

Interaction Logic Specification

Complete behavioral specification for the Credit Union website wireframe — triggers, actions, state changes, validation, and feedback that bring the static design to life.

Trigger

Action

State

Feedback

Check

What is interaction logic?

Interaction logic defines what happens when users engage with interface elements. It specifies the triggers, actions, state changes, validations, error handling, and feedback mechanisms that turn a static wireframe into a living, responsive product.



60+

Total interactions



25+

Component states



15+

Logic flows



11

Spec sections



5

Responsive
breakpoints

Every element below is documented as Trigger → Action → State change → Feedback, with dedicated IF / THEN logic flows for conditional behavior.

Eleven specification sections

01 Header Navigation

02 Hero Section

03 Features Grid

04 Rates Section

05 Mobile App Section

06 Blog / News

07 Form Interactions

08 Footer Section

09 Global Interactions

10 Responsive & Adaptive

11 Performance & Errors

Header navigation interactions

Logo

TRIGGER Click on logo

ACTION Navigate to homepage (/)

FEEDBACK URL → root, page scrolls to top

Nav link — hover

TRIGGER Hover on nav link

ACTION Show hover state

FEEDBACK Underline, color brightens, pointer

Nav link — click

TRIGGER Click nav link

ACTION Navigate to section / anchor

FEEDBACK Active indicator (bold/underline)

Dropdown item

TRIGGER Hover / click item with submenu

ACTION Open sub-nav panel

FEEDBACK Slides down 200ms, aria-expanded

Login button

TRIGGER Click Login

ACTION Logged out → modal; in → menu

FEEDBACK Overlay fades in, focus to field

Sticky header

TRIGGER Scroll > 100px

ACTION Header becomes fixed, adds shadow

FEEDBACK Slides down 150ms, slimmer height

Dropdown menu logic

1

IF User hovers 'Products & Services'
THEN Show dropdown after 200ms delay

2

IF Mouse leaves nav item before 200ms
THEN Cancel dropdown display

3

IF Mouse enters the dropdown menu
THEN Keep dropdown open

4

IF Mouse leaves item + menu > 300ms
THEN Close dropdown (fade out 150ms)

5

IF User clicks outside dropdown area
THEN Immediately close dropdown

6

IF User presses the Escape key
THEN Close and return focus to nav item

Hero section interactions

Primary CTA – hover

TRIGGER Hover 'Get Started'

ACTION Darken 10%, scale 1.02

FEEDBACK Lift + shadow, transform 200ms

Primary CTA – click

TRIGGER Click primary CTA

ACTION Navigate /signup or scroll to form

FEEDBACK Pressed state 0.98 for 100ms

Hero image

TRIGGER Page load

ACTION Fade in (lazy load if below fold)

FEEDBACK 500ms fade, blur-to-sharp

Hero text animation

TRIGGER Section enters viewport

ACTION Animate headline + body (once)

FEEDBACK Slide up + fade, 400ms stagger

CTA button states

State	Visual appearance	Behavior
Default	Solid background, white text, subtle shadow	Cursor: pointer on hover
Hover	Background darkens 10%, shadow up, scale 1.02	Transition 200ms ease-out
Active / Pressed	Background darkens 20%, scale 0.98, shadow down	Transition 100ms
Focus (keyboard)	Outline ring (2px), high contrast	Tab to focus, Enter / Space to activate
Loading	Spinner replaces text, reduced opacity	Disabled, cursor: wait
Disabled	Gray background, gray text, no shadow	Cursor: not-allowed, no click events

Features grid (4 cards)

Feature card — hover

- TRIGGER** Hover entire card
- ACTION** Lift card, deepen shadow
- FEEDBACK** translateY -8px, 250ms

Feature card — click

- TRIGGER** Click anywhere on card
- ACTION** Navigate to feature detail
- FEEDBACK** Scale 0.98 100ms, then navigate

Feature CTA — hover

- TRIGGER** Hover 'Learn More'
- ACTION** Underline + arrow slides right
- FEEDBACK** Underline in 150ms, arrow +4px

Feature CTA — click

- TRIGGER** Click 'Learn More'
- ACTION** Navigate + fire GA event
- FEEDBACK** Link darkens, page navigates

Feature icon

- TRIGGER** Card enters viewport
- ACTION** Scale + fade, 100ms stagger
- FEEDBACK** 0.8→1.0, 300ms ease-out

Cards grid

- TRIGGER** Resize below 768px
- ACTION** Reflow 4 → 2 → 1 columns
- FEEDBACK** Cards rearrange, keep spacing

Card click logic

1

IF Click feature card (not the CTA)
THEN Whole card acts as link → feature page

2

IF Click specifically on 'Learn More'
THEN Same nav, tracked as explicit CTA click

3

IF Middle-click or Ctrl+click the card
THEN Open feature page in a new tab

4

IF Keyboard: Tab to card, Enter
THEN Focus state visible, Enter navigates

5

IF Navigation link is broken (404)
THEN Show error page with return-to-home

Rates section interactions

Rate card — hover

- TRIGGER** Hover rate card
- ACTION** Subtle background tint
- FEEDBACK** Border intensifies, 200ms

Rate display

- TRIGGER** Section enters viewport
- ACTION** Count up 0 → actual value
- FEEDBACK** 800ms with easing

Rate details tooltip

- TRIGGER** Hover / click info icon
- ACTION** Show conditions & disclaimers
- FEEDBACK** Fades in 150ms, arrow to icon

View all rates

- TRIGGER** Click 'View All Rates'
- ACTION** Navigate to /rates
- FEEDBACK** Link changes, page loads

Apply now

- TRIGGER** Click 'Apply Now' on card
- ACTION** Navigate with pre-selected product
- FEEDBACK** Loading, then contextual nav

Comparison toggle

- TRIGGER** Toggle 'Compare to National Avg'
- ACTION** Show / hide comparison row
- FEEDBACK** Slides 200ms, switch animates

Rate update logic

1

IF Rates data loads from the API
THEN Replace placeholder text with live rates

2

IF API call fails
THEN Show 'Unable to load rates' + Retry

3

IF API returns stale data (> 24h old)
THEN Show rates with 'Rates as of [date]'

4

IF User is an authenticated member
THEN Show personalized relationship-tier rates

5

IF Rate changes live (websocket push)
THEN Pulse updated rate, show 'Updated' badge

Mobile app section

INTERACTIONS

Phone mockup

Parallax — floats at a different scroll speed for depth

App Store badge

Opens App Store in a new tab, tracks click

Google Play badge

Opens Play Store in a new tab, tracks click

QR code

Hover shows 'Scan with your phone to download'

Screenshot carousel

Click cycles app screenshots, dots update

DEVICE DETECTION LOGIC

1

IF User on iOS (user agent)

THEN Highlight App Store, iOS messaging

2

IF User on Android

THEN Highlight Play Store, Android messaging

3

IF User on desktop

THEN Show QR code prominently

4

IF App already installed (deep link)

THEN Show 'Open App' instead of badges

5

IF App unavailable in region

THEN Hide badges, 'Coming soon to your region'

Blog / news interactions

Article card — hover

TRIGGER Hover article card

ACTION Image scales up, card lifts

FEEDBACK Scale 1.05, shadow, 300ms

Article image

TRIGGER Click thumbnail

ACTION Navigate to full article

FEEDBACK Pointer, brightness dips on click

Article title

TRIGGER Click headline

ACTION Navigate to full article

FEEDBACK Title turns blue, underline appears

Read More link

TRIGGER Click 'Read More'

ACTION Navigate, tracked as CTA click

FEEDBACK Arrow slides right, underline

Article lazy load

TRIGGER Scroll near list bottom

ACTION Load next batch (infinite scroll)

FEEDBACK Spinner, new cards fade in

Filter / category

TRIGGER Click category tag

ACTION Filter to selected category

FEEDBACK Tag highlights, fade 200ms

Article loading logic

1

IF Page loads with blog section visible
THEN Load first 3 articles immediately

2

IF User scrolls to 'View All Articles'
THEN Preload next 6 articles in background

3

IF Click 'View All Articles'
THEN Navigate to full blog archive page

4

IF Article images fail to load
THEN Show placeholder image with article icon

5

IF Preview content is too long
THEN Truncate at 150 chars + 'Read More'

6

IF No articles available
THEN Empty state: 'No articles yet. Check back!'

Form interactions

Input — focus

TRIGGER Focus input field

ACTION Focus state, float label

FEEDBACK Primary border, ring, label up

Input — blur

TRIGGER Leave input field

CHECK Required, email, phone format

FEEDBACK Red border + message if invalid

Input — typing

TRIGGER Type (real-time)

CHECK Live validation, char count

FEEDBACK Green check / red X, strength meter

Dropdown select

TRIGGER Click dropdown field

ACTION Open options, aria-expanded

FEEDBACK Slides 200ms, searchable list

Checkbox / radio

TRIGGER Click control

ACTION Toggle checked / select option

FEEDBACK Animated check, focus ring

Submit button

TRIGGER Click submit

CHECK Validate all fields, cross-field

FEEDBACK Spinner + disabled, then result

Form submission logic

1

IF User clicks Submit**THEN** Run client-side validation on all fields

2

IF Validation fails**THEN** Block, scroll + focus first error

3

IF Validation passes**THEN** Disable button, loading, POST to API

4

IF API returns success (200)**THEN** Success message, redirect, clear form

5

IF API returns validation error (400)**THEN** Field-specific errors, re-enable submit

6

IF API returns server error (500)**THEN** 'Something went wrong. Please try again.'

7

IF Request times out (> 30s)**THEN** Timeout + retry, save form data locally

8

IF User navigates away, unsaved**THEN** Confirm: 'You have unsaved changes.'

Form field states

State	Visual appearance	Behavior
Default	Gray border, placeholder text visible	Cursor: text on hover / focus
Focus	Primary border, placeholder floats, outline ring	Accepts keyboard input
Filled	Value visible, label floated	Can be edited or cleared
Valid	Green border / checkmark, success color	Accepted for submission
Invalid	Red border, error icon, message below	Blocks submission until fixed
Disabled	Gray background, gray text	Cannot be edited or submitted
Loading	Spinner inside field or overlay	Async validation in progress

Footer section

INTERACTIONS

Footer links

Hover brightens + underline; click navigates to page

Social icons

Hover scales to 1.1 + brand color; click opens new tab

Newsletter signup

Validate email → API → 'Thanks for subscribing!'

Back to Top button

Appears after 500px scroll; smooth scroll to top

BACK TO TOP LOGIC

1

IF Page loads → Button hidden (opacity 0)

2

IF Scroll down > 500px → Fade in button (300ms)

3

IF Click Back to Top → Smooth scroll to top (800ms)

4

IF Scroll back to top manually → Fade out button (300ms)

5

IF Press Home key → Jump to top, hide immediately

Global interactions & behaviors

INTERACTIONS

Page load

Skeleton / spinner, progress bar, content fades in

Scroll progress

Top bar fills 0–100% as the user scrolls

Search overlay

Icon opens modal; typing = debounced autocomplete

Cookie consent

First visit banner slides up with accept / manage

Error state

API fail / 404 → message with Retry or Go Home

AUTHENTICATION STATE LOGIC

1

User not authenticated → Show Login, hide account features

2

User clicks Login → Show modal (username / password)

3

Login successful → Store token, show Account, → dashboard

4

User is authenticated → Personalized content, hide generic CTAs

5

Token expires (30 min idle) → Session-timeout modal, re-login

6

User clicks Logout → Clear token, → homepage, show Login

Responsive & adaptive behaviors

Hamburger menu

< 768px: nav → hamburger;
tap slides menu in, locks
scroll

Grid layout

Reflow columns 4 → 2 → 1,
no layout shift

Touch gestures

Swipe navigates carousel /
closes menu

Image optimization

Serve device-appropriate
sizes (srcset)

Keyboard navigation

Tab order + visible focus
ring, skip links

RESPONSIVE BREAKPOINTS

Breakpoint	Layout	Behavior
Desktop ≥1200px	4-column grids, full nav bar, large hero	Hover states active
Laptop 992-1199px	4-column grids, tighter spacing	Optimized for smaller screens
Tablet 768-991px	2-column grids, hamburger menu	Touch-optimized, 44px tap targets
Mobile 576-767px	1-column, stacked, compact header	Swipe gestures, bottom nav
Small <576px	Single column, minimal padding	One-handed, thumb-friendly zones

Performance & error handling

LOADING STATES

- **Page load** — skeleton screens or spinner, 3s max before timeout

API calls — loading indicator on the component, not the page

Images — progressive blur-up or fade-in when loaded

Lazy loading — load images / components only when in viewport

ERROR SCENARIOS

- **Network error** — 'No connection', retry button, save data locally

404 Not Found — custom page with search and navigation home

500 Server error — generic page, log error, show contact support

Timeout — after 30s, show timeout message with retry

Analytics & tracking logic

PAGE EVENTS

- Page view
- Time on page
- Scroll depth
- Exit intent
- Bounce tracking

INTERACTION EVENTS

- CTA clicks
- Form submissions
- Link clicks
- Button clicks
- Video plays

CONVERSION EVENTS

- Account creation
- Application started
- Application completed
- Referral generated
- Newsletter signup

SPECIFICATION COMPLETE

From static wireframe to living product

60+

interactions

25+

component states

15+

logic flows

5

breakpoints

Documented as Trigger → Action → State → Feedback, with conditional IF / THEN logic across every section — ready for design and development handoff.