

Handz V1 PRD Bundle

CH04 — Information Architecture & Navigation Map (R1)

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This chapter defines the global navigation model: top-level app states, tab structure, route registry, modal registry, deep links, and back behavior. It is written to minimize guesswork for implementation and QA. Page-by-page UI content is owned by CH05; this chapter owns **routing** and **navigation rules**.

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Status	Draft
Depends on	CH01, CH02, CH03
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Supersedes	N/A
Owned Decisions	App navigation architecture; tab order; route IDs; modal registry; deep link map; back/exit behavior; navigation-related empty/blocked state routing.
Open Questions / Placeholders	Tab icon set + exact labels; whether to include a distinct 'Home' dashboard vs using Library as home; whether Inbox is a standalone tab or Library header entry (default in this chapter: Library header entry).

1. Scope and Principles

- **Goal:** Define a complete navigation map for Handz V1 (iOS portrait) including tabs, stacks, modals, deep links, and back behavior.
- **Non-goal:** Define per-screen layouts or copy in full (owned by CH05) except where navigation requires specific blocking copy (e.g., unsaved changes confirmations).
- **Non-goal:** Define plan gating rules in detail (owned by CH08). CH04 only defines where gating intercepts happen and what route opens next.
- **Design principle:** Users can be as simple or as complex as they want; navigation must never force complexity.
- **Design principle:** The app teaches what a “flow” is through onboarding + guided empty states, not through long docs.

Cross-reference rules:

- Auth and guest conversion prompts are owned by CH07.
- Plan/entitlement gating rules are owned by CH08.
- Flow builder interaction behavior is owned by CH12–CH14.
- Sharing/unlisted link lifecycle is owned by CH17.
- Inbox receiving/import flow is owned by CH18–CH19.
- Offline behavior and sync rules are owned by CH28.
- Safety/abuse limits and warning ladder are owned by CH30.
- Error/empty states are owned by CH31 (but CH04 specifies which route they navigate to).

2. App State Machine

Handz has three top-level states. The navigation shell and available routes depend on the state:

- **State A — Signed Out:** user has not authenticated; can open Welcome Gate and view public/unlisted shared flows (view-only).
- **State B — Guest:** temporary session with limited exploration. Per current locks, guests cannot save flows (even locally) and cannot create custom moves; they can explore demo content and the flow builder in a non-saving sandbox.
- **State C — Signed In:** full app shell with tabs. Entitlements (Free/Pro/Trial) only affect gated routes and paywall intercepts.

State transitions:

- Signed Out → Guest: user taps “Try without account” (CH07).
- Signed Out → Signed In: user completes sign up or log in (CH07).
- Guest → Signed In: user creates account; on completion, the app offers to re-run “Move Preferences” onboarding so their move set is accurate without feeling repetitive (see CH09/CH10 onboarding notes).
- Signed In → Signed Out: user logs out or deletes account (CH34).

Global lock reminders that affect navigation:

- Platform: iOS-only, portrait-only (CH02).
- Practice is paywalled; Free gets 3 monthly practice credits usable only on saved flows (CH08).
- Free saved flows cap: 2 (CH08/CH15).
- Free inbox cap: 10; Free can view inbox items but cannot practice inbox items (CH18/CH20).
- Unlisted sharing is supported (CH17).
- Uploads are Pro-only and private-only; uploads do not travel with share links; link-based media can be shared (CH29).

3. Top-Level Navigation Shell

In Signed In state, Handz uses a bottom tab bar. Each tab owns its own stack. Modals can be presented over any tab.

3.1 Tab Bar (Signed In)

- **Tab 1 — Library:** saved flows, folders, search (flow-only search in V1), inbox entry point, flow detail, create/edit flows. (Owned screens: CH15–CH19).
- **Tab 2 — Practice:** practice hub, practice setup, active session, history, mastery/gameplans, maintenance. (Owned screens: CH20–CH24).
- **Tab 3 — Moves:** default move library, user moves, editing, tags/families/aliases management entry points. (Owned screens: CH09–CH11).
- **Tab 4 — Settings:** account, subscription, notifications, help, export, delete. (Owned screens: CH25, CH27, CH34, CH36).

Default landing behavior:

- First-time Signed In user lands on Library tab with a single “Demo Flow” card (does not count toward Free flow cap) plus a guided overlay introducing: (1) how to open a flow, (2) how to add a move, (3) how practice works. (Detailed copy owned by CH07/CH15).
- Returning user lands on the last-used tab and last-used screen within that tab, unless launched from a deep link.
- If app launches from a deep link, the deep-link target takes precedence; after exiting that flow, user returns to the most logical tab root (see Deep Link section).

3.2 Header Actions (Tab Roots)

- **Library tab root header:** left = app name/logo; right = (a) Inbox icon with unread badge (if any), (b) “+” create flow, (c) optional overflow menu (Search/Sort shortcuts).
- **Practice tab root header:** right = “Start” (opens practice setup), overflow = “History” and “Maintenance”.
- **Moves tab root header:** right = “+” create move, overflow = filters (by style, body part, family).
- **Settings tab root header:** standard iOS list, no special actions.

3.3 Shared Global Overlays

- **Paywall / Upgrade modal:** can be opened from any tab as a full-screen modal.
- **Toast system:** lightweight confirmations (e.g., “Link copied”, “Saved”) anchored above tab bar.
- **Soft warning ladder:** warning modals / banners triggered by abuse thresholds (See CH30). Navigation behavior is defined here: warnings never navigate away unless user accepts an action that opens Settings/Upgrade.

4. Route Registry (Authoritative)

This section is the single source of truth for route IDs. Developers should implement these IDs as constants. QA should validate each route is reachable only through allowed entry points.

Access shorthand used in tables:

- **SO** = Signed Out
- **G** = Guest
- **F** = Signed In (Free entitlement)
- **P** = Signed In (Pro entitlement)
- **T** = Trial (treated as Pro for gating, but with trial banners in Settings/Paywall)

Presentation shorthand:

- **Push** = standard stack navigation
- **Sheet** = iOS page sheet (swipe down to dismiss)
- **Full** = full-screen modal
- **AS** = iOS action sheet
- **System** = system picker / permission / share sheet

4.1 Auth and Onboarding

Route ID	Screen / Purpose	Presentation	Access	Notes / Owner
Auth/WelcomeGate	Welcome gate: sign up / log in / try guest.	Push	SO	CH07
Auth/SignUp	Sign up (Apple/Google/Email).	Push	SO	CH07
Auth/LogIn	Log in.	Push	SO	CH07
Auth/ForgotPassword	Password reset flow (email).	Sheet	SO	CH07
Auth/EmailVerifyPending	Verification pending screen + resend.	Push	SO	CH07
Onboarding/MovePreferences	Pick disciplines + optional move set selection. Re-runnable after guest converts.	Push	F/P/T	CH09/CH10
Onboarding/TutorialOverlay	First-run guided overlay; not a route in code (overlay component).	Overlay	F/P/T	CH07/CH31

4.2 App Shell and Tabs

Route ID	Screen / Purpose	Presentation	Access	Notes / Owner
App/Tabs	Signed-in shell: bottom tabs.	Root	F/P/T	CH04

Tab/Library	Tab root for flows & inbox.	Root	F/P/T	CH15–CH19
Tab/Practice	Tab root for practice & mastery.	Root	F/P/T	CH20–CH24
Tab/Moves	Tab root for move library.	Root	F/P/T	CH09–CH11
Tab/Settings	Tab root for settings.	Root	F/P/T	CH25/CH27/CH34

4.3 Library Stack (Flows, Folders, Inbox)

Route ID	Screen / Purpose	Presentation	Access	Notes / Owner
Library/Home	Flows library root: folders, flow list, create flow entry.	Push	F/P/T	CH15
Library/Folder	Folder detail: flow list filtered to folder.	Push	F/P/T	CH15
Library/FlowDetail	Flow detail view: overview, quick actions (Edit, Share, Practice).	Push	F/P/T	CH16
Library/FlowBuilder	Flow builder editor for a saved flow.	Push	F/P/T	CH12–CH14
Library/FlowBuilderSandbox	Flow builder sandbox (no saving).	Push	SO/G	CH07 + CH12
Library/Inbox	Inbox list: received flows awaiting import.	Push	F/P/T	CH18
Library/InboxItem	Inbox flow preview: accept/import, view details.	Push	F/P/T	CH18
Library/ImportConflict	Import conflict resolver (missing moves, alias collisions).	Sheet	F/P/T	CH18–CH19

4.4 Practice Stack (Paywalled)

Route ID	Screen / Purpose	Presentation	Access	Notes / Owner
Practice/Home	Practice hub: start session, mastery/gameplans, maintenance entry.	Push	F/P/T	CH20
Practice/Setup	Select paths / order / timer & rep assumptions.	Push	F/P/T	CH20
Practice/Active	Live session timer + controls.	Push	F/P/T	CH21
Practice/Summary	Session summary + save state (complete/interrupted).	Push	F/P/T	CH22
Practice/History	Logs list + detail.	Push	F/P/T	CH22

Practice/Gameplans	Create/manage “Gameplan” collections of paths across flows.	Push	F/P/T	CH23
Practice/Maintenance	Maintenance queue + filters (most used/recent/etc).	Push	F/P/T	CH24
Practice/Gate	Paywall intercept for practice features and credits.	Full	F	CH08/CH26

4.5 Moves Stack

Route ID	Screen / Purpose	Presentation	Access	Notes / Owner
Moves/Home	Moves library root: browse defaults + custom.	Push	F/P/T	CH09
Moves/MoveDetail	Move detail: fields, media, tags/family, edit actions.	Push	F/P/T	CH10
Moves/CreateMove	Create custom move (progressive disclosure).	Push	F/P/T	CH11
Moves/EditMove	Edit existing move; includes revert model.	Push	F/P/T	CH11
Moves/AliasPicker	Pick preferred naming for common aliases (e.g., teep vs push kick).	Sheet	F/P/T	CH10
Moves/FamilyPicker	Select family/variant relationships (optional).	Sheet	F/P/T	CH10

4.6 Settings, Subscription, and System

Route ID	Screen / Purpose	Presentation	Access	Notes / Owner
Settings/Home	Settings root list.	Push	F/P/T	CH25
Settings/Account	Profile, email, logout, delete account.	Push	F/P/T	CH34
Settings/Subscription	Plan state, manage subscription, restore purchases.	Push	F/P/T	CH26
Settings/Notifications	Reminder scheduling and practice/maintenance nudges.	Push	F/P/T	CH27
Settings/Privacy	Privacy controls, data handling notes.	Push	F/P/T	CH25
Settings/Help	Help center, contact, FAQs.	Push	F/P/T	CH36
Paywall/Upgrade	Upgrade modal (StoreKit) + trial start (7 days).	Full	F	CH26
System/ShareSheet	iOS share sheet (share flow link).	System	F/P/T	CH17

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System/MediaPicker	Photo/video picker; permission + picker UI.	System	F/P/T	CH29
System/PermissionG ate	Permission rationale screen(s) before system prompt.	Sheet	F/P/T	CH29/CH31

5. Modal Registry

Modals are used for focused tasks that should not disrupt the tab stack. All modals must support swipe-to-dismiss unless they contain unsaved edits; in that case, dismissal triggers an Unsaved Changes action sheet.

5.1 Standard Modal Types

- **Sheet** (preferred): short pickers and conflict resolution (e.g., Move Picker, Alias Picker, Import Conflict).
- **Full**: paywalls and immersive flows that feel like a new “mode” (Upgrade, Trial start, optionally Active Practice).
- **Action Sheet (AS)**: destructive or multi-choice confirmations (Delete flow, Discard edits).
- **System**: iOS share sheet, media picker, permission prompts.

5.2 Core Modals Used in V1

Route ID	Screen / Purpose	Presentation	Access	Notes / Owner
Modal/MovePicker	Pick an existing move to add as a node.	Sheet	F/P/T (SO/G in sandbox)	CH12 + CH09
Modal/CreateMoveInLine	Create a move without leaving the flow builder.	Sheet	F/P/T	CH11
Modal/NodeActions	Node context menu: edit, replace, attach media, delete.	AS	F/P/T	CH12–CH14
Modal/SequenceEditOr	Edit sequence/condition text between nodes.	Sheet	F/P/T	CH14
Modal/ImportConflict	Resolve missing moves/aliases when importing.	Sheet	F/P/T	CH18–CH19
Modal/UpgradePaywall	Upgrade to Pro / start 7-day trial.	Full	F	CH26
Modal/SoftWarning	Soft warning ladder steps (abuse limits).	Sheet/Full	F/P/T	CH30

5.3 Modal Dismiss Rules (Global)

- Swipe-down dismiss is enabled for Sheet and Full modals unless the modal contains unsaved edits.
- If the user attempts to dismiss with unsaved edits, show Unsaved Changes AS with: “Keep Editing”, “Discard Changes”, and (if applicable) “Save Draft”.
- After a modal is dismissed, the underlying screen must remain in the exact previous scroll/zoom state (especially Flow Builder).

6. Back Behavior and Exit Rules

Back behavior must be consistent and predictable. iOS back is primarily a stack pop; modals are dismissed. The app should never lose work silently.

6.1 General Rules

- Within a tab stack, back button pops one screen at a time.
- From a tab root screen, back exits the app (standard iOS behavior).
- Switching tabs preserves each tab's navigation stack and scroll position (unless memory pressure forces reset).
- If the user opens a deep link, exiting that content returns them to the most logical tab root (see 7. Deep Links).

6.2 Unsaved Work Protection

- **Flow Builder (saved flow):** leaving with unsaved changes triggers Unsaved Changes AS. Options: Save, Discard, Keep Editing.
- **Flow Builder (sandbox):** leaving triggers AS with: Discard Sandbox, Keep Editing, Create Account to Save (primary CTA).
- **Move Create/Edit:** leaving triggers Unsaved Changes AS; includes “Revert to Default” if editing a default move override.
- **Practice Setup:** if user has configured selections and tries to leave, confirm discard setup.
- **Active Practice:** back triggers pause and a confirmation: Continue, End & Save as Interrupted, Discard Session.

6.3 Deletions and Destructive Actions

- All destructive actions require a confirmation AS with clear consequences.
- Deleting a flow: warn if the flow is referenced by any Gameplan or Maintenance queue; offer “Remove from those lists” or “Cancel”.
- Deleting a custom move: warn if used in any flows; offer “Replace with...” (opens Move Picker) or “Cancel”.

7. Deep Links and Share Links

Handz V1 supports unlisted share links. These are the primary growth loop in V1. Deep linking must be reliable and safe.

7.1 Link Types

- **Unlisted Flow Link:** opens a view-only FlowDetail variant with optional embedded link-media. Can be opened by anyone with the link.
- **Internal App Links:** routes opened from notifications (maintenance reminders) or internal share actions.
- **Store / Upgrade Links:** links that open Paywall/Upgrade directly (used after soft warnings or practice gating).

7.2 Unlisted Flow Link Behavior

- If app is installed: open the app and navigate to ShareLink/FlowView (view-only).
- If app is not installed: open web fallback (placeholder for V1; can be a simple landing page that prompts App Store install).
- View-only screen must show: flow title, creator display name (if allowed), last updated date, and a simplified flow viewer.
- Primary CTA: “Open in Handz” (if signed in) or “Create account to save” (if signed out/guest).
- If the flow includes uploaded video (gallery uploads), show a badge: “Private upload - not shared via link.” Links or embedded web media can be shared.

7.3 Deep Link Return Path

- If the user opened the app from a deep link while Signed Out, and then closes the share view, route back to Welcome Gate (not a blank screen).
- If the user is Signed In and deep link opened ShareLink/FlowView, closing returns to Library tab root.
- If the user imports the flow from the share view, after import success navigate to the imported flow’s FlowDetail in Library.

8. Edge Cases that Affect Navigation

This chapter lists navigation outcomes for common edge cases. Detailed business logic is owned by the referenced chapters.

8.1 Offline / Sync

- If offline on launch: app opens to last cached screen; show a non-blocking banner “Offline - changes will sync later.” (CH28).
- Opening an unlisted share link while offline: show offline error state with retry; offer “Save link to open later” if possible (CH31).
- If user attempts to start Practice while offline: allow if all required data is cached; otherwise show blocking error with retry.

8.2 Gating and Limits Intercepts

- If Free user taps “Start Practice” with 0 credits: open Paywall/Upgrade (Full). Returning from paywall returns to Practice/Home.
- If Free user attempts to save a 3rd flow: intercept with “Flow Limit Reached” sheet offering Upgrade, Delete a Flow, or Cancel (CH08/CH15).
- If Free user tries to practice an Inbox item: show sheet explaining practice requires a saved flow + Pro/credits; offer Import to Library (if flow slots available) or Upgrade.
- If Inbox is at cap (10) and a new import arrives: show soft warning and keep newest in ‘Pending (not stored)’ state until user clears space (CH18/CH30).

8.3 Link Revocation / Invalid Token

- If share token invalid or revoked: show dedicated error screen with: “This link is no longer available.” CTA: Go to Library (if signed in) or Welcome Gate (if signed out).
- If token valid but flow is deleted: same behavior as revoked.

9. Build Notes for Vibe Coding (Replit) — Navigation Only

This section is written for an AI coding agent. It focuses only on implementing routing and navigation scaffolding. UI details and business rules must reference other chapters.

9.1 Recommended Navigation Pattern

- Use a tab navigator with four tabs (Library, Practice, Moves, Settings). Each tab contains a stack navigator.
- Implement a top-level Auth stack for Signed Out flows and an App stack for Signed In flows.
- Implement modal presentation for the modal registry above (Sheet, Full, Action Sheet).
- Maintain a single route constant map matching Section 4 IDs to screen components.

9.2 Route Constant Map (copy/paste template)

```
export const ROUTES = {
  AUTH_WELCOME: 'Auth/WelcomeGate',
  AUTH_SIGNUP: 'Auth/SignUp',
  AUTH_LOGIN: 'Auth/LogIn',
  ONBOARD_MOVES: 'Onboarding/MovePreferences',

  TABS: 'App/Tabs',
  TAB_LIBRARY: 'Tab/Library',
  TAB_PRACTICE: 'Tab/Practice',
  TAB_MOVES: 'Tab/Moves',
  TAB_SETTINGS: 'Tab/Settings',

  LIB_HOME: 'Library/Home',
  LIB_FOLDER: 'Library/Folder',
  LIB_FLOW_DETAIL: 'Library/FlowDetail',
  LIB_FLOW_BUILDER: 'Library/FlowBuilder',
  LIB_FLOW_SANDBOX: 'Library/FlowBuilderSandbox',
  LIB_INBOX: 'Library/Inbox',
  LIB_INBOX_ITEM: 'Library/InboxItem',
  LIB_IMPORT_CONFLICT: 'Library/ImportConflict',

  PRACTICE_HOME: 'Practice/Home',
  PRACTICE_SETUP: 'Practice/Setup',
  PRACTICE_ACTIVE: 'Practice/Active',
  PRACTICE_SUMMARY: 'Practice/Summary',
  PRACTICE_HISTORY: 'Practice/History',
  PRACTICE_GAMEPLANS: 'Practice/Gameplans',
  PRACTICE_MAINTENANCE: 'Practice/Maintenance',
  PRACTICE_GATE: 'Practice/Gate',

  MOVES_HOME: 'Moves/Home',
  MOVES_DETAIL: 'Moves/MoveDetail',
  MOVES_CREATE: 'Moves/CreateMove',
  MOVES_EDIT: 'Moves/EditMove',
  MOVES_ALIAS_PICKER: 'Moves/AliasPicker',
  MOVES_FAMILY_PICKER: 'Moves/FamilyPicker',

  SETTINGS_HOME: 'Settings/Home',
  SETTINGS_ACCOUNT: 'Settings/Account',
```

```
SETTINGS_SUBSCRIPTION: 'Settings/Subscription',
SETTINGS_NOTIFICATIONS: 'Settings/Notifications',
SETTINGS_PRIVACY: 'Settings/Privacy',
SETTINGS_HELP: 'Settings/Help',

PAYWALL_UPGRADE: 'Paywall/Upgrade',

SHARE_FLOW_VIEW: 'ShareLink/FlowView',
};
```

9.3 Troubleshooting Checklist

- If a screen is unreachable: verify it exists in the route constant map and is registered in the correct navigator (auth vs app vs modal).
- If tab stacks reset unexpectedly: ensure “unmountOnBlur” is disabled; preserve state per-tab.
- If deep links open the wrong place: verify the deep link path-to-route mapping matches Section 7, and that you handle Signed Out vs Signed In return paths.
- If swipe-to-dismiss loses work: ensure unsaved-changes intercept is implemented on modal close/back gesture (use navigation listeners).
- If paywall loops: ensure the paywall returns to the prior screen without re-triggering gating until user taps the gated action again.

10. Acceptance Tests (Navigation)

- From Signed Out, user can open Welcome Gate, sign up/log in, or enter Guest mode.
- Guest can open Flow Builder Sandbox but cannot save; attempting to exit shows conversion CTA.
- Signed In sees 4 tabs; each tab preserves its stack when switching.
- Free user with 0 practice credits tapping Start Practice opens Paywall; dismiss returns to Practice/Home.
- Unlisted share link opens ShareLink/FlowView; if Signed In, importing navigates to Library/FlowDetail for imported flow.
- Attempting to leave Flow Builder with unsaved edits always prompts; no silent loss of work.
- All destructive actions show confirmation action sheets.