PRJ 22753: cXc Phase 3

Combined Requirements Document

High Level & Non-Functional Requirements

Version 1.14

Revision History Table

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| March 21, 2017 | 1.0 | Initial creation | Andy Kavie |
| May 17, 2017 | 1.1 | Review with all teams | Andy Kavie |
| May 19, 2007 | 1.2 | Edits from Review | Andy Kavie |
| May 31, 2017 | 1.3 | Added FEAT 11: Conversion Requirements | Andy Kavie |
| May 31, 2017 | 1.4 | Added FEAT 12: O-auth Requirements  Reworded FR 3.2.1  Moved FRs 3.2.2 & 3.2.3 to FEAT 12 and reworded. | Andy Kavie |
| June 2, 2017 | 1.5 | Descoped FEAT 11 per BL feedback  Modified FEAT 2   * Edited FR 2.2 * Added FR 2.2.1, FR 2.3.1 * Removed FR 2.4. | Andy Kavie |
| June 5, 2017 | 1.6 | Fixed FEAT 7 numbering error. | Andy Kavie |
| June 8, 2017 | 1.7 | Added FR 9.10 – special charracters  Added FEAT 13 and associated FRs | Andy Kavie |
| June 19, 2017 | 1.8 | ~~Descoped FEAT 13~~ | Andy Kavie |
| June 29, 2017 | 1.9 | Added assumption that this project will not A11Y retrofit step up / OTP screens.  Added an A11Y out of scope item.  Completed FEAT 8  Descoped FEAT 9 | Andy Kavie |
| November 6, 2018 | 1.10 | Updates resulting from BL decisions made the week of 10/29  FR 4.6 – Reverted to original requirement of request having only one person.  FR 4.71 – Removed as we are not doing multiple recipients.  FR 4.10 & FR 4.6.5.4 – Removed as FEAT 9 is descoped.  FR 4.15 – Added, as we want to keep this functionality.  FR 7.2.2 – Removed the requirement to remove due date from timeline (see FR 4.15)  FR 7.2.3 – Removed as requests will only go to one person (see FR 4.6) | Andy Kavie |
| November 29, 2017 | 1.11 | Rewrote FEAT 1 to reflect what is actually being done.  Updated FEAT 3  Added FEAT 14 – Acitmize FBA Requirements  Added FEAT 15 – New matched recipient call | Andy Kavie, Damar |
| January 25, 2018 | 1.11 | Updated FEAT 15    Added details to FEAT 15.3.1 only – out-of-network debit card details. | Saurabh Arora |
| January 30, 2018 | 1.11 | Rewrote FEAT 5    Added FR 5.12.4 and FR 5.12.5 - Recalculation of Split amount while editing Split transaction. | Saurabh Arora |
| February 15, 2018 | 1.12 | Updated FEAT 5  FR 5.6.1 – Minimum number of Recipient for Split = 1.  FR 5.5.2 – Split flow will not allow recipient management. | Saurabh Arora |
| February 16, 2018 | 1.13 | Added Feat 16 for shared directory update to 3.8 version | Damar |
| April 3, 2018 | 1.14 | Updated FR 6.5, FR 6.5.1, FR 6.5.2, FR 6.5.3 with no backend team impacts  Removed FR 6.6.7 | Sriram Ganapathy |

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Section 1: Overview

# Project Summary

cXc Phase 3 (Q623239) is a CapEx idea to enhance U.S. Bank’s Zelle money movement capabilities. Phase 3 focuses on:

* Enhancing of our Fraud and Risk tools for Zelle payments
* Reduce risk for the bank from this emerging payment method
* Ensure this service meets all accessibility standards and requirements.
* Integrate U.S. Bank online Zelle experience with the EWS’s (Early Warning Systems) Zelle app.

## In-scope Items

### Integration with EWS’s solution including support of EWS’s API, synchronization of information between EWS’s app and USB online platforms, and enhanced authentication

### Integration with EWS’s fraud monitoring systems and exchange of fraud and risk information

### Enhanced Zelle customer experience by adding Request for Money and Split capabilities to the Zelle flow.

### Ensure the Zelle flow meets USB accessibility requirements.

### Add the ability for 24HB bankers to cancel Zelle payments on behalf of a customer.

### Inplement a “memo filter” to remove abusive and inappropriate language in the Zelle memo field.

### User experience enhancements.

## Out of Scope Items

### Changes to the legacy “Send Money to a Person” flows for sending money to an account or send money via a check.

### Synching a customer’s recipient list between the EWS Zelle app and the U.S. Bank Zelle experience.

### This project will not address A11Y issues in the global navigation elements, headers, footers, or any other global elements.

## Assumptions

### UI changes will conform to EWS’s UI guidance

### All new UI development will be accessibly compliant.

### Accessibility analysis of the current Zelle flow will be completed before this project begins.

### When U.S. Bank responds to an EWS fraud scoring request with a **RED** response, EWS will not allow the transation to proceed.

### When U.S. Bank responds to an EWS fraud scoring request with an enhanced authentication response, U.S. Bank will select an enhanced authentication method provided by EWS.

### U.S. Bank will not utilize Amazon Web Services (AWS) for EWS connectivity.

### Accessibility in the step-up and OTP screens, used for Zelle, will be addressed via the Shared Auth Phase 3 project. This will be done by the Shared Auth Project (PRJ # 22048).

## Constraints

### Request & split money flow/UX must be agreed upon by both EWS and U.S. Bank.

### Accessibility design requirements must be agreed upon by both EWS and U.S. Bank.

## Dependencies

### Timely implementation of EWS’s API

### Timely delivery of EWS’s UI guidance

### Timely access to U.S. Bank accessibility requirements/resources

## Risks

### None identified at this time.

Section II: Project Stakeholders

# Contacts and Contributors

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Group** | **Role** | |
| Jim Daik | Money Movement dev | | Dev Lead |
| Jill Rukke / Deborah Krinitzsky | ETM Money Movement | | Test Lead |
| Andrew Kavie | Money Movement Platform | | Requirements Lead |
| Guptan Nambudiripad | Architect | | Arch Lead |
| Denise Poitras | Fraud PMO | | Fraud PMO |
| Steve Gray | Fraud BL | | Fraud BL |
| Shaun Harteloo | Fraud BL | | Fraud BL |
| Ron Rosa | Fraud BL | | Fraud BL |
| Dario Diaz | Fraud Dev | | BA |
| Johnathan Hinde | Fraud Dev | | Architect |
| Kathy Heimerl | Fraud Dev | |  |
| Joan Isakson | Hogan PAS | | Dev |
| Tony A Becker | Performance Mangement Net app | |  |
| Darlene Owens | Reconciliation | |  |
| Nick Reynolds | Reconciliation | |  |
| Melinda Matthews | Hogan DDA | | BA |
| Michael Scott | Hogan DDA | | Dev |
| Dan Thompson | Hogan DDA | | Dev |
| Chris Williams | Hogan CIS | | BA |
| Linda Greyling | Hogan CIS | | Dev |
| Roseate Wagner | MM BL | | BL |
| Ashley A Martichuski | MM BL | | BL |
| Christine Ruppert | EWS | |  |
| Ellen L Mayberry | MM | | MM Dev |
| Raj Talluri | PM | | PM |
| Muzaffar Ali Razvi Mir | PMO | | PMO Lead |
| Mohamed Mandour | MM BL | | PM |
| Basu Bavidaddi | Digital Channels - Authentication | | Dev |
| Cynthia (Cindy) Palmer | ETM Compliance Systems | | Software Tester |
| Kacy Hartmann | ETM Hogan DDA | | Senior Software Tester |
| Margarete Coffeen | EDS | | BA |
| Richard Daniel | EDS | | Application Architect |
| Abe McCallum | EWS | |  |
| Mark Pender | EWS | |  |
| Albert Dyess | ETM - Financial Crimes / Fraud | | QA Manager |
| Deborah Krinitzsky | ETM - usbank.com | | QA Manager |
| Marlys Albrecht | ETM Hogan DDA | | Software Tester |
| Kathy Burleson | ETM Hogan DDA | | Software Tester |
| Anamica Rai | ETM - Financial Crimes / Fraud | | QA Manager |
| Uwe Britfield | O-Auth | | Info Security Dev |
| Steve Robrahn | O-Auth | | Info Security Dev |
| Tony Tran | O-Auth | | Info Security Dev |
| Eric R Potter | ISS | | Info Security Architect |
| Annette L Alvestad | ETM Hogan CIS | | Software Tester |
| Krishnan Puthuvayilkalam, Ramya P | ETM Money Movement | | MM Test Lead |
| Belinda Quick | Gateway API | | Technology Architect |
| Robison, Jessica D | ETM Money Movement | | Software Tester |
| Williams, Brett M | Hogan CIS Architecture | | Business Systems Analyst |
| Burleson, Kathy A | ETM Hogan DDA | | Software Tester |
| Derek O Girtman | Infrastructure | | Systems Integrator |

Section III: Requirements

# System Features

| **ID** | **Brief Description** | **Business Line Priority** |
| --- | --- | --- |
| FEAT 1 | ~~U.S. Bank shall respond to an EWS inquiry for fraud scoring on a Zelle transaction initiated by a U.S. Bank Customer, for all inbound out-of-network transactions, and all requests made by a USB customer.~~  The EWS Zelle app shall utilize U.S. Bank systems for send transactions and “requests” set up by U.S. Bank customers..ithin the Zelle app. | High |
| FEAT 2 | U.S. Bank shall share, with EWS, information on all Zelle transactions U.S. Bank suspects has fraud or has been confirmed as fraudant. | High |
| FEAT 3 | U.S. Bank shall share customer and transaction information with the EWS Zelle app. | High |
| FEAT 4 | Move the current “request” functionality from the P2P legacy flow into the USB Zelle flow. | High |
| FEAT 5 | Incorporate the new Zelle “split” functionality into the USB Zelle flow. | High |
| FEAT 6 | Move the current “respond to request” from the P2P legacy flow into the USB Zelle flow and enhance it to work with Level 3 data. | High |
| FEAT 7 | “Request” and “Split” transactions shall be viewable and editable in the “Transactions Timeline”. | High |
| FEAT 8 | Previously developed Zelle functionality shall be made accessibility compliant. | High |
| ~~FEAT 9~~ | ~~Exisiting Zelle shall be updated with additional features.~~  **Descoped** | ~~High~~ |
| ~~FEAT 10~~ | ~~The Zelle system shall interface with EWS’s Amazon Web Services (AWS).~~ **Descoped** |  |
| ~~FEAT 11~~ | U~~.S. Bank customers who have enrolled within the EWS app to receive money to their debit cards shall have their enrollment changed such that the debit card is replaced with the debit card’s associated account~~**. Descoped** | ~~High~~ |
| FEAT 12 | The solution shall provide an O-auth interface for the EWS Zelle app. |  |
| ~~FEAT 13~~ | ~~The solution shall ensure mobile number ownership via the MNO process.~~ **Descoped** |  |
| FEAT 14 | Actimize FBO Requirements |  |
| FEAT 15 | Implement new “match recipient” call in WEB, iPhone app, iPad app, android app, and Touch platfroms. |  |
| FEAT 16 | Update shared directory service to 3.8 version |  |

# Detailed Functional Requirements

FEAT 1: The EWS Zelle app shall utilize U.S. Bank systems for send transactions and “requests” set up by U.S. Bank customers within the Zelle app.

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| --- | --- | --- |
| **ID** | **Detailed Functional Requirements** | **Notes** |
| FR 1.1 | U.S. Bank shall fraud score and process all send transactions initiated by U.S. Bank customers within the EWS Zelle app. |  |
| FR 1.1.1 | U.S. Bank customer initiated send transaction include:   * USB customer to USB customer (DDA to DDA) * USB customer to Zelle network customer (DDA to in-network debit card) * USB customer to Zelle network customer (DDA to in-network DDA) * USB customer to out-of-network customer (DDA to out-of-network debit card) | Hogan DDA,ESD,Hogan PAS |
| FR 1.1.2 | The EWS ZELLE app shall submit all USB send transactions to USB for processing.   * Provide enough information to uniquely identify the USB customer involved in the transaction. * provide enough information to identify in-network and out-of-network transactions. * Provide information on the payee of an in-network and out-of-network transaction At a minimum, the system shall provide the cXc profile ID. * Provide USB the results of the EWS fraud score for the transaction. * Result of EWS step up * List of available step up methods | Web API |
| FR 1.1.3 | U.S. Bank shall fraud score EWS Zelle transactions before the transaction is submitted for further processing. | Actimize(FBA),ESD |
| FR 1.1.3.1 | EWS Zelle app transaction data shall be “enriched” prior to it being sent to Actimize. |  |
| FR 1.1.3.2 | Actimize shall respond with a green, yellow or red fraud score. | See Feat 14  Hogan DDA,ESD  Note- Request Id needs to be stored in Hogan to tie up with Pay ID in the yellow case. |
| FR 1.1.4 | The processing for EWS Zelle app transactions shall:   * Incorporate all eligibility and limit checks currently done for Zelle transactions initiated via usbank.com. * Proper delivery speed determination * Determine if the funds are to be delivered to an out-of-netowrk debit card. (i.e., new matched recipient call) |  |
| FR 1.1.5 | The EWS Zelle app shall be notified of the result of the U.S. Bank transaction processing. |  |
| FR 1.1.5.1 | If the transaction could not be processed, USB shall return a failure code to the Zelle App. |  |
| FR 1.2- Request | The EWS Zelle app shall submit “requests” set up by a U.S. Bank customer to U.S. Bank for set up. |  |
| FR 1.2.1 | The existing “request” set-up process shall be used. | See feat 14 |
| FR 1.2.2 | A new check shall be implemented to determine if:   * The request is going to a debit card * The debit card is in-network or out-of-network. |  |
| FR 1.2.3 | Requests to out-of-network recipient shall not be allowed.  \*\* Refer Feat 15 | (Match Recipient 3.8) |
| FR 1.2.4 | Requests made to mobile tokens on the USB DNC (Do Not Call) list shall not be processed.  \*\* Refer Feat 15 | (Match Recipient 3.8) |
| FR 1.2.5 | The EWS Zelle app shall be notified of the results of the request set-up. |  |
| FR 1.2.5.1 | If the request could not be processed, USB shall return a failure code to the Zelle App. |  |

FEAT 2: U.S. Bank shall share, with EWS, information on all Zelle transactions U.S. Bank suspects has fraud or has been confirmed as fraudant.

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| --- | --- | --- |
| **ID** | **Detailed Functional Requirements** | **Notes** |
| ~~FR 2.1~~ | ~~U.S. Bank shall establish a connection with the EWS to exchange fraud information on cXc transactions.~~ | ~~As is ?~~ |
| ~~FR 2.2~~ | ~~If U.S. Bank identifies fraud on a cXc transaction or U.S. Bank stops a cXc transaction for fraud reasons, U.S. Bank shall notify EWS of the fraud/stoppage and send the appropriate data to identify the transaction and type of fraud / reason for stoppage. U.S. Bank shall also share blacklisted information with EWS.~~ |  |
| ~~FR 2.2.1~~ | ~~The outbound connection from U.S. Bank to EWS shall be real time.~~ | ~~If real time not possible, file sharring shall occur as a nightly batch and consist of the ZFC and ZNA files.~~ |
| FR 2.3 | If EWS identifies fraud on a cXc transaction or EWS stops a cXc transaction for fraud reasons, EWS shall notify U.S. Bank of the fraud/stoppage and send the appropriate data to identify the transaction and type of fraud / reason for stoppage. |  |
| ~~FR 2.3.1~~ | ~~The inbound connection from EWS to U.S. Bank shall occury nightly and contain the ZRR file.~~ |  |
| ~~FR 2.4~~ | ~~Fraud sharring information shall occur in real time.~~ |  |

FEAT 3: U.S. Bank shall share customer and transaction information with the EWS Zelle app.

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| --- | --- | --- |
| **ID** | **Detailed Functional Requirements** | **Notes** |
| FR 3.1 | EWS shall identify U.S. Bank customers after they have logged into the EWS Zelle app. |  |
| FR 3.2 | U.S. Bank shall allow the EWS Zelle app to request customer information when a U.S. Bank customer is sending money via the EWS Zelle app. |  |
| FR 3.2.1 | ~~If a USB customer’s online banking UID is locked/disabled, the USB customer shall not be allowed to log in to the Zelle app.~~  Whenever the customer’s UID is locked out or disabled, the EWS Zelle app shall not be allowed to request customer information. |  |
| ~~FR 3.2.2~~ | ~~A USB customer’s O-auth credentials shall be kept in synch with their online banking credentials. (e.g., if customer changes password, their O-auth credentials token shall be updated.)~~ |  |
| ~~FR 3.2.3~~ | ~~Whenever the customer’s UID is locked out or disabled, the system shall update the O-auth credentials token.~~ |  |
| FR 3.3 | U.S. Bank shall respond to an EWS Zelle app customer information request with:   * Customer eligible accounts * Customer account numbers * Account balances * Account information display data * Maximum allowed for a transaction * Delivery speed for transaction (instant or standard) |  |
| FR 3.3.1 | When retrieving customer limit USB shall pass along the highest REMAINING limit of the two limits return by the back end | ie, if a customer is not eligible for instant up front, do not include instant payment limit. |
| FR 3.4 | U.S. Bank shall allow the EWS Zelle app to request customer payment history. |  |
| FR 3.4.1 | Customer payment history shall include:   * Past payments * Pending payments * Requests * Incoming cXc transactions * Response to Incoming Request * ~~Future dated and recurring ?~~ | Hogan DDA , PAS, ESD,Incoming CXC for activity. |
| FR 3.4.2 | A U.S. Bank customer shall be allowed to cancel their pending payments from within the EWS Zelle app. |  |
| FR 3.5 | Customer information & customer history data exhanges shall occur real time. |  |
| ~~FR 3.6~~ | ~~U.S. Bank shall establish of method of sharring with the EWS Zelle app cXc transaction payment information on cXc transactions initiated in the U.S. Bank Zelle experience.~~ | ~~Its Feat 2 will strike out?~~ |
| ~~FR 3.6.1~~ | ~~Sharing of transaction information shall not occur “real time”~~ |  |
| FR 3.7 | A U.S. Bank customer shall be allowed to tie one or more of their emails/mobile numbers to a U.S. Bank account (i.e., register to receive) within the EWS Zelle app. |  |
| FR 3.8 | A U.S. Bank customer shall be allowed unregister one or more of their emails/mobile numbers from within the EWS Zelle app. |  |
| ~~FR 3.9~~ | ~~A U.S. Bank customer shall be able to add/remove recipients from their U.S. Bank recipient list ?????~~ |  |

FEAT 4: Move the current “request” functionality from the P2P legacy flow into the USB Zelle flow.

|  |  |  |
| --- | --- | --- |
| **ID** | **Detailed Functional Requirements** | **Notes** |
| FR 4.1 | The new “request” flow shall be implemented in the WEB & TUX platforms and in the iPhone, iPad, and android apps. | **New.** **Some outstanding defects –need to review with Priya** |
| FR 4.2 | The “request” flow shall conform to EWS UI guidelines. | **New.** Verify if this was completed in Feb Release - Done |
| FR 4.3 | Customers must be enrolled to receive Zelle funds as a pre-requisite to using the Request feature. | “as is” |
| FR 4.3.1 | If not enrolled to receive Zelle funds, customers shall be presented with the option to enroll. After enrollment the customer shall be returned to the “request” flow. | Return to “request” is **new**. Verify if completed by the Front End in Feb Release - Done |
| FR 4.4 | The system shall only display recipients with an email and/or a mobile number. | “as is” |
| FR 4.4.1 | Recipients shall display and be selected as in the “send” flow. | “as is” |
| FR 4.4.2 | User shall be allowed to add or edit recipients while in the “request” flow. | “as is” |
| FR 4.5 | Requsts can only be sent to email or mobile number tokens. | “as is” |
| FR 4.5.1 | Requests to an unknown recipient can only use an email token. | “as is” |
| FR 4.5.2 | If a recipient’s mobile number token is on USB DNC (i.e, STOP list) call list, the recipient/token combination shall not be allowed on the “request”. | “as is” |
| FR 4.6 | ~~Customers shall be allowed to select multiple recipients on the same request.~~  ~~A “request” can only be sent to one (1) recipient at one (1) token.~~  A “request” can only be sent to one (1) recipient at one (1) token. | **~~New.~~**  ~~Per Roseate, we can continue to have multiple recipients.~~  New |
| FR 4.7 | The system shall prompt the customer to enter an amount. An amount shall be required. | Required amounts are **new**. Verify if completed by Front End in Feb Release - Done |
| FR 4.7.1 | ~~The customer shall be allowed to enter an amount for each recipient selected. The amounts shall not be required to be the same for each recipient.~~ | ~~“as is”~~ |
| FR 4.7.2 | The system shall impose a minimum and maximum “request” amount. | Min and max amounts are **new**. Verify if this was completed by the Front End team in Feb Release - Done |
| FR 4.7.4 | Request limits as defined in the cXc limits PCD shall be continure to be enforced. | “as is” |
| FR 4.7.5 | The daily and 30 day rolling limit on number of “requests” shall remain in effect. | “as is” |
| FR 4.8 | The system shall allow the customer to select the account into which the funds will be deposited. | “as is” |
| FR 4.8.1 | The list of eligible “deposit to” accounts shall be the list of “enrolled” accounts. | “as is” |
| FR 4.9 | The system shall allow the customer to enter a memo for the request. | “as is” |
| FR 4.9.1 | A customer entered memo shall be optional. | “as is” |
| FR 4.9.2 | If a customer memo is not entered, a default memo shall be used. | “as is” |
| FR 4.9.3 | If a customer memo is entered:   * ~~And an email token is used the minimum length of the memo shall be two (2) characters and the maximum length shall be 200 characters.~~ * ~~And a mobile number token is used~~ the minimum length of the memo shall be two (2) characters and the maximum length shall be 20 characters. | **~~New~~** “as is” |
| ~~FR 4.10~~ | ~~A “memo filter” to remove inappropriate and abusive language shall be applied to the “request” memo field. (See FR 9.3)~~ | **~~New~~** |
| FR 4.11 | The requestor nickname shall be eliminated. The sender name shall appear as it does in the “send” flow. | **New** Verify if this was completed by the Front End team in the Feb Release - Done |
| FR 4.12 | The system shall allow the customer to review the request and be allowed to go back and make edits. The customer shall also be allowed to cancel the “request”. | “as is” |
| FR 4.13 | The system shall present a confirmation screen after the request is submitted. The confirmation shall include the “request ID”. | **New.**  Front end – OLB only at this time – check with Ashley – not mobile - OK |
| FR 4.13.1 | If the submission was not successful, the customer shall be presented with a message. | “as is” |
| FR 4.14 | The new “request” flow shall leverage existing backend processes. | “as is” |
| FR 4.14.1 | The system shall ensure all “requests” are created with Level 3 data. | “as is” |
| FR 4.14.2 | “Requests” shall continue to be valid for 30 days. | “as is” |
| FR 4.14.3 | “Requests” history shall continue to be retained for 2 years. | “as is” |
| FR 4.15 | When setting up a request, the customer shall be required to enter a due date. | “as is” |

FEAT 5: Incorporate the new Zelle “split” functionality into the USB Zelle flow.

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| **ID** | **Detailed Functional Requirements** | **Notes** |
| FR 5.1 | The new “split” flow shall be implemented in the WEB & TUX platforms and in the iPhone, iPad, and android apps. | Same as “request” |
| FR 5.2 | The “split” feature shall be a distinct flow from the “request” feature. | **New – May Release** |
| FR 5.3 | The “split” flow shall conform to EWS UI guidelines. | Same as “request” |
| FR 5.4 | Customers must be enrolled to receive Zelle funds as a pre-requisite to using the Request feature. | Same as “request” |
| FR 5.4.1 | If not enrolled to receive Zelle funds, customers shall be presented with the option to enroll. After enrollment the customer shall be returned to the “split” flow. | Same as “request” |
| FR 5.5 | The system shall only display recipients with an email and/or a mobile number. | Same as “request” |
| FR 5.5.1 | Recipients shall display and be selected as in the “send” flow. | “Same as “request” |
| FR 5.5.2 | User shall be allowed to add ~~or edit~~ recipients while in the “request” flow. | ~~“Same as “request”~~ |
| FR 5.6 | A “split” transaction can be sent to multiple recipients. . | Differs from “request”  “Same as “request”  Front End |
| FR 5.6.1 | The system shall impose a minimum and maximum number of recipients on a “split”. Minimum number = 1 & Maximum number = 10. The requestor shall not be included in the recipient count. | Differs from “request”  ESD, PAS and Hogan DDA |
| FR 5.6.2 | Splits can only be sent to email or mobile number tokens. | Same as “request” |
| FR 5.6.3 | A recipient can only appear once on a “split”. | Differs from “request”  Same as “request”  ESD Backend validation |
| FR 5.6.4 | “Splits” to an unknown recipient can only be sent using an email token. | Same as “request” |
| FR 5.6.5 | If a split recipient’s mobile number token is on USB DNC call list, the recipient/token combination shall not be allowed on the “split”. | Same as “request” |
| FR 5.7 | The system shall prompt the customer to enter an amount. An amount shall be required. | Same as “request” |
| FR 5.7.1 | The system shall impose a minimum and maximum “split” amount. | Min and max same as “request” |
| FR 5.7.2 | The “split” amount does not need to be a round number. | **New**  Front End –can have a decimal place – individual request |
| FR 5.8 | “Request” limits as defined in the cXc limits PCD shall be applied to “splits”. “Request” and “split” transactions amounts shall aggregate. | **New**  Backend should be accommodating – need to verify |
| FR 5.8.1 | The “split” amount used for limits calculations shall be the sum of the amounts of for each recipient, excluding the requestor. | **New**  Front End |
| FR 5.9 | The daily and 30 day rolling limit on number of “requests” shall remain in effect. “Request” and “split” transaction count shall aggregate. | **New**  Front End – limits on the backend –using that logic today – no change to Hogan DDA – no change for ESD or PAS |
| FR 5.10 | The system shall allow the customer to select the account into which the funds will be deposited. | Same as “request” |
| FR 5.10.1 | The list of eligible “deposit to” accounts shall be the list of “enrolled” accounts. | Same as “request” |
| FR 5.11 | The system shall allow the customer to enter a memo for the request. | Same as “request” |
| FR 5.11.1 | A customer entered memo shall be optional. | Same as “request” |
| FR 5.11.2 | If a customer memo is not entered, a default memo shall be used. | Same as “request” |
| FR 5.11.3 | If a customer memo is entered, the minimum length of the memo shall be two (2) characters and the maximum length shall be 20 characters. | Differs from “request”  Front End |
| FR 5.11.4 | ~~A “memo filter” to remove inappropriate and abusive language shall be applied to the “split” memo field. (See FR 9.3)~~ | **New** |
| FR 5.12 | The system shall allow the customer to review the “split”. | **New**  Front End |
| FR 5.12.1 | By default, the amount entered shall be split between all recipients and the requestor. | **New**  Front End |
| FR 5.12.2 | The requestor shall be allowed to modify the amount for each recipient. The modified amounts must equal the total amount entered. | **New**  Front End |
| FR 5.12.3 | Any remainder amounts left over due to the default split or manual entry shall be assigned to the requestor. | **New**  ESD, PAS, Hogan DDA and Front End |
| FR 5.12.4 | Once an Amount has been edited, a reset button will appear to reset all edited amount. | **New** |
| FR 5.12.5 | All recipients that have not been manually changed will see a recalculation after a manual change occurs. | **New** |
| FR 5.12.6 | The customer shall also be allowed to cancel the “split”. | Same as “request” |
| FR 5.13 | The system shall present a confirmation screen after the request is submitted. The confirmation shall include the “event ID”. | Same as “request” |
| FR 5.13.1 | If the submission was not successful, the customer shall be presented with a message. | Same as “request” |
| FR 5.14 | The new “split” flow shall leverage existing backend processes for “requests”. | Same as “request” |
| FR 5.15 | The system shall ensure all “splits” are created with Level 3 data. | Same as “request” |
| FR 5.16 | “Splits” shall be valid for 30 days. | Same as “request” |
| FR 5.17 | “Split” history shall continue to be retained for 2 years. | Same as “request” |

FEAT 6: Move the current “respond to request” from the P2P legacy flow into the USB Zelle flow and enhance it to work with Level 3 data.

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| **ID** | **Detailed Functional Requirements** | **Notes** |
| FR 6.1 | The “respond to request” flow shall be updated in the WEB & TUX platforms and in the iPhone, iPad, and android apps. | **New**  Front End |
| FR 6.2 | The “respond to request” flow shall conform to EWS UI guidelines. | **New**  Front End |
| FR 6.3 | Customers shall continue to be notified of a request in both WEB and MB channels. | “as is” |
| FR 6.4 | The request notification details shall not change. | “as is” |
| FR 6.5 | Customer shall have the option to pay the request or to decline the request. | “as is” behavior but UI will change  Front End – No backend team impact |
| FR 6.5.1 | If the payment is declined the respondent shall have the ability to enter a memo. | “as is” behavior but UI will change  Front End – No backend team impact |
| FR 6.5.2 | If a customer memo is not entered a default memo will be used | “as is” behavior but UI will change  Front End – No backend team impact |
| FR 6.5.3 | A confirmation screen indicating the request has been declined shall be shown to the respondent. | “as is” behavior but UI will change  Front End – No backend team impact |
| FR 6.5.3 | After a request has been declined, the request notification shall not show to the customer. | “as is” |
| FR 6.6 | The respond to request flow shall utilize the Zelle Send flow. | **New**  **Front End – pass thru the request ID – etc. being tested in the Feb project. –“pre-filling fields” no new screens – coding changes** |
| FR 6.6.1 | The recipient and token shall be pre-selected and cannot be changed. | “as is” |
| FR 6.6.2 | The amount field shall be pre-filled with the request amount but the responder shall have the ability to enter a different amount. | **New** BRs are different  Front End only |
| FR 6.6.2.1 | The amount field cannot be blank or zero. | “as is” |
| FR 6.6.3 | The responder shall have the option to select the funding account. | “as is” |
| FR 6.6.4 | Send limits and fees shall continue to be enforced. | “as is” |
| FR 6.6.5 | The system shall allow the customer to enter a memo for the response. | “as is” |
| FR 6.6.5.1 | A customer entered memo shall be optional. | “as is” |
| FR 6.6.5.2 | If a customer memo is not entered, a default memo shall be used. The default memo shall be the same as in the “send” flow. | **New**  Front End |
| FR 6.6.5.3 | If a customer memo is entered:   * And an email token is used the minimum length of the memo shall be two (2) characters and the maximum length shall be 200 characters. * And a mobile number token is used the minimum length of the memo shall be two (2) characters and the maximum length shall be 20 characters. | Same as send |
| ~~FR 4.6.5.4~~ | ~~A “memo filter” to remove inappropriate and abusive language shall be applied to the “split” memo field. (See FR 9.3)~~ | **~~New~~** |
| ~~FR 6.6.7~~ | ~~Recipient token shall be removed from the respond to request flow.~~ | **~~New~~**  ~~Front End – field removal~~ |
| FR 6.7 | The system shall allow the customer to review the response and be allowed to go back and make edits. The customer shall also be allowed to cancel the response. | “as is” |
| FR 6.8 | The system shall use the same BRs for determining how a “response to a request” is sent (i.e., instant vs. standard). | **New**  Front End: Apply send rules to a “respond to request” – Aug Release |
| FR 6.9 | A “respond to a request” shall be fraud scored using the same BRs, processes and procedures as a Zelle “send” transaction. | “as is” |
| FR 6.10 | The system shall present a confirmation screen after the response is submitted. The confirmation shall include the “payment ID”. | **New** Presentation differ some from a normal “send”.  Front End – Aug Release? Verify |
| FR 6.14.1 | If the submission was not successful, the customer shall be presented with a message. | “as is” |
| FR 6.15 | The new “request” flow shall leverage existing backend processes for “send” payment. | “as is” |
| FR 6.16 | The system shall ensure all “responses” use Level 3 data. | “as is” – need to verify  Tested in Feb – check status |

FEAT 7: “Request” and “Split” transactions shall be viewable and editable in the “Transactions Timeline”.

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| **ID** | **Detailed Functional Requirements** | **Notes** |
| FR 7.1 | The “Requested” tab in P2P Transactions Timeline shall be modified to accommodate changes in “request” functionality, the addition of “split” functionality and incorporate Level 3 data. | Feb Release |
| FR 7.2 | Within timeline, a “request” shall show:   * Date of request (“as is”) * Recipient of request (“as is”) * Status of request [e.g., open, declined (new), closed, cancelled, responded (new)] * Total request amount (“as is”) | New statuses  Highlighted status not completed in Feb Release – verify the other statuses |
| FR 7.2.1 | Customers will continue to be allowed to view “request” details and to cancel a “request”. | “as is”  Not completed in the Feb Release |
| FR 7.2.2 | “Request” details shall be modified:   * ~~To remove “requested due date”~~ * To remove “nickname” * To add additional statuses | **New**  Not completed in the Feb Release |
| ~~FR 7.2.3~~ | ~~When cancelling a “request”, customers will not be required to select a recipient.~~ | **~~New need to be changed~~** |
| FR 7.2.4 | If a “request” has been responded to, the amount of the response shall be shown. | **New**  Not completed in Feb Release |
| FR 7.3 | The “Requested” tab in P2P Transactions Timeline shall display “split” requests. | **New**  Hogan DDA, PAS amd ESD |
| FR 7.3.1 | Within timeline, the following details of a “split” shall be available.   * Date of request * All recipients on the “split” * Amount requested to each recipient * Amount assigned to requestor? * Memo sent to all recipients * Status for each recipient [e.g., open, declined, closed, cancelled, responded] * Total “split” amount * If responded to, the amount sent to requester, per recipient. * Total amount received from split * Total outstanding amount of split * Memo from responder | Similar to “as is” but, for each recipient, adds amount and status  Front End  See highlight for backend: Hogan DDA, PAS and ESD |
| FR 7.3.2 | Customers shall be allowed to view “split” details. | **New**  Use Get\_Request flow – Front End |
| FR 7.3.3 | Customers shall be allowed to cancel a “split”. | **New**  Front End  Hogan DDA, PAS and ESD |
| FR 7.3.3.1 | When cancelling a “split”, customers shall be able to cancel the entire “split” or cancel for individual recipients on the “split”. | **New**  Front End  Hogan DDA, PAS and ESD |
| FR 7.3.3.2 | When a “split” is cancelled, the customer shall be provided with a review and confirmation screen. | **New**  Front End  Hogan DDA, PAS and ESD |
| FR 7.2.2 | The system shall keep 2 years worth of “request” and “split” history. | “as is” |
| FR 7.2.3 | The system shall show the previous 90 days worth of “request” and “split” history. | “as is” |
| FR 7.2.4 | Customer shall be able to use the Transaction Activity search feature to go back further into “request” and “split” history. | **New**  Front End  Hogan DDA, PAS and ESD |

FEAT 8: Previously developed Zelle functionality shall be made accessibility compliant.

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| **ID** | **Detailed Functional Requirements** | **Notes** |
| FR 8.1 | The solution shall update the Zelle “Send” and “Enroll” UI’s to ensure they are accessibility compliant within the WEB, TUX, iPhone, iPad and android. | New  Front End – Aug Release |
| FR 8.2 | All recommendations from the A11Y analysis (performed by The Paciello Group) for the Zelle “send” and “enroll” flows shall be implemented. Exclued is A11Y remediations on global elements, step up, and OTP. | [Final A11Y Analysis Report](http://qa-sharepoint/db05/Q635270/PRJ22753/Shared%20Documents/Final%20Report%20US%20Bank%20Send%20Money%20Audit.docx)  New  Front End – Aug Release |
| FR 8.3 | A11Y shall be assessed using the JAWS software. |  |

~~FEAT 9: Exisiting Zelle shall be updated with additional features.~~ DECSOPED

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| ~~FR 9.1~~ | ~~Transaction timeline shall be renamed “Transaction Activity” in TUX & WEB platforms and iPhone, iPad, and android apps.~~ |  |
| ~~FR 9.2~~ | ~~Within the TUX & WEB platforms and iPhone, iPad, and android apps, a new view in Transaction Activity displaying incoming Zelle transactions shall be created.~~ |  |
| ~~FR 9.2.1~~ | ~~Incoming Zelle transactions shall show ….~~   * ~~Sender~~ * ~~Amount~~ * ~~Date Received~~ * ~~Status (“pending” or “paid”)~~ * ~~Sender’s Memo~~ | ~~We have this data already.~~ |
| ~~FR 9.2.2~~ | ~~The system shall keep 2 years worth of receive transaction history.~~ |  |
| ~~FR 9.2.3~~ | ~~The system shall show the previous 90 days worth of receive transaction history.~~ |  |
| ~~FR 9.2.4~~ | ~~Customer shall be able to use the Transaction Activity search feature to go back further into receive history.~~ |  |
| ~~FR 9.3~~ | ~~The system shall filter memo field content to remove abusive/inappropriate language.~~ | ~~New coding piece needed.~~ |
| ~~FR 9.3.1~~ | ~~The filter shall consist of a simple word search against a “black list” of inappropriate words.~~ |  |
| ~~FR 9.3.2~~ | ~~The customer shall be notified of any inappropriate language in the memo field.~~ |  |
| ~~FR 9.3.3~~ | ~~The transaction shall not be submitted if the memo field contains word on the “black list”.~~ |  |
| ~~FR 9.3.4~~ | ~~The “black list” of words shall be periodically updated.~~ |  |
| ~~FR 9.4~~ | ~~The account selected shall display on the review page for “send” and “respond to request”.~~ |  |
| ~~FR 9.5~~ | ~~iPhone, iPad, android & TUX shall support the use of finger gestures to select numbers.~~ |  |
| ~~FR 9.6~~ | ~~Add a link in Bill Pay (WEB, TUX, iPhone, iPad, android) to the Zelle flow.~~ |  |
| ~~FR 9.7~~ | ~~24HB and branch bankers shall be allowed to cancel scheduled and recurring Zelle payments.~~ | ~~Modification to banker view of timeline.~~ |
| ~~FR 9.8~~ | ~~The system shall indicated which recipients/tokens are registered in the Zelle network and which ones are not.~~ |  |
| ~~FR 9.9~~ | ~~The system shall implement field level error handling on all Zelle pages.~~ | ~~Page level errors will continue to be displayed.~~ |
| ~~FR 9.10~~ | ~~The solution shall be able to handle memo fields containing emoji special characters. For memos containing emoji special characters the system shall appropriately display the memo to the customer.~~ |  |

~~FEAT 10: The Zelle system shall interface with EWS’s Amazon Web Services (AWS).~~ DECSOPED

~~FEAT 11: U.S. Bank customers who have enrolled within the EWS app to receive money to their debit cards shall have their enrollment changed such that the debit card is replaced with the debit card’s associated account.~~ DECSOPED

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| **ID** | **Detailed Functional Requirements** | **Notes** |
| ~~FR 11.1~~ | ~~For U.S. Bank customer’s enrolled to receive money via their debit cards, U.S. Bank, at time of implementation, shall convert customer enrollment information to use a DDA account.~~ |  |
| ~~FR 11.2~~ | ~~EWS shall provide U.S. Bank information for all currently registered U.S. Bank customers and their associated debit card information. Any other necessary customer information shall also be included.~~ |  |
| ~~FR 11.2.1~~ | ~~EWS shall prevent U.S. Bank customers from enrolling to receive with U.S. Bank debit cards X day before implementation.~~ | ~~Need to determine “x”?~~ |
| ~~FR 11.2.2~~ | ~~EWS shall provide debit card information X days before implementation.~~ | ~~Need to determine “x”?~~ |
| ~~FR 11.3~~ | ~~U.S. Bank shall map a customer’s debit card to its associated DDA account and perform a “token takeover” like process to convert tokens using debit cards.~~ |  |
| ~~FR 11.3.1~~ | ~~The conversion process shall not require any customer interaction if the customer’s token, email or mobile number, is already on the customer’s U.S. Bank profile.~~ |  |
| ~~FR 11.3.1.1~~ | ~~If a customer’s email or mobile number is on file but is not verified, the conversion process shall mark it as validated without any customer interaction.~~ |  |
| ~~FR 11.3.2~~ | ~~If a customer’s email or mobile number is not on their U.S. Bank profile, a process shall be created to notify these customers and have them perform a token validation.~~ |  |
| ~~FR 11.4~~ | ~~Customers who do not have their tokens converted shall continue to receive money via their debit cards.~~ |  |

FEAT 12: The solution shall provide an O-auth interface for the EWS Zelle app.

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| **ID** | **Detailed Functional Requirements** | **Notes** |
| FR 12.1 | The existing U.S. Bank O-auth login screens shall be utilized for the EWS Zelle app. |  |
| FR 12.1.1 | EWS Zelle app specific views for O-auth shall be configured. |  |
| FR 12.1.2 | The verbiage on the O-auth screens shall be modified to reflect it’s usage with the EWS Zelle app. |  |
| FR 12.2 | Login assistant shall not be available in the EWS Zelle app 0-auth screens. |  |
| FR 12.3 | If a customer changes their authentication credentials, the customer shall be required to reauthentication via O-auth upon next EWS Zelle app login and/or request. |  |
| FR 12.4 | If a customer’s O-auth token has expired, the customer shall be required to reauthenticate via O-auth upon next EWS Zelle app login and/or request. |  |

FEAT 13: ~~The solution shall ensure mobile number ownership via the MNO process.~~ DECSOPED

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| **ID** | **Detailed Functional Requirements** | **Notes** |
| ~~FR 13.1~~ | ~~When a mobile number is added/edited via OLB (WEB, TUX, iPhone, iPad app, android app) as a primary or secondary mobile number the MNO process shall be applied to that number.~~ |  |
| ~~FR 13.1.1~~ | ~~OTP validation of mobile numbers shall remain “as is” and be performed before the MNO process.~~ |  |
| ~~FR 13.1.2~~ | ~~The addition of a mobile number to the CIS profile and RCD list shall remain “as is”.~~ | ~~Not true based on FRs 13.2 & 13.3~~ |
| ~~FR 13.1.3~~ | ~~For carrier based and fixed VoIP numbers the MNO process shall return ownership information.~~ |  |
| ~~FR 13.1.4~~ | ~~For non-fixed VoIP numbers the MNO process shall indicate the numer is non-fixed and return the service provider.~~ |  |
| ~~FR 13.1.5~~ | ~~Responses from the MNO shall be fed to Actimize real time.~~ |  |
| ~~FR 13.1.5.1~~ | ~~Infromation sent to Actimize shall include:~~   * ~~Customer Information~~ * ~~MNO Data~~ * ~~Session Data~~ |  |
| ~~FR 13.1.5.2~~ | ~~Non-fixed VoIP numbers, fixed VoIP numbers and carrier based numbers without valid ownership shall go into an eFraud queue for further review.~~ |  |
| ~~FR 13.2~~ | ~~Primary mobile numbers being added/edited shall have the MNO/ Actimize process apllied to them.~~ |  |
| ~~FR 13.2.1~~ | ~~If the number comes back as a carrier based mobile number and ownership is verified, the number shall be:~~   * ~~Added/Updated on the customer’s profile~~ * ~~Added to the RCD list.~~ * ~~Actimize shall be notifed of the MMO response.~~ |  |
| ~~FR 13.2.2~~ | ~~If the number comes back as non-fixed VoIP, fixed VoIP, carrier based but ownership cannot be validated, or OPT fails:~~   * ~~The number shall be added to the customer’s profile~~ * ~~The customer shall be messaged the number they entered can not be used for authentication, alerts or monetary transactions~~ * ~~The number shall not be added to the RCD list.~~ * ~~Actimize shall be notifed of the MMO response.~~ * ~~The number shall be flaged as ‘high risk’ or ‘unverified’.~~ |  |
| ~~FR 13.3~~ | ~~Numbers being added/edited as “other” mobile number shall be updated based on the MNO/Actimize analysis,~~ |  |
| ~~FR 13.3.1~~ | ~~If the number comes back as carrier based and ownership is verified, the number shall be:~~   * ~~Added/Updated on the customer’s profile~~ * ~~Added to the RCD list.~~ * ~~Actimize shall be notifed of the MMO response.~~ |  |
| ~~FR 13.3.2~~ | ~~If the number comes back as non-fixed VoIP, fixed VoIP or carrier based but ownership cannot be validated:~~   * ~~The customer shall be messaged the number is not valid~~ * ~~The number shall not be added/updated in the customer’s profile.~~ * ~~Actimize shall be notifed of the MMO response.~~ |  |
| ~~FR 13.4~~ | ~~T&Cs on the mobile number entry screens shall be updated.~~ |  |
| ~~FR 13.5~~ | ~~A one time MNO batch process shall be performed on RCD numbers before a nightly MNO batch process is implemented.~~ |  |
| ~~FR 13.5.1~~ | ~~The Fraud Strategy & Support Services group shall analyze the one time MNO batch process on RCD numbers and generate a report and file.~~ |  |
| ~~FR 13.5.2~~ | ~~Appropriate follow up shall be performed on “high risk” customer numbers identified in the batch MNO report for RCD numbers.~~ |  |
| ~~FR 13.5.3~~ | ~~Hogan CIS shall remove all non-fixed VoIP, fixed VoIP and unverified carrier based numbers from the RCD list and any and all matching numbers on the customer’s profile shall be flaged as ‘high risk’ or ‘unverified’.~~ |  |
| ~~FR 13.6~~ | ~~A one time MNO batch process shall be performed on non-RCD numbers before a nightly MNO batch process is implemented.~~ |  |
| ~~FR 13.6.1~~ | ~~The Fraud Strategy & Support Services group shall analyze the one time MNO batch process on non-RCD numbers and generate a report and file.~~ |  |
| ~~FR 13.6.2~~ | ~~Appropriate follow up shall be performed on “high risk” customer numbers identified in the non-RCD batch report.~~ |  |
| ~~FR 13.6.3~~ | ~~Any “high risk” non-RCD number on the customer’s profile shall be flaged as ‘high risk’ or ‘unverified’.~~ |  |
| ~~FR 13.7~~ | ~~Non-RCD customer phone numbers that have been added/edited in non online channels shall have the MNO process applied to them on a nightly basis.~~ |  |
| ~~FR 13.7.1~~ | ~~The results of the nightly analysis shall be fed to Actimize. Infromation sent to Actimize shall include:~~   * ~~Customer Information~~ * ~~MNO Data~~ * ~~Session Data~~ |  |
| ~~FR 13.7.1.1~~ | ~~Actimize shall create alerts on the nightly analysis data. Appropriate follow up on the alert shall occur.~~ |  |
| ~~FR 13.7.2~~ | ~~Customer phone number attributes in Hogan CIS shall be updated as a result of the nightly MNO/Actimize analysis.~~ |  |

FEAT 14: Actimize FBA Requirements

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| **ID** | **Detailed Functional Requirements** | **Notes** |
| FR 14.1 | The EWS Zelle app shall notify Actimize FBA whenever a USB customer sends a payment and USB shall respond with risk score to EWS |  |
| FR 14.1.1 | If a “red” result is returned:   * The EWS Zelle app shall not allow the send transaction to proceed. * The transaction shall not be processed by USB.   The customer’s OAUTH token shall be disabled |  |
| FR 14.1.2 | If advanced authentication /step up is required the EWS Zelle app shall be responsible for presenting advanced auth. USB shall provide the EWS Zelle app with any necessary information to advanced authentication. |  |
| FR 14.1.2.1 | If USB performs an advanced auth/step up on Zelle Transaction which were already performed advanced auth by EWS, USB shall provide a higher advanced auth method than what EWS performed . |  |
| FR 14.1.3 | The EWS Zelle app shall inform U.S. Bank of the result of the advanced authentication. |  |
| FR 14.1.4 | If advanced authentication is successful, the EWS Zelle app shall submit the transaction to U.S. Bank for set-up and processing. | Request ID , in Yellow. Hogan DDA,ESD |
| FR 14.1.5 | If advanced authentication fails, the EWS Zelle app shall cancel the transaction and the transaction shall not be allowed to be submitted. | Request Id in ZRR file to tie up Payment in Hogan,ESD |
| FR 14.1.6 | If advanced authenticatioin is not required, the transactions shall be submitted to U.S. Bank for processing. |  |
| FR 14.2 | The EWS Zelle app shall notify Actimize FBA whenever a USB customer registers or deregisters one of their tokens used to receive money. |  |
| FR 14.2.1 | USB shall risk score when customer registers/deregisters one of their and will respond with a deny or allow. |  |
| FR 14.3 | The EWS Zelle app shall notify Actimize FB with their risk scores whenever a USB customer cancels a pending transcation |  |
| FR 14.3.1 | USB shall not risk respond when customer cancels a pending transction from Zelle App |  |
| FR 14.4 | The EWS Zelle app shall notify Actimize FBA with their risk scores whenever USB customer creates a Payment request/split |  |
| FR 14.4.1 | USB shall risk score when customer creates a payment request or split from Zelle App and will respond with a deny or allow. |  |
| FR14.5 | EWS Zelle app shall notify Actimize FBA with their risk scores whenever USB customer cancels a payment request. |  |
| FR 14.5.1 | USB shall not risk respond when customer cancels a payment request. |  |
| FR 14.6 | EWS Zelle app shall notify Actimize FBA with their risk scores whenever USB customer declines an incoming payment request. |  |
| FR 14.7 | USB shall not risk respond when customer declines an incoming payment request from Zelle App |  |

FEAT 15: Implement new “match recipient” call in WEB, iPhone app, iPad app, android app, and Touch platfroms for requests.

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| **FR** | **Detailed Functional Requirements** | **Notes** |
| FR 15.1 | For request transactions set up via USB’s WEB, iPhone, iPad, android, or Touch platforms, the system shall determine if the recipient has any tokens on the EWS do not call list. | **'New'**  In Scope for Feb Release    This will be New Requirement for the front end team which will be prioritize for the Feb Release.  Note: Information message will be different for EWS DNC List and USB DNC List. |
| FR 15.1.1 | If the recipient’s token, for a request, is on the EWS DNC list the token shall be displayed, selectable but gray out and system shall display with DNC details information message along with token and but request shall be sent. |
| FR 15.2 | If the recipient’s token, for a request, is on the USB DNC list the token shall be displayed, selectable but gray out and system shall display with DNC details information message along with token and request shall be sent. | **'New'**  In Scope for Feb Release |
| FR 15.3 | For send transactions set up via USB’s WEB, iPhone, iPad, android, or Touch platforms, the system shall determine if the funds are to be delivered to an out-of-network debit card. | **May**  New scope requiring work from Front End and ESD |
| FR 15.3.1 | If a send transaction goes to an out-of-network debit card, then USB shall store the following debit card data.  • ORG ID  • Type of the card (Example: Visa or Master Card)  • Token information | **May**  New scope requiring work from Front End and ESD |

FEAT 16: Upgrade Shared directory services to 3.8

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| **FR** | **Detailed Functional Requirements** | **Notes** |
| FR 16.1 | US bank shall send senders address including state and country code if the recipient is debit network(Master or Visa) . No changes to 16.1 per Ashley | Add Payment  Hogan DDA,  MM Dev  Hogan PAS  ESD  ETM  April 30,2018 |
| FR 16.1.1 | US bank shall handle the reject code and reason from directory when payments to unknown supported debit card recipient is rejected of missing sender’s address. | April 30, 2018 |
| FR 16.2 | US bank shall handle the reject code and reject reason from Shared directory if payment to unknown recipient has opted out of notification. | April 30,2018 |
| FR 16.3 | US bank shall pass the DENIED status and all denied reason code to EWS shared directory if the payment is denied on the business background. | ChangePaymentStatus  Hogan DDA  ESD  ETM  July 30,2018 |
| FR 16.4 | US bank shall update the speed of a payment to real time /Instant when made to an unknown recipeint and the unknown recipient registers the token to the network. A less complicated way to do it? Ashley wants to know | April 10,2018  Hogan PAS  Hogan CIS  Hogan DDA  ESD  ETM |
| FR 16.5 | US Bank shall send to shared directory customer’s First name and Last name when customer registers a token to receive money. | Register Token and Unregister Token(New service)  Hogan DDA  ESD  MM dev  ETM  OLB UI  Feb 28,2018 |
| FR 16.6  TBD*-no-per ashley* | US bank shall store last 4 digit of the supported senders debit card PAN(primary account number). | getPayment,On New Payment  ESD, PAS , DDA, DDA ETM  July 30,2018 |
| FR 16.7 | US bank shall store all the denied status and denial reason code on Inbound payments. | OnPaymentStatusChange  Hogan DDA  July 30,2018 |
| FR 16.8 | US Bank shall handle the rejection if a payment request is made to a responder who has opted out of notification. No – per Ashley | Payment Request  MMM Dev,ETM, Hogan DDA, ESD, OLB UI  April 30,2018 |

# Non Functional Requirements

Performance Requirements

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| --- | --- | --- |
| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 1 | The system shall handle the following cXc/EWS network volume.   * 2017: 2500 calls per hour (peek). * 2018: 5500 calls per hour (peek). * 2019: 10000 calls per hour (peek). |  |
| NFR 2 | Response times to EWS requests shall not be greater than 5 seconds. |  |
| NFR 3 | EWS requests shall time-out after 60 seconds if no response is produced. |  |
| NFR 4 | All other existing cXc response times shall remain “as is”. |  |

Scability Requirements

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| --- | --- | --- |
| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 5 | The system shall handle the following cXc user volume.   * 2017: 10 concurrent transactions (peek). * 2018: 20 concurrent transactions (peek). * 2019: 40 concurrent transactions (peek). |  |
| NFR 6 | All other existing cXc scability requirements shall remain “as is”. |  |

Usability Requirements

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| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 7 | Existing cXc usability requirements shall remain “as is”. |  |

Availability Requirements

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| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 8 | The cXc / EWS interface shall be available 24x7x365. |  |
| NFR 9 | cXc / EWS interface availability shall be the same or better than Online Banking. |  |

Reliability Requirements

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| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 10 | Existing cXc reliability requirements shall remain “as is”. |  |

Backup and Recovery Requirements

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| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 11 | Existing cXc backup and recovery requirements shall remain “as is”. |  |

Legal and Regulatory Requirements

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| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 12 | Existing cXc legal and regulatory requirements shall remain “as is”. |  |

Controls and Reporting Requirements

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| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 13 | Existing cXc controls and reporting requirements shall be applied to the new cXc/EWS interface. |  |

Maintainability Requirements

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| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 14 | The existing cXc issue escalation process shall be applied to the cXc/EWS interface. |  |

Security Requirements

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| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 15 | Existing Online Banking security requirements for interfacing with external systems shall be applies to the cXc/EWS interface. |  |

External Interface Requirements

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| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 16 | The solution shall interface with the EWS Zelle application via API’s. |  |

User Interface Requirements

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| --- | --- | --- |
| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 17 | Current U.S. Bank customer interface standards shall apply to any newly developed screens. |  |
| NFR 18 | Newly developed screens shall be accessibility compliant. |  |

Data Retention Requirements

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| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 19 | Current cXc data retention requirements shall apply to the cXc/EWS interface and all files shared between systems. |  |

Disaster Recovery Requirements

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| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 20 | All existing cXc disaster recovery requirements shall apply to the cXc/EWS interface and data. |  |

Training and Documentation Requirements

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| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR | N/A |  |

Deployment Requirements

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| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 21 | Established cXc deployment processes and procedures shall be applied to the deployment and maintenance of the cXc/EWS interface. |  |

Technical Constraints

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| --- | --- | --- |
| **NFR** | **Detailed Non-Functional Requirements** | **Notes** |
| NFR 22 | U.S. Bank shall support version 3.6 or higher of the new Zelle directory. |  |
| NFR 23 | The system shall appropriately handle duplicate transactions from the Zelle app. |  |