses the organized tasks and procedures to turn a person into the bank's customer.

One-Time-Password (OTP)

It is a password generated by the system to validate a piece of information or sign a document.

Open Banking

Open banking connects banks, third-parties and technical providers to securely exchange data.

P

Profit and Loss Statement (P&L)

The P&L statement refers to a financial statement that summarizes the revenues, costs, and expenses incurred during a specified period, usually a quarter or fiscal year.

S

Sales funnel

It is the process prospects go through to become a customer. Each stage of the funnel takes the buyer one step closer to making a purchase.

Scoring

Credit scoring is a statistical analysis performed by lenders and financial institutions to determine the creditworthiness of a person or a small, owner-operated business.

SIC

Standard Industrial Classification. It classifies industries with a four-digit code. Companies House uses SIC business codes for the same purpose and the Office for National Statistics uses SIC business codes to gather important data.

SME

Small and mid-size enterprises are businesses that maintain revenues, assets or a number of employees below a certain threshold depending on the country.

Sort Code

A sort code is an important factor of your bank account. A sort code is a 6 digit number that identifies your bank.



Underwriting

Underwriting is the process by which your lender verifies your income, assets, debt and property details in order to issue final approval on your loan application.