

PLOT_HUD_DESIGN

January 30, 2026 at 04:56 PM

Plot HUD Design Proposal

Date: 2026-01-30 Status: Proposal Goal: Unify plot management with existing HUD system for consistent UX

Current State

Existing HUD System (Consistent UX)

The HUD functions provide workspace visibility with consistent patterns:

HUD	Command	Key	Opens In
Memory	:RMemoryHUD	<LocalLeader>m	Vim split
Data Frames	:RDataFrameHUD	<LocalLeader>e	Vim split
Packages	:RPackageHUD	<LocalLeader>z	Vim split
Environment	:REnvironmentHUD	<LocalLeader>x	Vim split
Options	:ROptionsHUD	<LocalLeader>a	Vim split
Dashboard	:RHUDDashboard	<LocalLeader>0	5 tabs

Consistent UX patterns:

- Open in Vim splits or tabs
- Tabulated data display (Tabularize integration)
- q to close, / to search
- <LocalLeader> + single key for quick access
- Read-only buffers with viewer settings

Current Plot System (Inconsistent)

Feature	Implementation	Issue
Display	Kitty pane (external)	Different from HUDs
Watcher	Polling mechanism	Unique to plots
Navigation	R functions	Not Vim-native
Gallery	Vim buffer	Different styling
Key mappings	<LocalLeader>p* family	Inconsistent with HUD pattern

Proposed Design

Plot HUD Buffer

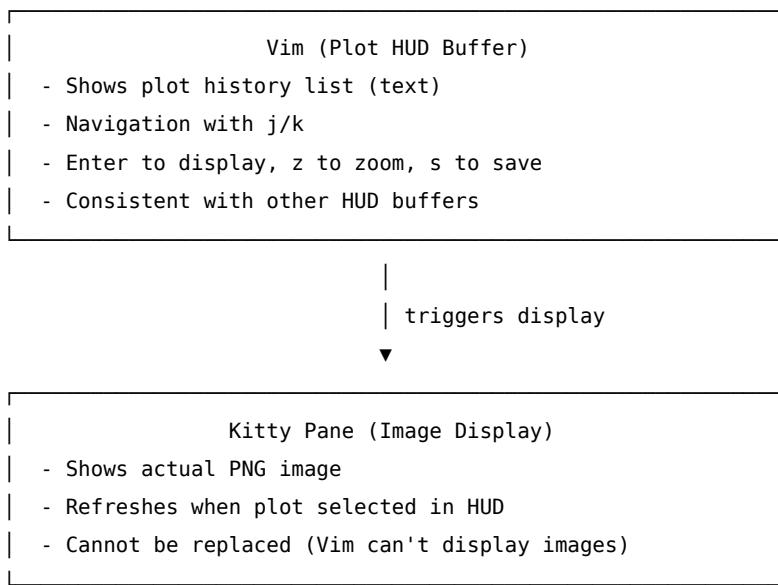
A new :RPlotHUD command (mapped to <LocalLeader>P) opens a Vim buffer styled like other HUDs:

```
Plot History [HUD]
=====
Press Enter to display, z to zoom PDF, s to save, q to close

# Name           Created          Code
-----
> 1 scatter_mpg    2026-01-30 10:30  zzplot(mtcars$wt, mtcars$mpg)
  2 histogram      2026-01-30 10:35  zzplot(hist(rnorm(1000)))
  3 regression     2026-01-30 10:40  zzggplot(p + geom_smooth())

Total: 3 plots | Current: 1
```

Architecture



Key Bindings (in Plot HUD buffer)

Key	Action	Consistent With
j/k	Move cursor	Standard Vim
Enter	Display selected plot in kitty pane	HUD pattern
z	Zoom - open PDF in Preview	Plot-specific
s	Save plot (prompt for filename)	Plot-specific
d	Delete plot from history	Plot-specific
q	Close HUD buffer	All HUDs
Esc	Close HUD buffer	All HUDs

Key	Action	Consistent With
/	Search	All HUDs
1-9	Quick select by number	Gallery pattern

Dashboard Integration

The HUD Dashboard (<LocalLeader>0) would include Plot HUD as 6th tab:

```
" Tab 6: Plot History
call s>CreateHUDTab('Plots', 'plots', function('s:GeneratePlotHUD'),
  \ l:source_file, l:r_terminal_id)
```

Commands

Command	Key	Description
:RPlotHUD	<LocalLeader>P	Open Plot HUD buffer
:RPlotZoom	(from HUD: z)	Open current PDF
:RPlotSave	(from HUD: s)	Save current plot

Implementation Functions

```
" Main HUD function - consistent with other HUDs
function! s:RPlotHUD() abort
  " Read .plots/history/index.json
  " Format as tabulated list
  " Open in split with viewer settings
  " Set up buffer-local mappings
endfunction

" Generate plot list for HUD tab
function! s:GeneratePlotHUD() abort
  " Called by CreateHUDTab for dashboard
  " Returns formatted plot history
endfunction

" Buffer-local action handlers
function! s:PlotHUDSelect() abort
  " Get plot under cursor, display in kitty pane
endfunction

function! s:PlotHUDZoom() abort
  " Open PDF of plot under cursor
endfunction

function! s:PlotHUDSave() abort
```

```
" Save plot under cursor (prompt for filename)
endfunction
```

Benefits

1. **Consistent UX** - Plot management feels like other workspace tools
2. **Vim-native navigation** - j/k, Enter, q instead of R functions
3. **Dashboard integration** - All workspace info in one place
4. **Discoverable** - Same patterns users already know from other HUDs
5. **Keyboard-driven** - No mouse needed, efficient workflow

Migration Path

1. Keep existing plot watcher and kitty pane display (working well)
2. Add :RPlotHUD as new entry point
3. Refactor :RPlotGallery to use HUD styling
4. Add to Dashboard as 6th tab
5. Deprecate old <LocalLeader>p* mappings in favor of HUD buffer actions

Open Questions

1. Should kitty pane auto-open when Plot HUD is opened?
2. Should Plot HUD auto-refresh when new plot is created?
3. Should we show thumbnail previews in Vim using ASCII art or sixel?