

# Work breakdown

The following is a rough breakdown of work needed to create a functional native Wayland toolkit.

Graphics		
1	Basic drawing support using shared memory	
2	CPU rendering	
3	Unaccelerated VolatileImage support	
4	Accelerated rendering support (VolatileImage)	
5	GraphicsEnvironment /GraphicsDevice/etc, including multiple screen support	
6	HiDPI	
7	Top-level window transparency	
8	Image formats (native 64bits?), HDR / color profiles?	
9	Color blending with transparency support	alpha, pre-multiplied?
10	AlphaComposite support on client side ?	main Porter-Duff rules like CLR, SRC_OVER or more?
Input		
11	Mouse	Only 3-button mice with vertical scrolling is supported
12	Keyboard	
13	Touch (hi-resolution scrolling, gestures)	
14	Input methods	
GUI		
15	Frame decorations	Basic title bar decorations, "native" look-and-feel is a separate task
16	Interactive resize/drag/minimize /maximize	
17	Modal and non-modal dialogs	
18	Correct Z-order for complex window hierarchies with modal dialogs	
19	Fullscreen support	But can't specify the device yet
20	Tooltips, menus, comboboxes, etc	
21	GTK support (making GTKLookAndFeel work)	
22	Splash screen support	
23	ToFront/toBack support	ToFront can be implemented through an activation token (as if the window just appeared); toBack can be implemented through a synthesized gesture on the title bar (also needs mouse serial). See GTK implementation.
24	AWT components (java.awt.Button, java.awt.Checkbox, etc)	AWT components were implemented in the Caciocavallo project using Swing itself. It is a good idea to take inspiration from there for the Wayland implementation: <a href="https://hg.openjdk.org/caciocavallo/ng/">https://hg.openjdk.org/caciocavallo/ng/</a>
25	AWT File dialogs/Print dialogs	
Robot support		
26	For testing	
27	Full support in a production environment	Probably not feasible in full
Misc		
28	Clipboard support	
29	Drag-n-drop support	

30		Taskbar/tray support	
----	--	----------------------	--

Legend:

- - feature is functional at the basic level (for example, mouse support means 3-button mice, nothing fancy)
- - task not started yet
- - task is being worked on