Building Relationships with

Ren
ATM Management

XFS Solution

Euronet

The Changing Role of Self-Service in Banking

Just as needs and preferences vary by customer, the benefits that each customer finds in their preferred banking channel differ. For consumers dependent on cash, ATMs are vital. In areas where banks have closed branches to lower costs, ATMs and self-service kiosks provide the only community-based access to banking services. To maintain an edge in today's highly competitive environment, banks must find innovative ways to accommodate these preferences while maintaining costs and efficiencies. Using the latest ATM technology can optimize the value delivered through the self-service channel by enabling the delivery of personalized customer journeys, informative messages and marketing promotions.

It must be acknowledged that the ways we interact with customers has never changed so much as rapidly as it has since the COVID-19 Pandemic. This is true for all industries, and particularly for industries such as financial services which play such a vital role in the lives of consumers.

Today,"Low Contact" is preferred by many consumers as an alternative to in-person banking. It's important for service providers to acknowledge the ways COVID-19 has impacted consumers and to respond to changing consumer behaviors, recognizing that showing empathy and concern for customers in the midst of this crisis not only yields near-term benefits, but will likely have long-term effects on consumer loyalty and trust. While the pandemic has forced consumers to become more comfortable with self service, reliability and trust are still key. Feature-rich ATMs provide a trusted alternative for consumers to meet virtually any banking need, from money transfers to withdrawals, deposits and bill payments. More progressive organizations are not limiting their ATMs to banking products. These visionaries are offering products such as transportation passes, postage, and event ticket purchase at the ATM. According to Payments Journal, the pandemic has meant that "purely transactional activities moved to ATMs, giving FIs reason to expedite digital transformation plans for their ATM fleets" (https://www.paymentsjournal.com/atms-and-cash-use-took-some-interesting-twists-in-2020/).

Recognizing changing behaviors and having the agility to respond quickly is key to meeting customer expectations and remaining competitive. Consider the following:

- The onset of the COVID-19 pandemic saw a surge in demand for cash and many banks had to add cash to their ATM networks to keep up with customer demand. This highlights the importance that consumers place on having cash during times of uncertainty. ATMs are the only source for cash for some during lockdowns. By utilizing cash recycling, FIs can decrease site visits, reduce exposure risk, all while ensuring cash is available for customers.
- Although many branches have re-opened, it is important to note that during the lock-downs lobby ATMs are often inaccessible to customers and CIT, making drive-thru and external walk-up ATMs invaluable because of their 24/7 accessibility.
- In today's low-rate environment, customer experience is one area where financial institutions can really stand out among the competition. Capturing and analyzing customer transaction and usage data from the ATM can provide priceless actionable insight to improve the customer experience and increase operational efficiencies.
- With circumstances changing quickly, ATMs are a great way to offer guidance and communicate important information to groups of consumers and to provide targeted messages to individual users. As self-service usage increases, banks can utilize the ATM channel to promote products, and provide critical updates to keep customers informed.
- The pandemic has increased the need for timely customer feedback. Traditional feedback methods often have a lag time of days or weeks. With conditions changing rapidly, ATMs offer the means for critical real-time feedback via on-screen surveys.

- Electronic journaling is a great alternative to having to send a technician out to retrieve and store physical journals, especially in today's low contact environment.
  - Reduces ATM downtime
  - Removes the need for site visits
  - Faster audit capabilities

Ren ATM Management for XFS Overview

Euronet's Ren ATM Management XFS Solution is a comprehensive self-service (ATM and/or kiosk) device driving and management solution, designed to maximize customer engagement and operational efficiency. Ren ATM Management for XFS Solution does this while also providing new revenue generating features, and giving financial institutions strategic control of their ATM fleet by eliminatingthe constraints caused by dependencies on NDC-DDC protocols.

Ren ATM Management for XFS Solution consists of four primary components:

- **Ren ATM Management for XFS Solution Designer** - a desktop tool with "drag & drop" functions for the creation and customization of screens, transaction flows and receipts as well as management of these assets.
- **Ren ATM Management for XFS Solution Simulator** - enables the Ren ATM Management for XFS Solution Client to run locally on a PC for screen flow development, validations of updates to graphics (colors, fonts, placement of buttons, data entry fields, etc), testing, troubleshooting and demos.
- **Ren ATM Management for XFS Solution Terminal Management Dashboard** - a browser-based UI for centralized management of ATM configuration, real-time fleet monitoring, remote commanding and ATM Marketing and Messaging campaign scheduling.. The TMS Dashboard offers real-time information regarding the status of self-service devices and their individual components, as well as cash levels, usage statistical information, electronic journal data and an automatic dispatching of service providers in case of hardware errors. Its user administration allows the allocation of individual user access privileges.
- **Ren ATM Management for XFS Solution Device Driver (Client and Server)** - Ren ATM Management for XFS Solution Client is a module that is installed on the ATM or other self-service devices. The Ren ATM Management for XFS Solution Client communicates with the peripheral hardware of the device e.g. the card reader, dispenser, PIN pad, etc. through a software layer (XFS) that lies between the hardware device drivers and the Ren ATM Management for XFS Solution Client application. The Ren ATM Management for XFS Solution Server is a central server which receives transaction data and status messages from the Ren ATM Management for XFS Solution Client. The Server performs transaction routing and authentication via the transaction switch.

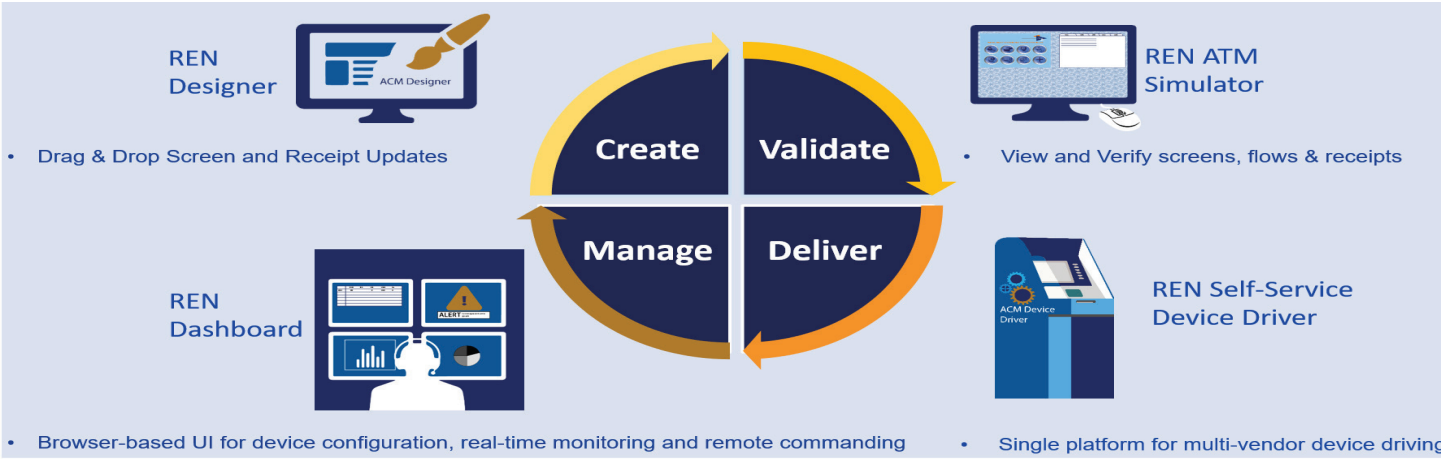


Figure 1: Ren ATM Management for XFS Solution Components

Ren ATM Management for XFS Solution comes configured with a set of standard xml-based transaction flows. During the implementation process, Euronet personnel will work with your operations and marketing teams to understand the business requirements for your institution and to ensure that your organization's transaction set is covered by these standard flows. If additional transactions are required, Euronet resources can be contracted to make any modifications necessary, or optionally—those well versed in xml can add the new transactions using Ren ATM Management for XFS Solution Designer.

Putting Your Organization's Mark on Your ATMs

In addition to providing the tools required to modify the standard transaction flows, or to add new transactions, Ren ATM Management for XFS Solution provides for a high degree of branding and personalization of the imagery displayed on the screens.

Because most organizations place responsibility for the ATM's "look" and "feel" with their marketing departments, Ren ATM Management for XFS Solution has been designed to allow marketing personnel to easily incorporate the institutions branding and to manage "look" and "feel" items without assistance from IT.

By utilizing the Ren ATM Management for XFS Solution Designer desktop application, items such as the background screens, screen layout, images and videos displayed, text displayed on screens and in ads, fonts, font color, placement of buttons, etc., are all items that can be easily updated by marketing personnel.

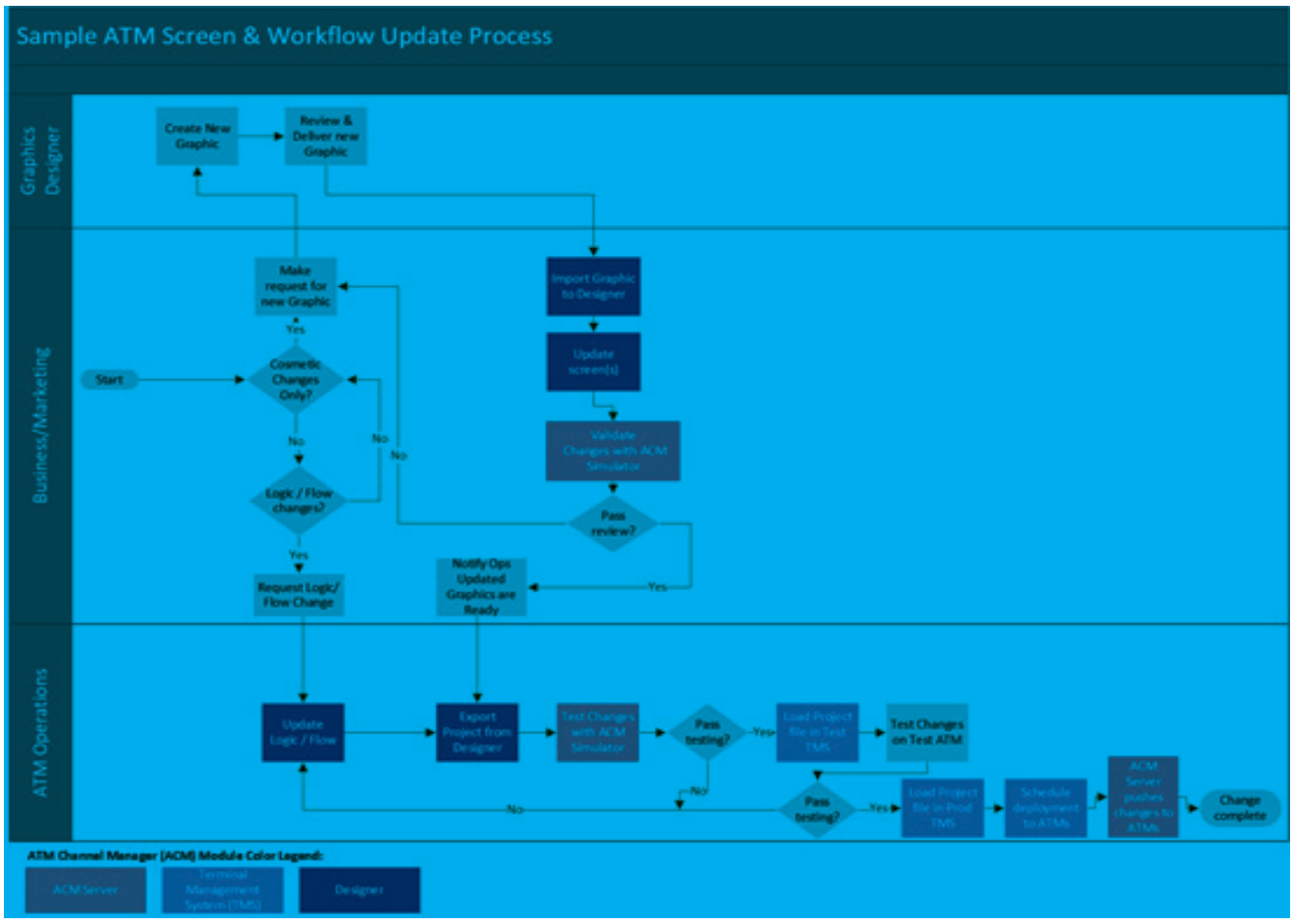


Figure 2: Example ATM Screen Flow

Once updates have been made in Designer, they can be validated by marketers in Ren ATM Management for XFS Solution Simulator. The Project file created by Designer can be deployed to the simulator via TMS. Then, by launching the Ren ATM Management for XFS Solution Simulator

marketing personnel can run simulated ATM Transactions to verify the changes and flows function as desired. Once marketing is satisfied with the updates, the updated XML and any new graphics should be provided to the Operations Team for end-to-end testing in the ATM testing lab, and scheduling for Production implementation. Once all testing is completed, the Operations Team can push the updates to the desired ATMs using the Ren ATM Management for XFS Solution Dashboard Terminal Management System using remote commanding and version controls.

Creation of Images for Ren ATM Management for XFS Solution Screens/Ads

Ren ATM Management for XFS Solution supports the use of Portable Networks Graphic (png) and Joint Photographic Experts Group (jpg or jpeg) files for background screens, buttons, and marketing campaign packages. These files can be created with many different graphic design software applications such as Adobe Illustrator, Adobe Photoshop, Corel Draw, Roxio, etc. PNG files work particularly well, as they can be created with a transparent background.

Video and animation file formats are also supported by Ren ATM Management for XFS Solution, however the specific file format is dependent upon the Codec of the ATM. Check with your hardware manufacturer to determine the supported video file types for your ATMs (gif, mpeg, mov, avi, etc.). As with static graphics, there are a multitude of video/animation software applications that can be used to create video files.

As a rule, it is best to identify which of your ATM models has the largest screen size and design your screens with the dimensions and aspect ratio for that screen. When the images are displayed on ATM's with smaller screens they will have a high enough resolution to appear clearly. By creating a template in your graphic design software that is the same size as the ATM screen (most likely 640 x 480 pixels which has a 4:3 aspect ratio), you will be able to accurately judge how your images will appear when displayed at the ATM. Additionally, this can be very helpful when determining the placement of touch buttons. Simply design the screen and place the button images as you like and let the graphics programs provide you the X and Y coordinates for each button. These coordinates will need to be input into the xml to ensure proper placement of the buttons on the ATM screen.

Resolution of your image output files should typically be 72 dpi/ppi. Ren ATM Management for XFS Solution supports larger file sizes, but the increased file size serves no purpose when displaying the images on a typical ATM screen.

Where to Start

For even the most basic transaction sets, there will be some foundational images that you will need to design and provide during the implementation. These include:

- Background screen image
- Button image(s)
- Receipt images (if desired)

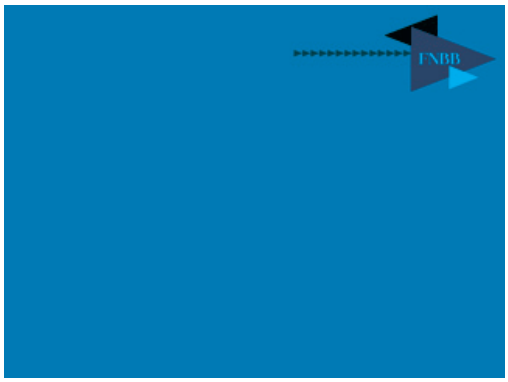


Figure 3: Example Background Image for Transaction Screens

The background screen (provides a backdrop for the text shown during the standard transaction flows). The background image is usually very simple so that it doesn't compete for attention with the text, buttons, or entry fields that are displayed during ATM transactions. It can be a solid color, or a gradient, and can include the institution logo. Placement of the logo should be in the upper portion of the screen so that it does not interfere with the text displayed as part of the transaction flows or with the Fixed Button positions (if you use Fixed Buttons with any of your fleet). (See figure 3 for an example background image.) For touchscreen ATMs there are no limitations on text or button placement.

You will also need to provide an image to be used for buttons. Depending on the makeup of your fleet, you may opt to go with all "Fixed Buttons", all "Touch Buttons", or a mix (if only a portion of your ATMs have the hardware to support Touch Screen).

There are two different ways to approach a mixed fleet such as this: 1) Set up two separate sets of transaction flow xmls (one for fixed button ATMs and one for Touch Screen ATMs); OR 2) Use one set of xmls where the touch screen buttons appear in the same positions on the screen as the standard fixed button. Fixed Buttons should be of a standard size 280 pixels wide x 60 pixels high). Touch buttons can vary in size and shape if you will only be using them on Touch Screen ATMs. If you want to use the same image on both Fixed Button and Touch Button ATMs (option 2 above), the buttons need to be designed to be the same size as the Fixed Button (as shown below).

Figure 4 - Examples of Fixed and Touch Screen Buttons of same size and relative shape

Figure 5 - Examples of Touch Screen Buttons

Working with Ren ATM Management for XFS Solution Designer

Creating a Project File for Designer

Designer is an app that is installed locally on your PC. With Designer your organization can view and edit ATM screens and receipts. As part of the Ren ATM Management for XFS Solution implementation, Euronet personnel will assist your team in creating your first Designer Project File which will contain all of your organizations transaction screen flows and receipts. Utilizing this "baseline" project file with Designer, your organization can review and make updates to screen and receipt appearance.

The Project File will contain (at a minimum)

- All of your institution's screen flows
- The images used on your ATM screens (such as button images, logo images, background images, waitcard images)
- The receipt designs for each of the possible receipt layouts
- Translations (if used) for screen text

These files and subfolders will be zipped and placed inside a non-zipped folder named "(Bank name) Base Project". When you launch Designer for the first time, you will need to import this Project file to begin making edits to your screen designs. This will serve as the starting point for any modifications that your organization may choose to make to the ATM screens. As modifications are made, new Project files will be created to include the modified screens. It will be important to establish a process for managing

these project files, keeping track of what elements were changed from one project file to the next to ensure that the proper project file is being used for each ATM. Depending upon how your organization decides to manage your fleet, you may have only one project file that is used on all ATMs, or you may have a variety of project files and deploy them based on the location of the ATM (in branch or retail as an example).

Once you import your project file to the Designer application, you will see a screen that looks similar to the one in Figure 6.

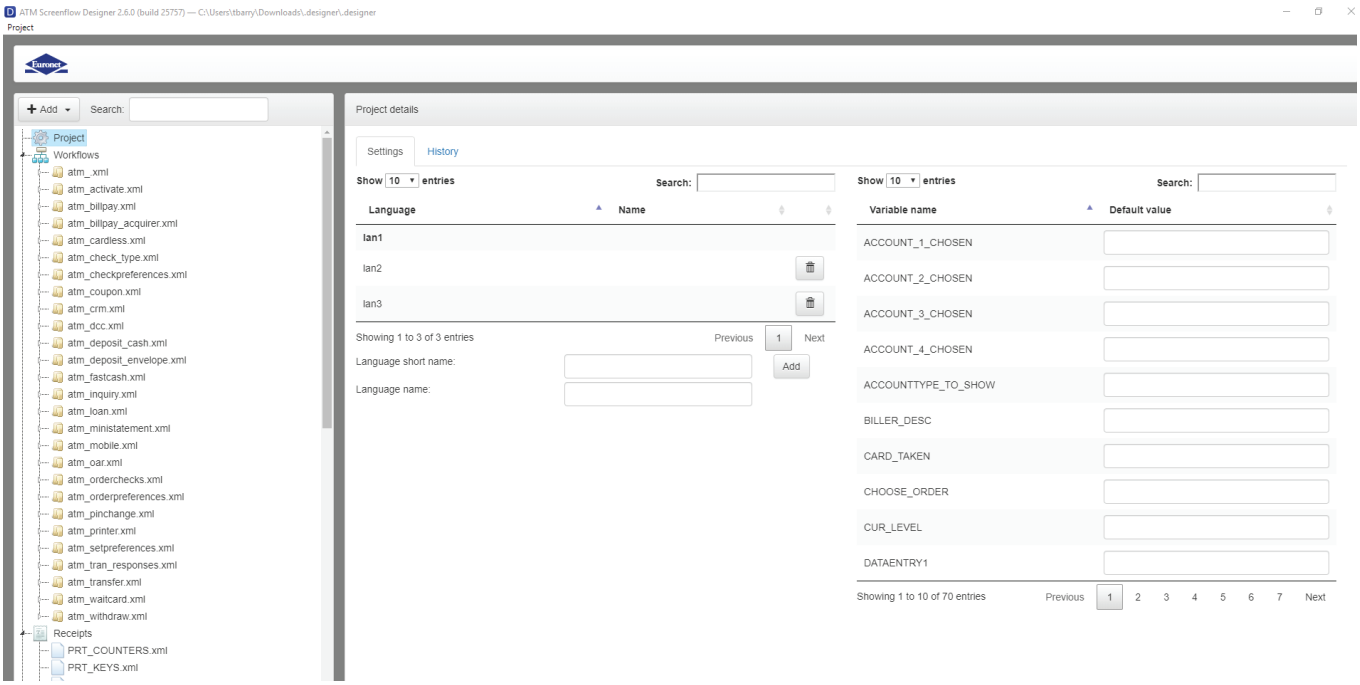


Figure 6: View of Project file opened in Ren ATM Management for XFS Solution Designer

When you select the small arrow on one of the xml folders, the folder expands to display a list of the pages (ATM screens and actions) that make up this xml flow. Select one of the pages and the right-hand panel now displays a “branching logic view” of the Screen flow page and at the top center of the window, there are three new buttons that allow you to switch between the Screen Flow, Designer and Logic views.

Figure 7: Designer Logic Flow

Some of the elements of the screen flow are non-visual. For those that are visual, an image of the screen is displayed (such as is seen here with the Out of Order screens. You can edit these visual screens by selecting the screen within the flow and selecting the Designer button at the top of the window. See the example in Figure 7, showing the Out of Order screen selected in the Designer View.

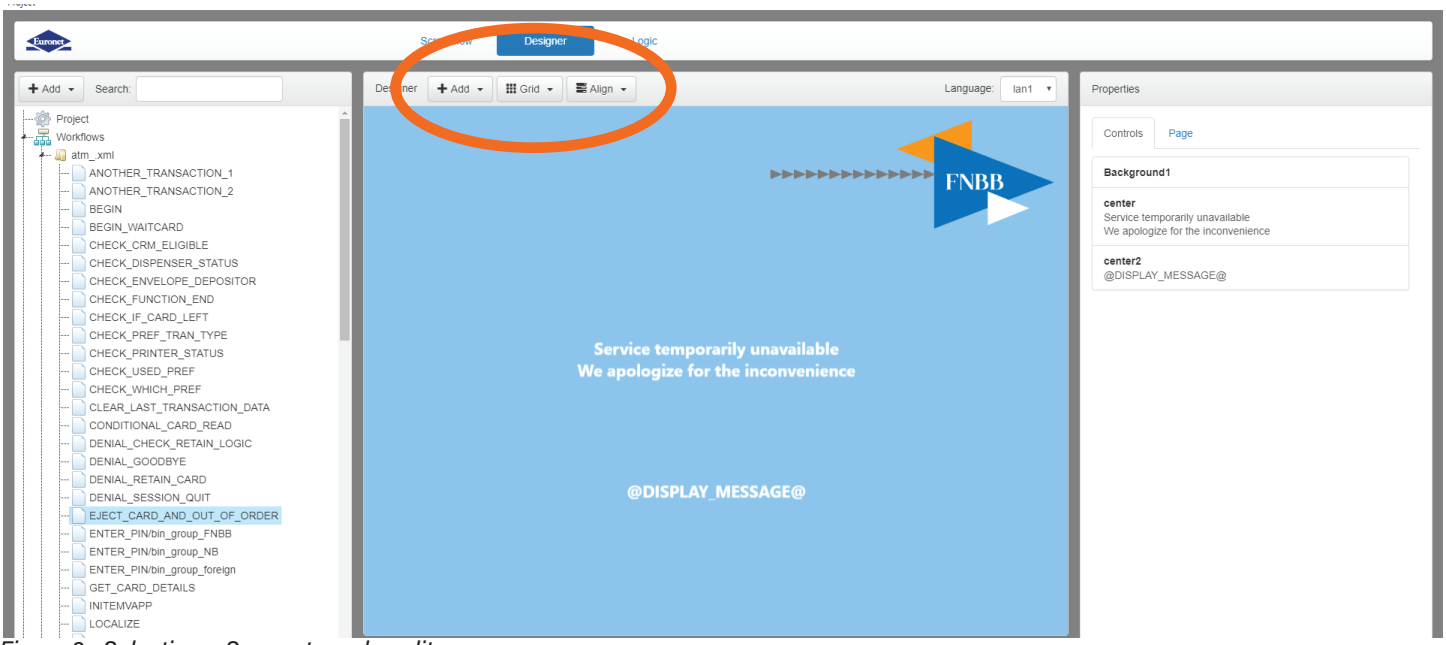


Figure 8: Selecting a Screen to make edits

Note that in this view, a third panel, Properties, is displayed and additional buttons are displayed at the top of the center panel for Add, Grid and Align. There is also a dropdown for selecting language. NOTE: This requires that multi-language has been enabled and that the translations have been configured (See section on Translations for more info).

Editing Screens with Ren ATM Management for XFS Solution Designer

Depending on how the images for screens are created and designed, editing options will vary. For example, if the entire screen, including text is all one static image, the only edit that can be made is to replace the image with another image or to add overlays . If the screen is designed with a simple background and then other images are layered onto the background, along with variable text fields and/or buttons, each of these elements can be edited. A new background can be chosen, a different image can be added as an overlay, the text can be edited (words, font, size and color can all be changed) and button images can be added or changed, along with button text.

Figure 9: Static Image; No editable elements

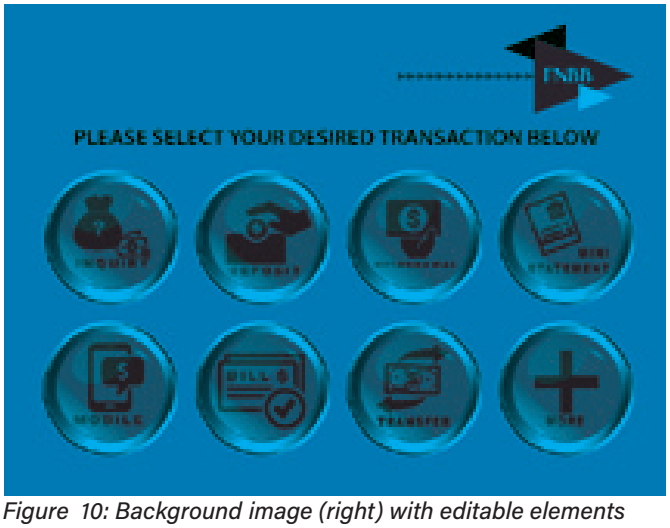


Figure 10: Background image (right) with editable elements (Text and Buttons)

Replacing a Static Image

In the figure below, we see the ATM Waitcard.xml contents (Waitcard is sometimes referred to as Welcome Screens). In this example there are three static images that loop continuously on the ATM when the ATM is idle. (NOTE: The Waitcard.xml can also include video files in the loop. There is no limit to the number of images or videos that can be included in the loop.)The first image shows the bank's logo; the second shows a promo for a opening an account at the bank; and the third is a announcement for a local event encouraging usage of the bank's credit card.

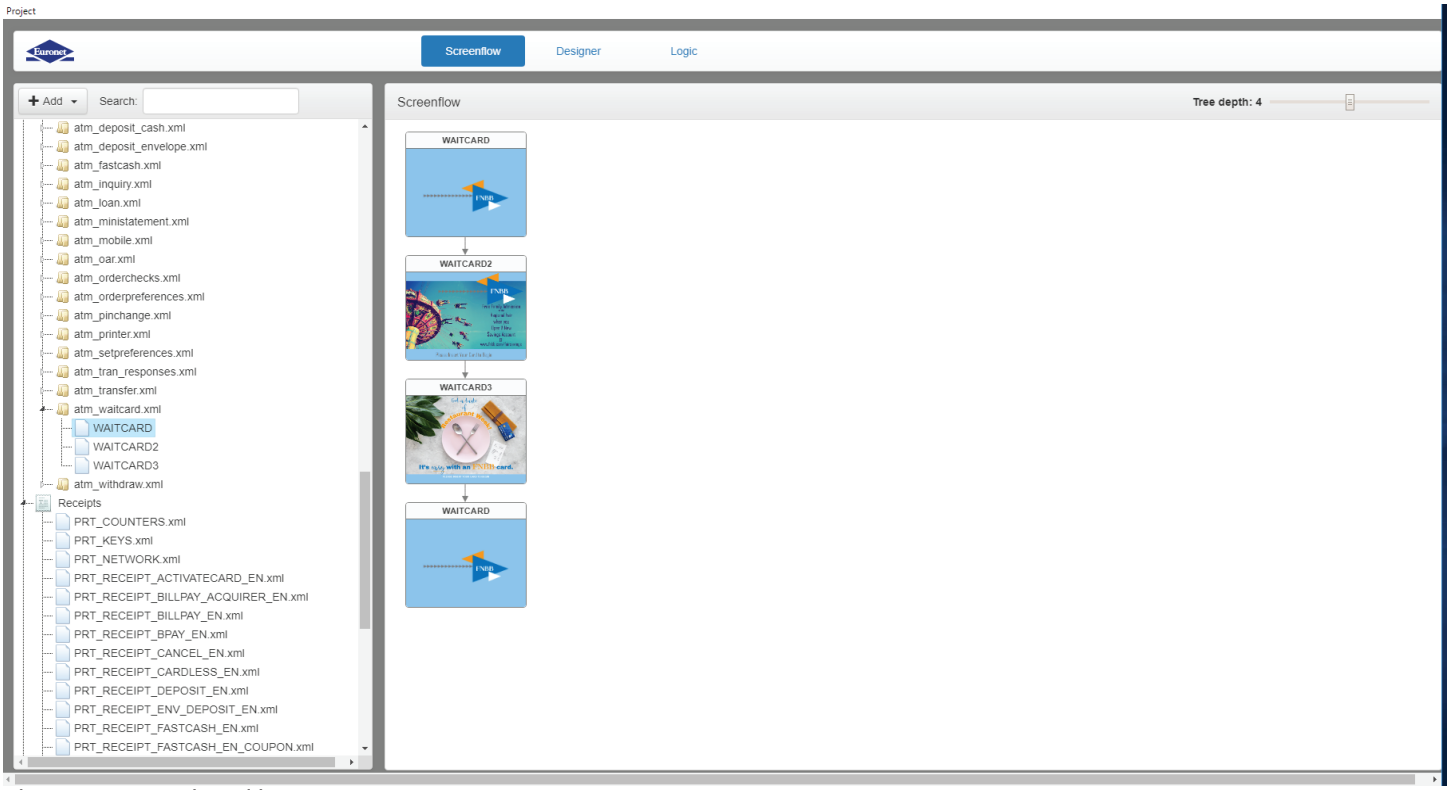


Figure 11: ATM Waitcard loop

Let's assume that the local event is now past and that image now needs to be replaced with a new one. Simply select that image, and click on the Designer button at the top of the screen. You'll see a screen like this display:

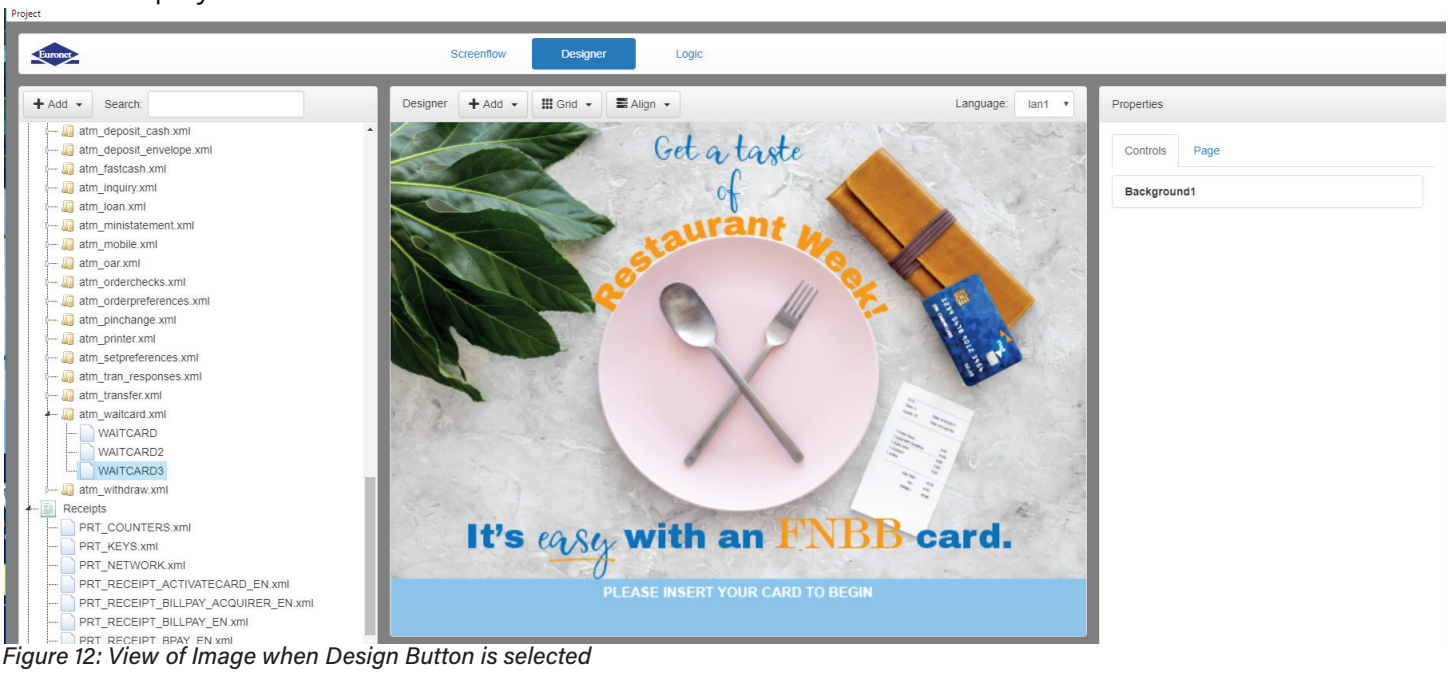


Figure 12: View of Image when Design Button is selected

Click on the Page tab in the Properties panel on the right side of the screen, and the display changes to this:

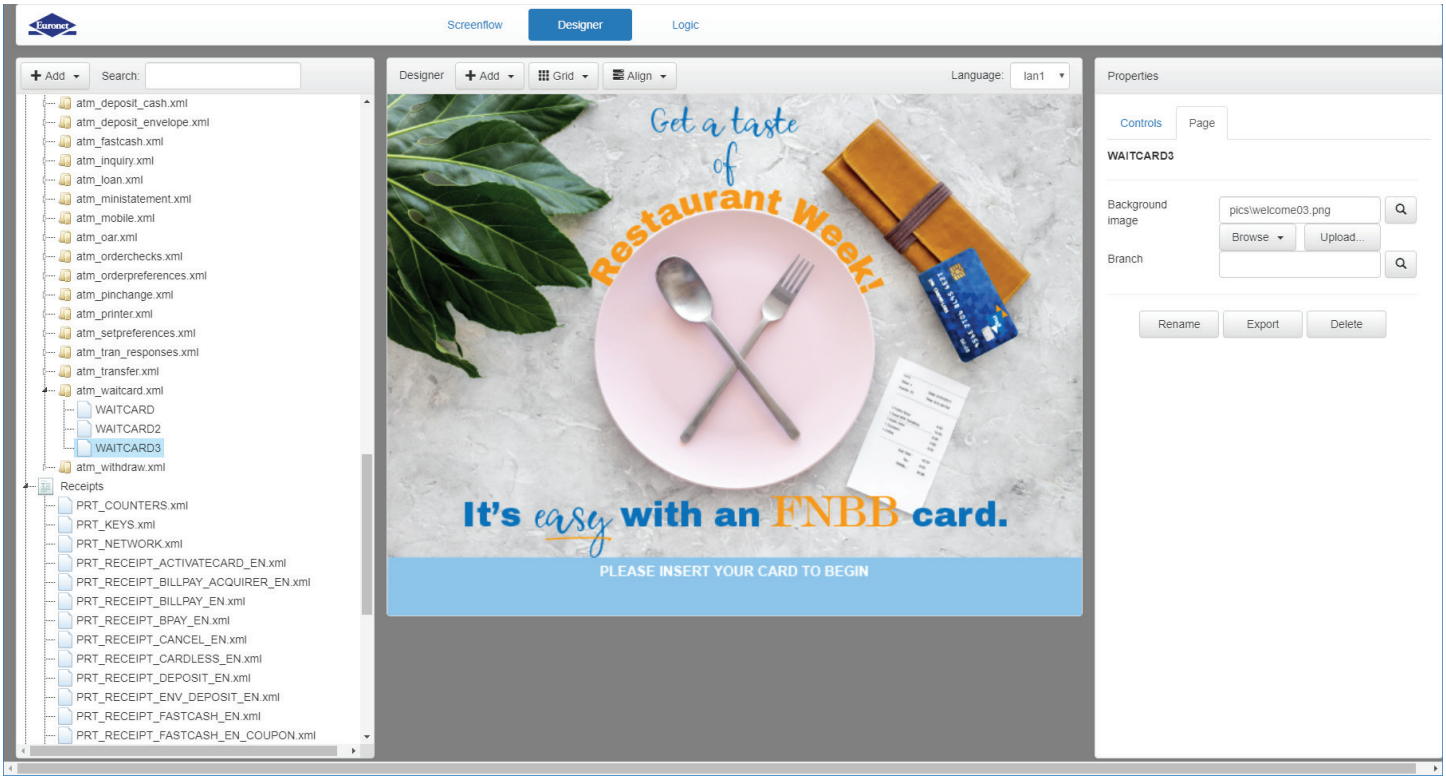


Figure 13: View of Properties tab in Design mode

You now have the option to browse for another image or to upload another image. When you select the Browse button, a new pop-up window opens with a list of image files. By default, the first 10 files names are displayed, but you can change the number of files to be displayed by adjusting the "Show Entries" number at the top of the pop-up. You can go to the next page of files by selecting the page number or "Next" at the bottom of the pop-up window. You also have the option of browsing by Image by selecting that radio button. Choosing this option will bring up thumbnails of the images in the Designer image library. Once you have found the image file that you want, click on it to select it, and it will replace the original image. Only image files that have been uploaded previously will be listed here.

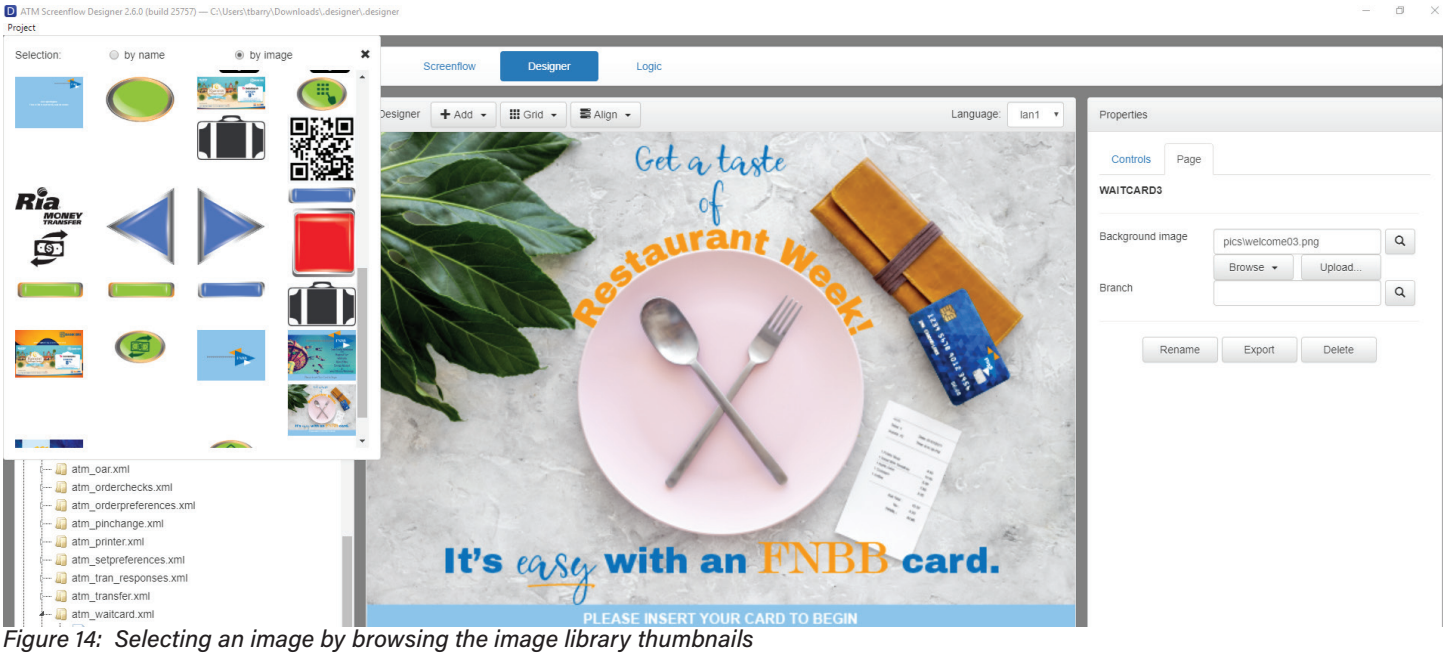


Figure 14: Selecting an image by browsing the image library thumbnails

If the image that you need has not yet been uploaded, select “Upload” and you will see an “Upload File” pop-up window display. Select the “Choose File” button and browse through your file directory to find the image that you want to upload. Select the file and click on the “Open” button at the bottom of the screen. Then select the “Upload” button and the image file will be uploaded to Designer and it will replace the previous image.

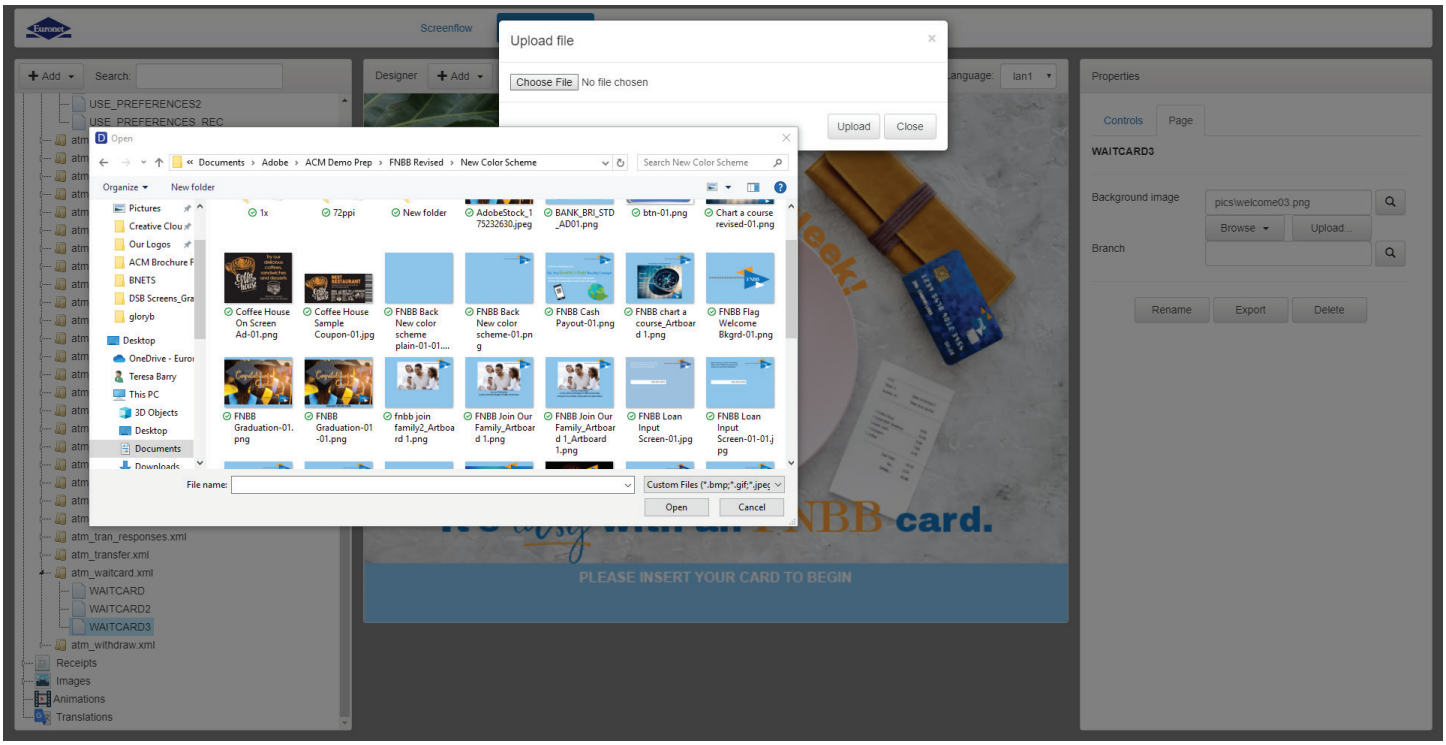


Figure 15: Uploading a new image to the image library

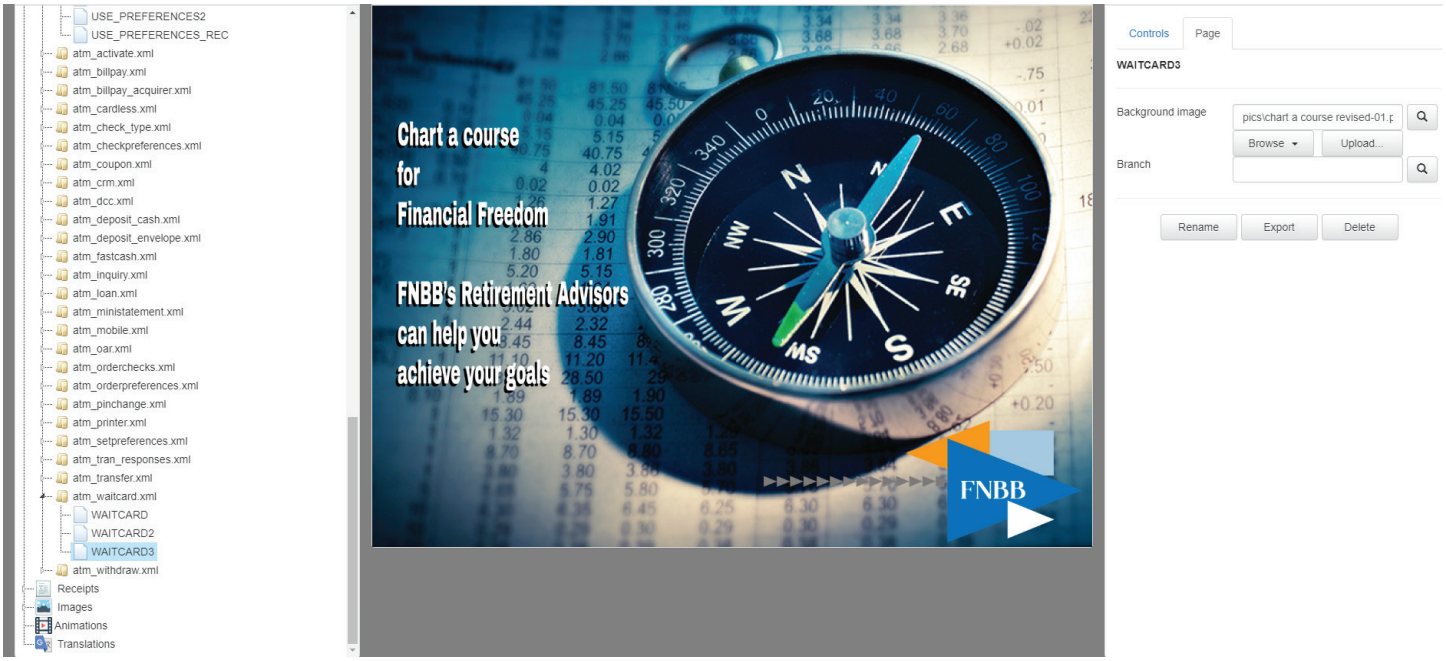


Figure 16: Updated image for Waitcard xml

Updating a Non-Static Image (Image with editable elements)

Depending on the page and the types of editable elements that are included, your editing options will vary. For our example, we will look at the Select Transaction xml. This page includes a background image that can be replaced with another background image, editable text, and touchscreen type button images that can be replaced with another touchscreen button image if desired.

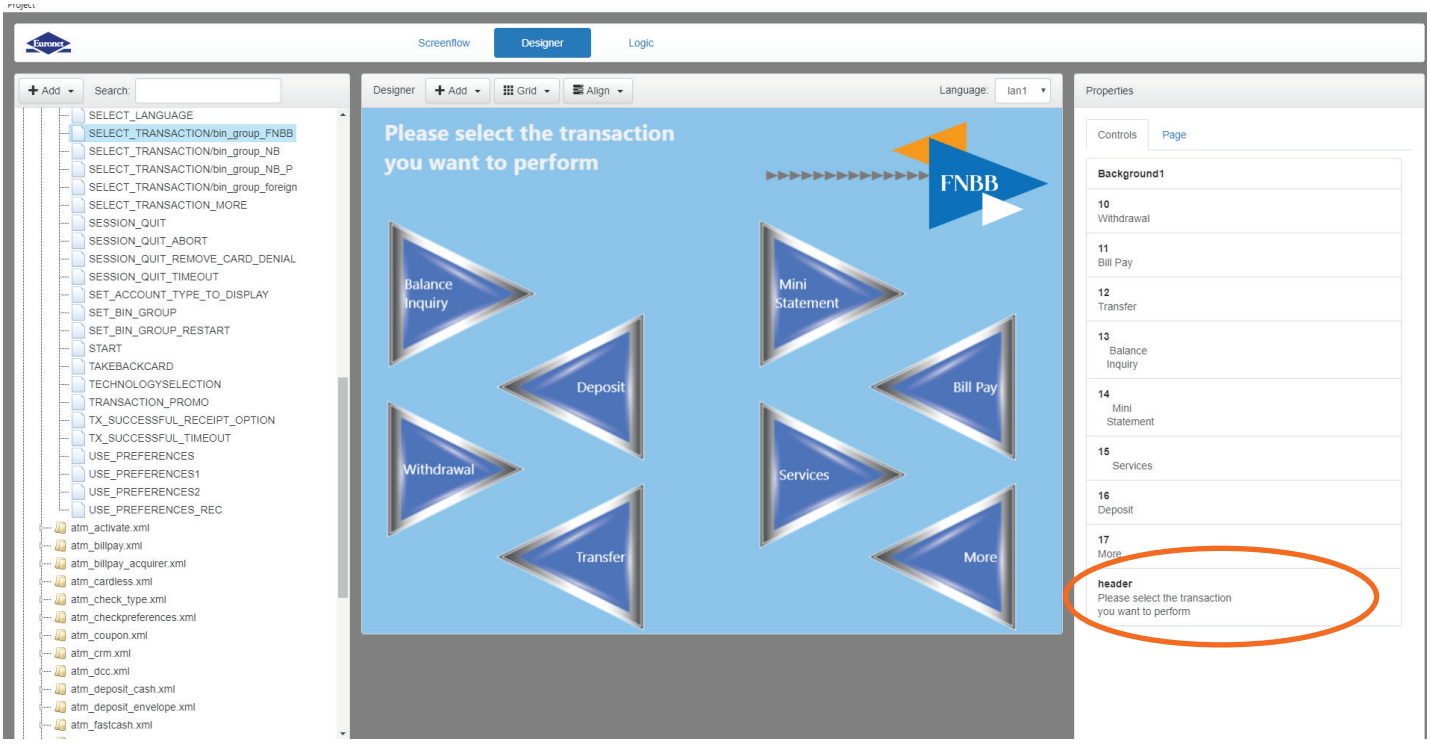


Figure 17: Select Transaction Screen with Touch Screen type buttons

To start, let's update the text. If you click on the "header" area at the bottom of the right panel, you'll notice that a "header" tab is added and is immediately displayed. Also, the text area is now highlighted with a marquee drawn around it on the center panel.

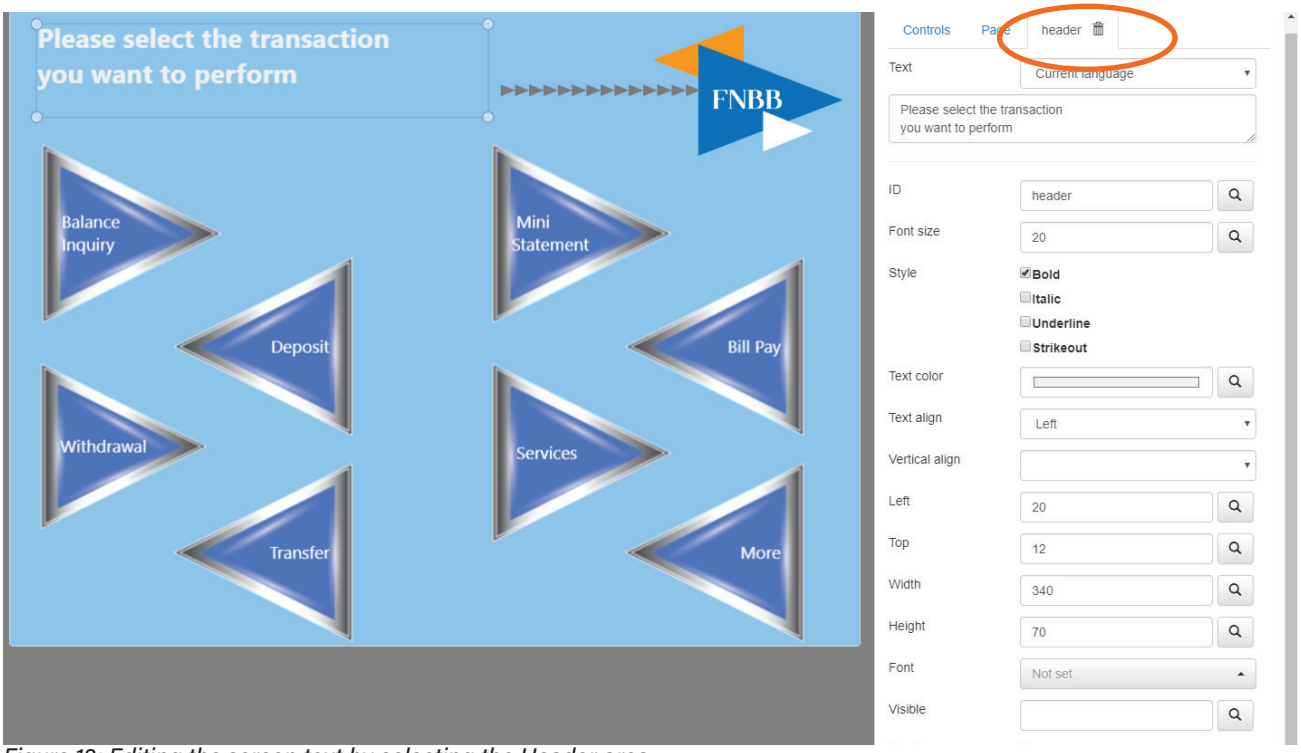


Figure 18: Editing the screen text by selecting the Header area

On the right-hand panel there are options to edit the wording, edit the font size, text color, text alignment, vertical alignment, Left position adjustment (in pixels), Top position adjustment (in pixels), Width of text area (in pixels), and Height of text area (in pixels), and finally a drop-down that allows you to select a different font.

To change the wording, simply highlight the text in the text box and start typing the wording you would like to use. You can adjust the color by selecting the color picker. A pop-up window will be displayed that allows you to click on the desired color. See the image below to see that the text color has been updated as well as the font, and position of the text.

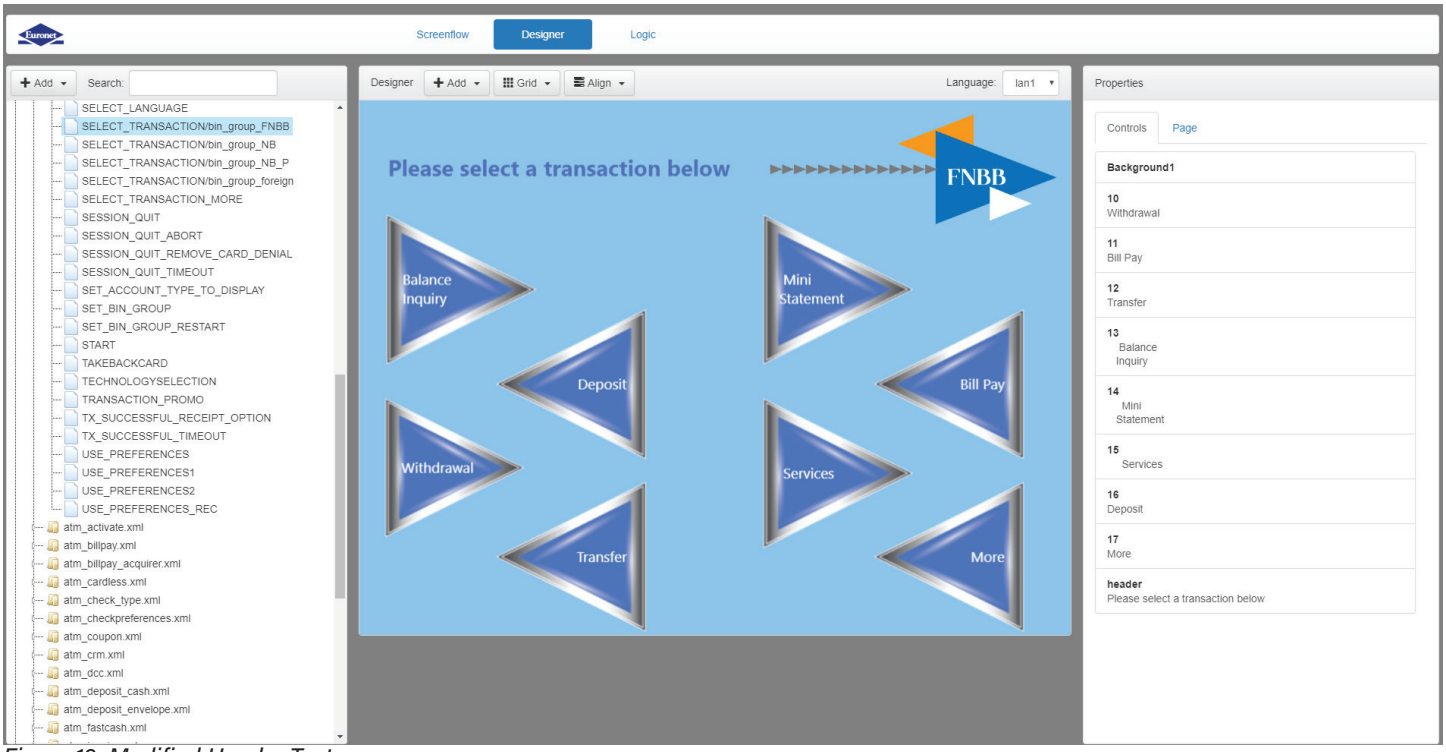


Figure 19: Modified Header Text

Changing the background image for a screen such as this is the same as changing the image for a static screen. Select the "Page" tab on the right-hand panel, and browse for the image you'd like to use, or upload a new image.

When updating buttons, you will need to be mindful of the differences between Touch Screen Buttons and Fixed Buttons. When working with Touch Screens, buttons can be virtually any size or shape, and their position on the screen can vary. However, Fixed Buttons can only be placed in specific areas which relate to the ATM Machine Function Keys. Because of their specific placement, the size and shape of Fixed Buttons is somewhat limited. The eight (8) Screen Function Keys are arranged in two four-key groups—one on the left and the other on the right side of the screen. The function keys are designated F1 through F8, as shown in Figure 20..

Figure 20: Fixed Button Positions relate to ATM Function Keys

NOTE: screen function keys are only active when a corresponding function or menu option is present next to that key.

If you are managing a fleet which consists of some Touch Screen machines and some Fixed Button machines, you must decide if you will maintain separate screen flows for each group. Doing so provides the greatest level of flexibility with the screen designs for your touch screen machines. However, maintain separate screen flows also adds to the complexity of managing your fleet. If you do not want to maintain separate Screen Flows for Fixed and Touch Screen machines, you will need to design your screens so that the touchscreen buttons are in the same location on the screen as the Fixed Button positions.

Changing button images also works in a similar manner as changing the background image. If you have already uploaded the images, you can simply click on button image. A new tab is displayed in the Right hand panel with a number that corresponds to the Control (3 in this instance).

Messaging & Marketing

with Ren ATM Management for XFS Solution

Marketing personnel are also able to easily configure marketing campaigns with Ren ATM Management for XFS Solution.

There are two primary types of marketing supported by Ren ATM Management for XFS Solution—Targeted and Non-Targeted. Targeted marketing uses information about the card holder/user to selectively provide marketing or informational messaging to the customer. Non-targeted marketing is more generic and typically involves marketing or informational messaging that is suitable to be shown to any card holder/user.

One example of non-targeted marketing would be the "Welcome Screen" messaging, also known as the "Idle Loop". The Idle Loop images are displayed whenever the ATM is not being actively used by a card holder/user.

The Idle Loop consists of still images and/or videos that are generally used to promote the organization's branding; perhaps highlighting the organization's support of local events, or even showcasing achievements of the organization or providing well wishes in recognition of a holiday season. Marketing can set the number of seconds that each screen is displayed before the next item in the idle loop is shown. As a matter of practicality, screens that have more text should be displayed longer than those screens with little or no text to allow for the text to be read. There is no system limit to the number of still images and/or videos that can be configured for the idle loop. (See Figure 21 for examples of idle loop images)

Figure 21 - Idle Loop Static Images

Additionally, Ren ATM Management for XFS Solution is designed to allow for the addition of targeted and non-targeted marketing messages at various points during the standard transaction flows. There are four standard insertion points (Package Types):

- Pre-transaction: displayed before PIN entry
- Transaction-in process: displayed during transaction processing
- Post-transaction: displayed after transaction completion of before TranInProgress
- Transaction Exception: displayed following transaction declined response

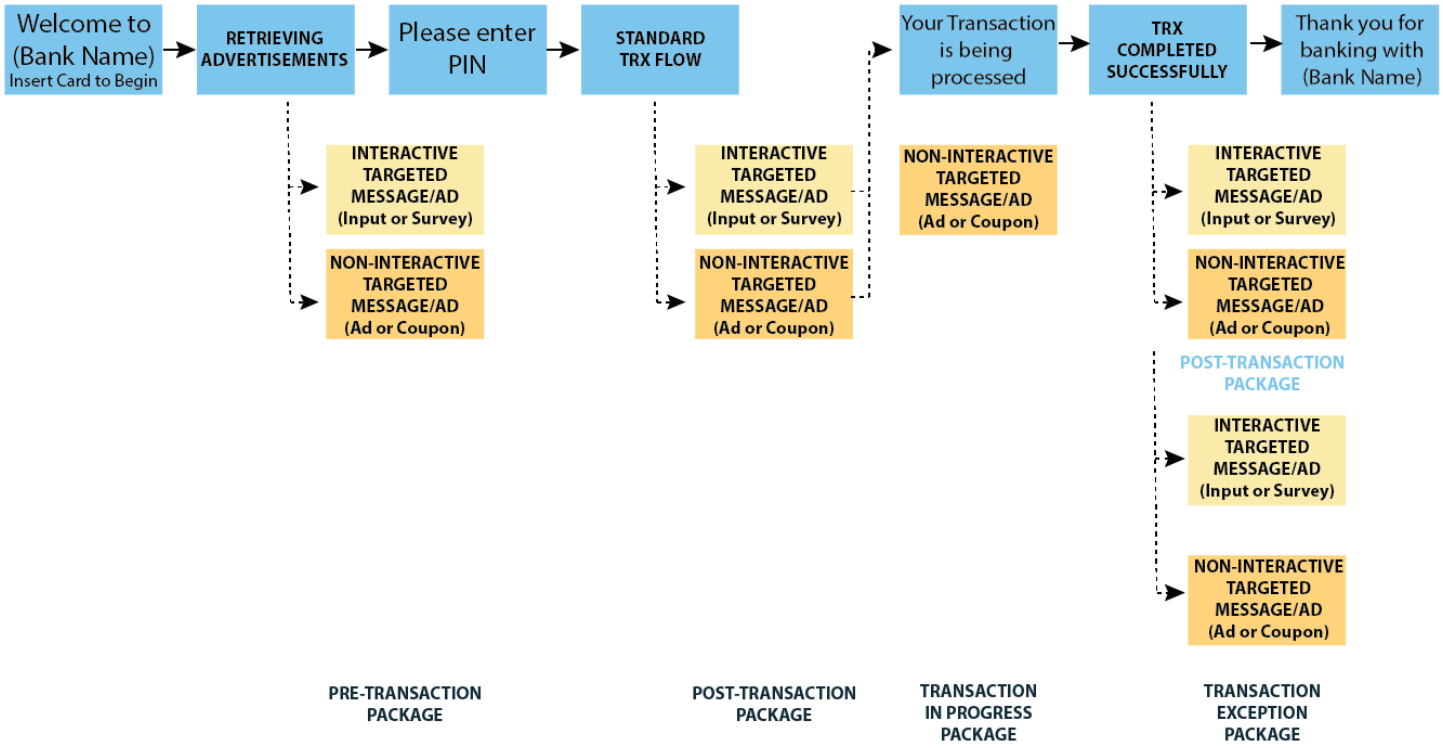
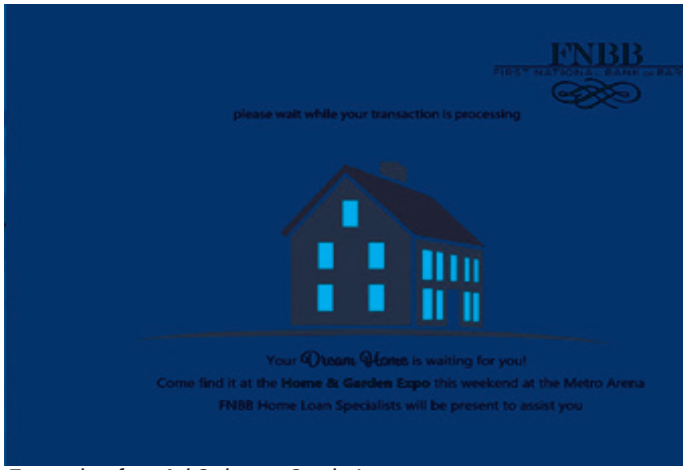


Figure 21: Example Screen Flow with Package Types

Types of Campaigns

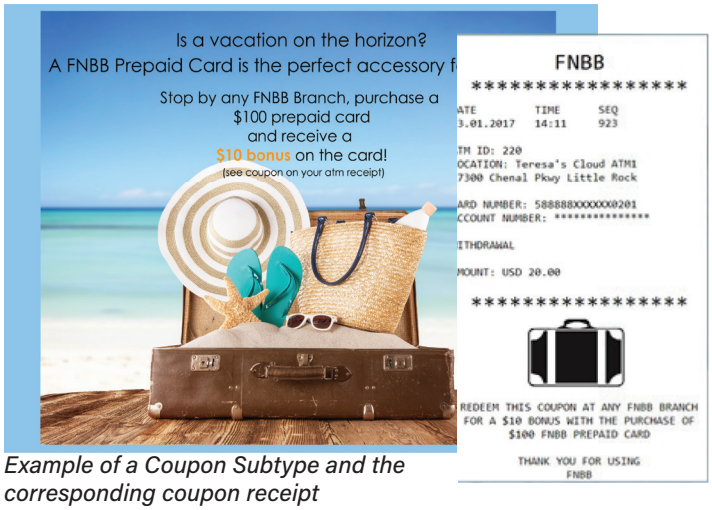
Advertisement:	Non-interactive advertisement graphic
Coupon:	Non-interactive advertisement graphic with corresponding receipt advertisement
Survey:	Interactive advertisement graphic with Yes/No option on screen
	Both options show the same 2nd screen (eg Thank you for your response)
Input:	Interactive advertisement graphic with Yes/No option
	"YES" option shows 2nd screen with option to enter a contact information;
	"NO" option shows a different 2nd screen (eg: "Sorry you didn't accept the offer")

Ad – Static Image or Video is displayed, but no button or opportunity for user input is provided



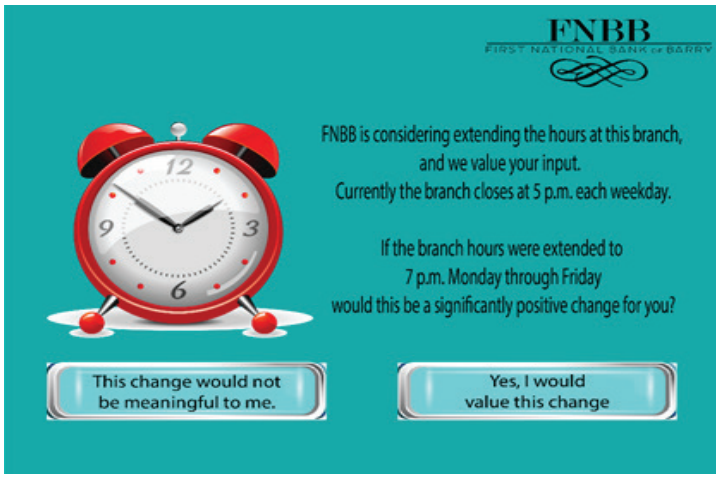
Example of an Ad Subtype Static Image

Coupon – Similar to the Ad, a static image or video is displayed, however a special coupon receipt is printed at the completion of the transaction



Example of a Coupon Subtype and the corresponding coupon receipt

Survey - Static image is displayed with two buttons (an affirmative and negative). The text on the buttons is set up as an attribute of the campaign. Examples: Yes/No, Tell Me More/ No Thank You, I accept this offer/I decline this offer. User must choose one or the other button to proceed with their transaction. Their input is captured in the Ren ATM Management for database. Regardless of which button is chosen, the next screen displayed is the same for all users.



Example of Survey Input Subtype with buttons

Input – Static screen is displayed with two buttons (an affirmative and negative). User must choose one or the other button to proceed with their transaction. If the user chooses the affirmative button the next screen displayed allows them to input data (such as their email address or cell phone number). If the user selects the negative button, their transaction completes as normal. The users button selection and any data input is captured in the Ren ATM Management for database.

Example of Input Screen

Project & Campaign Configuration

There are multiple variables that can be used to further configure campaigns within Ren ATM Management for XFS Solution. This configuration is done via the Ren ATM Terminal Management System (ATMS) via the Project and Campaign menu options.

The variables availble are:

- The Package Type
- The Campaign Type
- Date(s) that the campaign is active (start and end dates)
- Days of the week that the campaign is active
- Time(s) of day that the campaign is active
- The ATM or group of ATMs for which the campaign is active. ATM groups are very helpful in managing ATM messaging and promotions. A bank might create one ATM group for all ATMs that are in branch locations, and another ATM group for all ATMs in retail locations. They could also create a third ATM group that included all of the bank's ATMs. Another way a bank might choose to use groups could be based on how the bank management is structured. ATM groups could be created for each regional manager's territory of responsibility. Having these various groups allows for a message or ad to only be displayed on that ATMs that belong to the chosen groups. NOTE: An ATM can belong to multiple groups.
- The number of times the campaign should be displayed to a user
- The BIN or group of BINs for which a campaign is active
- A list of customer IDs for which the campaign is active
- The date and time when the campaign should be remotely downloaded to the selected ATM or groups of ATMs
- The image(s) including background and/or campaign specific images or videos as well as button images, input fields and any overlay text to be displayed for the campaign. These images and videos will be uploaded to ATMS in a ZIP file that will be downloaded to the desired ATM or group of ATMs at the date and time specified in the configuration. This will update the CRM xml on the ATM(s).

One of Ren ATM Management for XFS Solution's security features is Versioning Controls which check the xml version on each ATM with each alive message to verify the version is correct. This is done to ensure that the ATM xmls have not been hacked or tampered with. If ithe version is not correct, the ATM is automatically shut down, and an alert is sent to the operations team.

It is important to note that multiple Projects/Campaigns can be active on a given ATM at one time.

Ren ATM Management for XFS Solution uses the following logic to prioritize which promotion/messaging will be displayed to the ATM user:

a. Target group size:
    i. Card over BIN
    ii. BIN over non-targeted (all users)

b. Date campaign started:
    i. Older over newer

Target group is considered first and if, for example, there are two promotions for the same target group, then the date the campaign started is the determining factor.

The use of these variables provides a great deal of flexibility and specificity for your messaging and promotions. Below are a few examples of how these variables might be used for various messaging and promotional purposes:

- A bank might choose to run a specific informational message to their customer base informing the customers of a change in policy prior to the policy being implemented. In this scenario the bank could set up a project and campaign that is configured to only display to ATM users whose cards are within the bank's own BIN ranges (OnUs). They could specifiy that the campaign be displayed to these users up to three times for a period beginning 90 days before the new policy is set to take effect.. Note, the actual number of times a customer would see the message would be dependent on the number of times the customer used one of the bank's ATMs. If they only used the ATM once during the specified active period of the campaign, they would only see the message once.
- A bank could choose to promote a new product or service via a short video. for the next 90 days The intent is for the video to be displayed to all ATM users (On Us and Off Us users) while the customer is waiting for the transaction to be processed. ATM users will be asked if they would like more information regarding the product; if interested, they will be asked to enter a contact phone number. To accomplish this the bank would need to configure a project with a start date of today, and a post transaction project type with an input campaign subtype. All ATM groups would be included.
- A bank might want to run a promotion for Off-Us customers to encourage them to become a customer. One way to do this would be to offer the off-us customers a discount coupon that could be redeemed by stopping by a branch and purchasing a prepaid card, or some other bank product. The project would be set up to target the BINS of competitor banks, and would use the coupon subtype. These coupons can include a barcode to be scanned at the time of redemption, as well as an image that ties into the promotion. When the user visits the branch to purchase the promotional product, bank personnel have an opportunity to encourage the user to become a bank customer.

By using different combinations of project types, campaign subtypes, and the other variables, your marketing and communications team can structure a wide variety of messages and advertisements to benefit your business and keep customers engaged and well informed.