The "Universal Component" Blueprint: How to Build a Cross-Platform Library

Based on the deep research of Relume, Osmo Supply, and Flowbase, the "Best Solution" for building a platform that supports **GSAP**, **Webflow Copy/Paste**, and **HTML/Code Export** is a **Dual-Payload Architecture**.

This approach treats every component as a data object containing two distinct "truths": one for the Webflow Clipboard (JSON) and one for the Developer (Clean Code).

Here is the detailed rundown of the technical solution.

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1. The Core Architecture: "Dual-Payload" Database

Do not try to auto-convert Webflow components to clean HTML code on the fly; the result is often messy "spaghetti code." Instead, store two versions of every component in your database (PostgreSQL, Supabase, or Webflow CMS):

Data Field	Format	Purpose
payload_webflow	JSON Object	The specific @webflow/XscpData structure required for the "Paste into Webflow" feature.
payload_code	String (HTML/JS)	The clean, semantic HTML + GSAP JavaScript for developers to use in VS Code.
preview_image	Image/Video	The visual thumbnail or video loop shown on the dashboard.

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2. The "Copy to Webflow" Mechanism (The Technical Secret)

This is the feature used by Relume and Flowbase. It relies on intercepting the browser's copy event and injecting a specific MIME type that Webflow's Designer recognizes.

A. The Data Structure

Webflow expects a JSON object with a specific signature. You must extract this from Webflow first.

1. **Build** your component in Webflow.
2. **Copy** it (Cmd+C).
3. **Extract** the JSON using a tool like Clipboard Inspector.
4. **Sanitize** it: Remove specific _id fields if you want to avoid conflicts, though Webflow handles ID collisions fairly well on paste.

B. The JavaScript Trigger

You cannot use a standard navigator.clipboard.writeText(). You must use the ClipboardItem API to set the content type to application/json.

The Implementation Code:

JavaScript

```
async function copyToWebflow(componentJson) {
 // 1. Construct the ClipboardItem with the specific Webflow signature
 const type = "application/json";
 const blob = new Blob(, { type });
 const data = [new ClipboardItem({ [type]: blob })];

 // 2. Write to the Clipboard
 try {
  await navigator.clipboard.write(data);
  alert("Copied! Paste into Webflow (Cmd+V)");
 } catch (err) {
  console.error("Failed to copy:", err);
 }
}
```

Note: This specific method works best in Chrome/Edge. Safari has stricter clipboard permissions, which is why Flowbase often warns users about Safari compatibility.

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3. Handling Dependencies: GSAP & Styles

This is where Osmo Supply excels. You cannot just copy the HTML structure; you need the *logic* (GSAP) and the *styling* (CSS) to travel with it.

A. The Styling Strategy: "Client-First" or "Tailwind"

If you paste a component with class header-1, and the user's site has a different header-1, it breaks.

- **The Relume Solution (Recommended):** Build everything using **Finsweet's Client-First** system. This creates a "shared language." If the user has Client-First installed, the component inherits their global font sizes and spacing automatically.
- **The Isolation Solution:** Use unique namespaces (e.g., osmo_header-1). This prevents conflicts but makes the code harder for the user to customize later. **Recommendation: Stick to Client-First for Webflow components.**

B. The Animation Strategy (GSAP)

Webflow's native interactions (IX2) are stored inside the JSON blob. However, complex **GSAP** animations (like Osmo's) are **custom code**.

- **How to Bundle it:**
    1. **Embed Block:** Inside your Webflow component, include an "HTML Embed" element.
    2. **Script Tag:** Inside that embed, write your GSAP logic.

HTML

```
<script>
 // Wrap in a function to avoid global variable leaks
 (function() {
  // Check if GSAP is loaded, if not, warn the user
  if (typeof gsap === 'undefined') {
    console.warn('GSAP not found. Please install GSAP in Project Settings.');
    return;
  }

  // Your Animation Logic using specific IDs or scoped classes
  gsap.to(".component-class", { x: 100 });
 })();
</script>
```

3. **Global Requirement:** Explicitly tell your users (via an onboarding modal) that they **must** add the GSAP CDN link to their project's <head> tag for the

components to work. Do not try to bundle the GSAP library inside every component; it will cause performance issues.

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4. The "HTML / Code" Export (For Non-Webflow Users)

For users who want to paste into VS Code (the "Simple Code" request):

1. **Don't use the Webflow export:** Webflow's exported HTML is often bloated with wf-section classes and div wrappers.
2. **Hand-Clean the Code:** For your "Premium" library, manually refactor the component into semantic HTML5 or React.
3. **Display Logic:** On your dashboard, have a tab toggle:
    - **Tab A (Webflow):** Triggers the JSON Clipboard function (Section 2).
    - **Tab B (HTML/JS):** Displays the clean string from your payload_code database field inside a code block (using Prism.js for syntax highlighting).

5. Summary Checklist for Your Build

To compete with Relume/Osmo, your roadmap is:

1. **Standardize:** Adopt the "Client-First" class naming convention for all your components.
2. **Build Inventory:** Create your components in Webflow.
3. **Extract Data:** Write a script to export your Webflow components into JSON files.
4. **Frontend App:** Build your marketplace using **Next.js**.
    - It handles the database of JSONs.
    - It renders the "Copy" buttons.
    - It manages user authentication (Stripe/Supabase).
5. **Clipboard Logic:** Implement the ClipboardItem logic to inject the JSON into the clipboard as application/json.
6. **GSAP Handling:** Ensure every animated component has a <script> embed that references GSAP, and provide a "Getting Started" guide that gives users the GSAP CDN links.

This architecture gives you the "Magic Paste" for Webflow users *and* the clean code for developers, setting you apart as a true hybrid platform.