PRPL & RAIL

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PRPL

- Pattern for improving the mobile web experience
- "Purple"
  - Push
  - Render
  - Pre-cache
  - Lazy-load

Push & Render

- Push critical resources - make them available as soon as possible
  - application entrypoint
  - "application shell" (SPA environment)
- HTTP/2 Server Push
  - Use with care! (foreceful network request)
  - Alternative is to preload (`<link ref="preload">`)

Pre-cache

- Adding resources to cache to improve performance
  - Can be achieved by Cache API
  - Use tools like Workbox.js to do pre-caching of assets

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Lazy-load

- Load everything else only when needed
  - Components
  - Styles
  - Scripts
  - Images (e.g. carousel)

RAIL

- User-centric performance model
  - Response
  - Animation
  - Idle
  - Load
- Understand key performance metrics to enhance user experience
- Recommendations to deliver the metrics
- User experience perceptions will not change, recommendations could change
  - Different devices, network conditions