



AE DESIGN WORKFLOW CHEATSHEET

Engine Version 6.12 and later

Please be advised that this cheatsheet contains the most current obtainable information, but is not exhaustive. For questions requiring support, please contact:

support@you.i

| NAMING CONVENTIONS | Use the following method when naming Compositions, Layers, and images whenever possible: Type-SubType-Description e.g. Btn-Toggle-PlayPause, Image-Icon-Watchlist.png, Layout-Container-Description, Text-Title | Class/Comment: |
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| EXPORTING | Go to: 'Composition > Export All Compositions' to export the current project file. This will generate the timelines and layouts required to build the application. Go to: 'Composition > Export All Compositions In All Projects In Folder' to export all of the After Effects project files within the current directory. Very handy for cleaning up a project during the optimization phase. Delete all old exports files, then re-export all compositions in all projects in the folder for a clean build. | |
| Warnings | Warnings flag potential issues and inefficiencies within an After Effects project file. Project files should be warning free on export. | |
| Visibility | Layers with the visibility turned off will not be exported. | |
| Errors | Errors on export could lead to application instability and crashes. It is critical to fix errors prior to committing exports to a project. | |
| | Notes: Double-Click on a warning or error in the exporter panel to navigate directly to the source composition. | |
| ANIMATIONS | Animations are used to display changes in states. Interactions and and transitions are communicated through animations defined in After Effects using keyframes. | |
| Markers | Markers are interaction queue points. Animations are defined by keyframes within the visible range of a marker. Marker timelines can't overlap. A keyframe should be at the beginning and end of a marker's timeline. Never start an animation at frame '0'. Notes: Select 2 or more keyframes, navigate to the 'Composition' menu & select 'You.i: Insert Marker' to apply a marker with the correct duration. | |
| Easing | Keyframes should be 'eased' for the motion interpolator to work properly. Easing is also referred to as 'curves' or 'beziers'. | |
| Recursive | Nested/recursive animations can be chained together by adding recursive:true to the parent marker. Animation markers need to have the same name. You can use stop-recursion:true to break the chain (e.g. button in a button) | |
| Image Sequence | For larger sequences, import the images as a group of images, trim the layers to 1 frame, then sequence them in the parent composition. Image sequences work for small animations and work as sprite-sheets (only in C++). The maximum size for exported sprite sheets is 1024x1024. | |
| Looping | To loop animations use the marker name 'Loop' . For nested animations, you may need to add ' recursive:true' to the 'Loop' marker for proper preview. | |
| BUTTONS | Markers: (Order of marker names is inconsequential) Interactions will play in reverse if no counterpart is found, e.g. Press is required, Release is not. Interaction conventions (markers) can be combined e.g. a push button can receive touch, focus, and hover events. | Note: toggle buttons and radio groups are not supported by RN by default |
| Push Button | "Press", "Release", "Disable" | CYIPushButtonView |
| Toggle Button | "Press", "Press-Checked", "Toggle-On", "Toggle-Off", "Disabled", "Disable-Checked" | CYIToggleButtonView |
| Focus Button (10ft) | "FocusIn", "FocusOut", "Press", "Disable" | CYIPushButtonView |
| Toggle Focus Button (10ft) | "FocusIn", "FocusOut", "FocusIn-Checked", "FocusOut-Checked", "Press", "Press-Checked", "Toggle-On", "Toggle-Off", "Disabled", "Disable-Checked" | CYIToggleButtonView |
| Web Buttons | "Up-Over", "Over-Up", "Up-Over-Checked", "Over-Up-Checked", "Down-Up", "Down-Up-Checked" | CYIPushButtonView |
| Dynamic Text | Use layer names "Text" or "Placeholder-Text", set in code using SetText(). "TextPressed" or "Placeholder-TextPressed", Text displayed on the button when pressed, which can be set using SetText(). Useful if you want to use a different font or color when pressed/focused. | |
| Radio Buttons | A collection of CYIToggleButtons where only one button can be 'active' at any given time. Notes: Animating the same property at different state can lead to conflicting animations. Try abstracting one of the animations by parenting the layer to a null object. For example, you can animate a layer's opacity and it's parent independently. Alternatively, try using recursive timelines. | CYIRadioGroupView |
| TEXT | Project fonts should be installed prior to starting work on the project. Fonts used in AE will be automatically exported to the AE/Assets folder. | |
| Paragraph Text | Paragraph is the preferred text format. Text will reflow to fill the box. Select the Text tool, and then click and drag a box for the desired amount of space. | |
| Text Formatting | Dynamic Text: To make text dynamic, enable the 'Dynamic Text' box in the Layer properties of the Properties Panel. Ellipsis: To add an ellipsis to truncated text, enable the 'Ellipsis' box in the Layer properties of the Properties Panel. Leading: Leading must be adjusted in the Layer properties in the Properties Panel (if unadjusted, leading renders at the font default setting). Rendering: Designers can choose the type of font renderer. Font atlas is default, but does not scale/rotate well. SDF rendering may yield better results but may not be supported by lower-end devices. Bitmap text relies on font atlas, but can be rotated. | text-placeholder:true; text-overflow:ellipsis |
| Input Text | Requirements: Input text must be point text and left-aligned & contain a solid layer named 'InputProperties' parented to the Text layer. Regular: Input text field for entering information such as email address, name, etc. Password: Input text field for entering a protected password. | CYITextFieldView CYIPasswordTextEditView |
| Scrolling Text | Requirements: ListRoot (typically a Null Object layer) - must be named "ListRoot", Precomposed Text (the height difference between Text Composition and Scrolling Text View determines the amount to scroll). | CYIScrollingTextView |
| Animating | Notes: Best practices dictate converting the font-renderer to SDF for scale and rotation animations to avoid artifacts. | CYISDFAtlasTextSceneNode |
| LISTS | Scrollable lists are groups of dynamic content that can 'stream' into view. Placeholder content is added to a list and will be replaced dynamically at runtime. Layout is applied to a list to establish padding, direction, and spacing between list items. | CYIListView |
| | Layout: Determines the appearance of a list. Any layout can be used, but Row/Horizontal & Column/Vertical is the most typical combination. | type:horizontal |
| | Placeholder: Lists require content. Dynamic content must be flagged with the 'Placeholder' attribute via the Properties Panel. | placeholder:true |
| | Direction: Change the orientation of the list in the Properties Panel. | type:horizontal |
| | Clipping: Clips content to the dimensions of the List composition. To turn Clipping off, enable the Layer properties of the list in the Properties Panel. | clip:false |
| | Overpull: Specify how much a list can extend past its bounds before snapping back to place via layer settings in the Properties Panel. | overpull:100 |
| | Carousel: Repeat/loop a list's content with the 'Carousel' option in the List properties. | horizontal-carousel:always; |
| | Magnets: Align list content to the middle or edge of a screen when scrolling. Content will 'snap' into place for ideal alignment. | horizontal-magnet-offset:0 |
| | ListMove Anim: Make use of a 'Move' timeline for the items within the list. This is a special timeline not driven by time changes, but instead by the position of the item in view. The directional timelines are named 'MoveHorizontal' and 'MoveVertical', respectively. It is recommended to use 100 frames for the animation, as it directly corresponds to the percentage scrolled... 1 frame = 1% scrolled | Also works with CYIScrollingView |
| | Cascade Anim: You can animate the in/out content of a list. All repeated items in the list will play the same animation with a delay/offset controlled via the Properties Panel. Include 'CascadeIn' and 'CascadeOut' timelines within the list items. Note that an 'In' or 'Out' marker must be present inside the CYIListView, and in all views between the CYIListView and the screen root, for the 'In' and 'Out' timeline group generation to find the cascade timelines automatically. A cascade animation will play by default in the preview tool, but code is required to trigger the animation in an app. | Currently not supported by React-Native by default |
| SCROLLING | Scrolling views are a way to scroll overflow content into view. Scrolling views may contain static or variably-sized content. Scrolling is a sub-type of container. | CYIScrollingView |
| | Direction: Scrolling views can move vertically, horizontal, both, or you can set the view to not scroll at all. | horizontal-scroll:true; vertical-scroll:false |
| | Overpull: Specify how much a scrolling view can extend past its bounds via layer settings in the Properties Panel. | horizontal-overpull:100; vertical-overpull:100 |
| IMAGES | Use PNG images for project work. Images should be saved in the AE/Assets/drawable/default folder. | |
| NPatch | Npatch images are scalable graphics that retain their integrity when resized. Registration points determine scaling behavior. Format: "Border.9.png" | |
| Dynamic Images | Requirements: The Dynamic Image View must contain a layer named 'ImageNode' . This layer will be replaced by the loaded (dynamic) image. Animations: Use the 'ImageSet' timeline in the Dynamic Image composition to play an animation once the image texture has been downloaded. Interactive: Images can receive touch input. To disable interactivity, enable the 'Interactive' box within the layer properties within the Properties Panel. Masks: Masks can be applied to solids, images, and compositions in AE. Animated masks are not supported. For rectangular masks, try adding clipping (clipping:true) to the parent composition. You can animate clipping dimensions with dynamic layout. | CYIImageView interactive:off Not supported by Roku |
| Rounded Corners | You can apply rounded corners to compositions via the Decorated View Container sub-type in the Properties Panel. Masking is another option. | CYIDecoratedView |
| | Overflow: An option to set clipping for the composition to match the corner path. | overflow:hidden |
| | Color: By default the background is transparent. Set a hex color to apply a background to the container. | background-color:FFFFFF |
| | Border: Applies a stroke of the specified width to the container. | border-thickness:4 |
| | Border Color: Sets the color of the stroke applied to the border. | border-color:E3E1D8 |
| | Radius: Sets the rounded corner radius per corner. | corner-radius-top-left:4 |
| | Notes: Rounded corners may impact device performance. The performance hit is proportional to how big the rounded corners are. | |
| Special FX | Blur: Apply a gaussian blur to an adjustment layer in a composition to blur the image behind. Tint: Apply a tint effect to an adjustment layer in a composition to tint the image behind. Note: Effects such as blur can greatly impact device performance and may not be supported by all types of hardware (Roku) | |
| ACTIVITY INDICATORS | Activity indicators (loaders) are generally looping animations played while information/pages/scenes are being loaded | CYIActivityIndicatorView |
| | Markers: "Loop" the animation that's played during loading. "In" & "Out" can be animated within, or outside of, the Activity Indicator view. | |

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| Boot Image | The image displayed at the initial launch of an application. Platform specific, the boot image is typically housed in the 'build' folder of a project. | |
| LAYOUT | Layouts define the alignment, orientation, spacing, height, and width of content. Layouts work in conjunction with 'sizing' anchors. | |
| Composition vs. Layer | Layout applied to a composition will effect all of it's children. Layout can be applied directly to a child/layer to override it's default properties. Be sure you're applying layout to the right composition/layer by checking the name of the item selected in the Properties Panel. | |
| Row Layout | Automatically align items horizontally. | CYIRowLayout |
| Column Layout | Automatically align items vertically. | CYIColumnLayout |
| Stack Layout | Layer items on top of each other in a stack. | CYIStackLayout |
| Grid Layout | Arrange items as a grid, filling the container. | CYIGridLayout |
| Auto Linear Layout | Automatically switch layouts between Row & Column, based on the screen orientation (landscape vs. portrait). | CYIAutoLinearLayout |
| Scaling Layout | Similar to Stack Layout, but scales its children to fill their containers. There are four Scaling modes: Stretch, Fit, Fill, and None. | CYIScalingLayout |
| Auto Layout | A layout that assigns margins to children based on their initial position and size. | CYIAutoLayout |
| Parameters | <p>Gravity: Select the orientation of gravity - center, top, bottom, left, right, or any combination thereof. Top-Left is default. Gravity can be set for the entire layout, as well as for individual layers.</p> <p>Fit Content: You can select to have a layout 'fit the size of content' for width and/or height. Especially useful for variably-sized content. Enable the Width/Height box in the Layout properties (ensure the Composition tab is selected in the Properties Panel).</p> <p>Fill Parent: Resize the content of a layer to match the width/height of a layout container (ensure the Layer tab is selected in the Properties Panel).</p> <p>Spacing: Amount of space in pixels between layout items. 10 pixels is default.</p> <p>Padding: Amount of space around the layout. You can set margins for: left, right, top, bottom. Margins can be positive or negative numbers.</p> <p>Background: An option to have a layer fill the entire composition without affecting other elements in the layout.</p> <p>Layoutable: An option to have layout ignore the selected layer.</p> <p>Maintain AR: An option to maintain the aspect ratio of an element within a layout (may require an additional precomposition).</p> | <p>gravity:center</p> <p>width:fit-content; height:fit-content</p> <p>width:fill-parent; height:fill-parent</p> <p>spacing:15</p> <p>padding-top:20</p> <p>background:true;</p> <p>layoutable:false;</p> <p>maintain-aspect-ratio:true;</p> |
| RESPONSIVE ANCHORS | When items are parented to responsive anchors, they inherit scaling and positioning behaviors. | |
| Scaling | Scale 1:1 to match the device's screen and aspect ratio. Can be defined as width/height scaling (default behavior). | |
| Non-Scaling | Preserve the original size of the UI component. Great for preventing stretch/squashing for images/items that need to preserve their aspect ratio. | Currently not supported by React Native |
| Proportional | Scale in size & maintain aspect ratio. Great for lists and background images. Defined by difference in height, width, or average between the 2 dimensions. | |
| Sizing | Sizing anchors are intended to be used with the 'CYILayout' system. The anchor is applied to the layout component to inherit differences in screen size. | |
| | Direction: Sets the origin/anchor point of the scaling anchor. Choose from: left, top, center, right, bottom (in any combination). | |
| | Warning: Anchor properties are determined by the dimensions of the parent composition. If the composition is resized, the anchors must be recreated. | |
| PREVIEW TOOL | The Preview Tool is an interactive way to simulate application content, screens, and features. | |
| Preview Current Composition | Go to Composition > You.i: Preview Current Composition (you may want to set up a system shortcut for this task). | |
| Crashes | Check the App Log for more information regarding crashes and debug. Go to Composition > You.i: View Preview App Log. | |
| Shortcuts | <p>Help: Press 'h' to see a list of help tips, or use the menu navigation. Also displays the You.i Engine Plugin version number (in the footer).</p> <p>Screen: Press 's' to select a device screen to emulate. You can also resize the window to test your layout. 'r' will rotate the screen orientation.</p> <p>Text: Cycle through variable text strings to test the dynamic layout of a page.</p> <p>Animations: Press the number keys to play timelines in order of appearance. 'n' animations play by default. Press 'i' to play the timeline 'in'; press 'o' for 'out'. While animations are previewable, code may be required to trigger them in an application.</p> <p>Asset Viewer: Press 'a' to see how much space different types of assets are consuming.</p> <p>Scene Tree: Press 'v' to open the scene tree viewer dialog.</p> <p>Outlines: Press 'e' to see outlines for assets. A strong visual aid when working with alignment and layout.</p> <p>Magnets: Press 'm' to display magnets during preview.</p> <p>Reset: Press 'delete' or 'backspace' to reset the preview window. This will also fix the preview window size for non-standard composition resolutions.</p> | |
| Developer Panel | <p>Access: Triple click in the left-hand corner of the Preview window to access the Developer/Debug panel. The Dev panel has many features, this section outlines common practices.</p> <p>Scene Tree Inspector: View information about the pointed-to node.</p> <p>Assets Viewer: View loaded assets and memory usage</p> <p>Virtual Mouse: Enable a mouse controlled by the arrow keys.</p> <p>Scene Tree Viewer: View the scene tree and bounding boxes.</p> <p>Focus Debugger: Shows information about focused items.</p> <p>Time Dilation: Run the app in slow-motion.</p> | |
| Preview & Export Messages | <p>Warnings: Warnings are suggestions as to how to best optimize your file and should be followed. Double-click the warning to navigate to the offending composition.</p> <p>Errors Errors indicate more serious issues that could lead to a crash. Errors need to be fixed. Double-click the error to navigate to the offending composition.</p> | |
| CROSS PLATFORM | While it's possible to develop one design for each screen to work across a variety of platforms, best practices often require a unique design to support each device. | |
| Asset Locator | Designs specific to platforms are segregated into a system of folders within a project file. Common elements are reused wherever possible. | |
| | handset: This folder defaults as the asset folder for Handset - typically 9:16 format (1080x1920). | |
| | tablet: Folder for tablet layouts & components. Tablets are typically 16:9 (1920x1080 - Android) or 4:3 (2048x1536 - iOS). | |
| | tv: Folder for television layouts. TVs render in a 16:9 (1920x1080) format. | |
| | default: Cross-platform content should be left outside of folders in the project library. e.g. a button used for handset & tablet. | |
| | other: Custom compositions can be created for specific cases. e.g. Roku, PS3, Brand1, Brand2, ...etc | |
| PROTOTYPING | Leverage the Preview Tool within After Effects to build out high-fidelity prototypes without the need for code. | |
| Connect Events to Animations | To connect a timeline to a button, add the following layer comment to the button: on-click:CompositionName.MarkerName Toggle animations (requires Toggle-Button): on-toggle-on:CompositionName.MarkerName1;on-toggle-off:CompositionName.MarkerName2 | |
| | Notes: If using the 'on-click' method, the animations must appear in a child composition, not in the Root/Main composition. Otherwise an error may occur ~ something to the tune of 'Error: Could not locate any node named 'CompositionName' | |
| | Ever wonder how to change the AE dynamic image default previews? To change the AE preview dynamic images, go to the You.i plugin > right click > show package contents can find the images here: | |
| Image Preview | Contents/Resources/You.i Preview.app > right click > show package contents>Contents/MacOS/assets/drawable/default/YouiEngineDevPanel_Preview-image-* | |
| CONVENTIONS | Markers: (Order of marker names is inconsequential) Interactions will play in reverse if no counterpart is found. e.g. Press is required, Release is not. | |
| Masking | Masking support is limited. In most cases you can achieve the desired masking effect by applying the clipping:true property to a composition/container. Animated masks are not supported, however it is possible to animate clipping within a composition by using layout to control the dimensions of a container with clipping:true. | |
| AE Effects | Most effects aren't supported, with the exception of Gaussian Blur and Tint. | |
| Track Mattes | Unsupported | |
| Shape Layers | Limited support (engine version 5.5+) ~ no Roku Cloud Solution support | |
| Acceptable Import Filetypes | .png (preferred), .jpg | |
| 3D layers | 3D layers are supported, however pixels will be drawn in their layer order, not by z-depth. | |
| Radio Buttons | A collection of CYIToggleButtons where only one button can be 'active' at any given time. | |
| Visibility | Visibility can be controlled by: opacity, visibility track, and visibility toggle (layers with the visibility toggled off will not be exported) | |
| ACCESSIBILITY | Accessibility attributes may be assigned to components within After Effects. These attributes support and enable screen-reader functionality These features are added to AE via layer comments. e.g. accessibilityLabel:"Back"; accessibilityHint: "Navigate to previous screen"; accessibilityRole: "button" | |
| accessibilityLabel | Label describing the button/component | |
| accessibilityHint | Informs the user the action performed by the element they are activating | |
| accessibilityRole | Communicates the purpose of a component to the user | |
| accessibilityStates | Describes the current state of a component: supported values include "disabled", "checked", and "expanded". | |
| | Notes: Accessibility comments set for a component in AE will be overridden by accessibility props set in RN. Code will override parameters set in AE C++ apps can take advantage of accessibility attributes via the CYIAccessibilityAttributes class | |

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| FOCUS ZONES | Can be used to influence how focus is assigned when moving focus around screen. The Focus Zone is available as a subtype under "Container" in the Properties Panel. The Focus Zone allows you to set the Entry Mode for this container from within the Properties Panel. The Entry Modes are the following: Restore Last, Prevent Entry, and Standard |
| Restore Last | (Default) When focus enters the container it will be given to the last focused element in the container |
| Prevent Entry | Focus will not be able to move to any elements within the container |
| Standard | Behaves like a normal view with no special handling of focus |

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| BATON PANEL | Once you have the Baton Server set up, you can use the Baton Panel in After Effects as a collaboration tool on projects. Note: The Panel doesn't manage versioning of AE files. If versioning of project files is important, you can use any repository or version control method in conjunction with the Baton Panel. |
| Installation | The Baton Panel is installed with the other You.i AE plugins. |
| You.i Baton | To open the Panel in AE, select You.i Baton in the Window menu. You can then arrange it in your workspace like any other panel. |
| Set Username | Select the gear icon in the panel to open Settings. Clicking the Username text box allows you to input your own username (attached to any file you have open). |
| Settings | Displays all the AE files in your project, with current locked/unlocked status and the name of the person who has files locked. |
| Open a File | If you open a file that is locked, you'll see a message warning you who has the file locked. |
| Refresh the Panel | Circular arrow icon beside the Settings gear icon will refresh both the AE file you're in and all the AE files in your project. |
| Lock/Unlock a File | Lock/unlock icons in the Panel allow you to lock and unlock AE files. Lock before starting work, and unlock after you're done. |
| Force Unlock | If a file has been left locked, you can force unlock (clicking unlock icon). Use this as a last resort. |

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| STYLE EXTRACTOR | UX designers can use the Style Extractor to extract data from shared Sketch and Figma styles into a style dictionary JSON file for use in a design system. |
| Installation | The Style Extractor is installed with You.i Engine One. |
| Extract styles | For Sketch, load a .sketch file into the desktop app or command-line interface. For Figma, supply a design file URL to the command-line interface. |
| Usage | In the full After Effects or hybrid After Effects / JSX app development model, designers can load the style dictionary with the Style Panel. In the pure JSX app development model, developers can use the style dictionary through a JSX import of the JSON file. |

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| STYLE PANEL | Motion designers can use the You.i Style Panel to apply color, typography, and layout styles from a style dictionary to layers in After Effects. Whenever the style dictionary changes, designers can reimport it, automatically updating the linked styles. |
| Installation | The Panel is installed along with the other You.i AE plugins. |
| You.i Style | To open the Panel in AE, select You.i Style from the Window menu. You can then arrange it in your workspace like any other panel. |
| Load a Style Dictionary | Click the Load button and browse to a style dictionary JSON file. |
| Apply Styles | For Color and Typography styles: Select a layer, go to the Color or Typography tab in the Style Panel, and click the style you want to apply. For Layout styles: To apply a layout style, select it in the Layout tab. Then select a layer in your composition. In the You.i Properties Panel, paste the clipboard contents into the appropriate Layout property field. |
| Refresh Styles | If the style dictionary JSON file has changed, or if you've made style changes to individual layers that you want to override, click the Refresh button to refresh the style dictionary. |

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