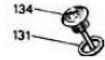


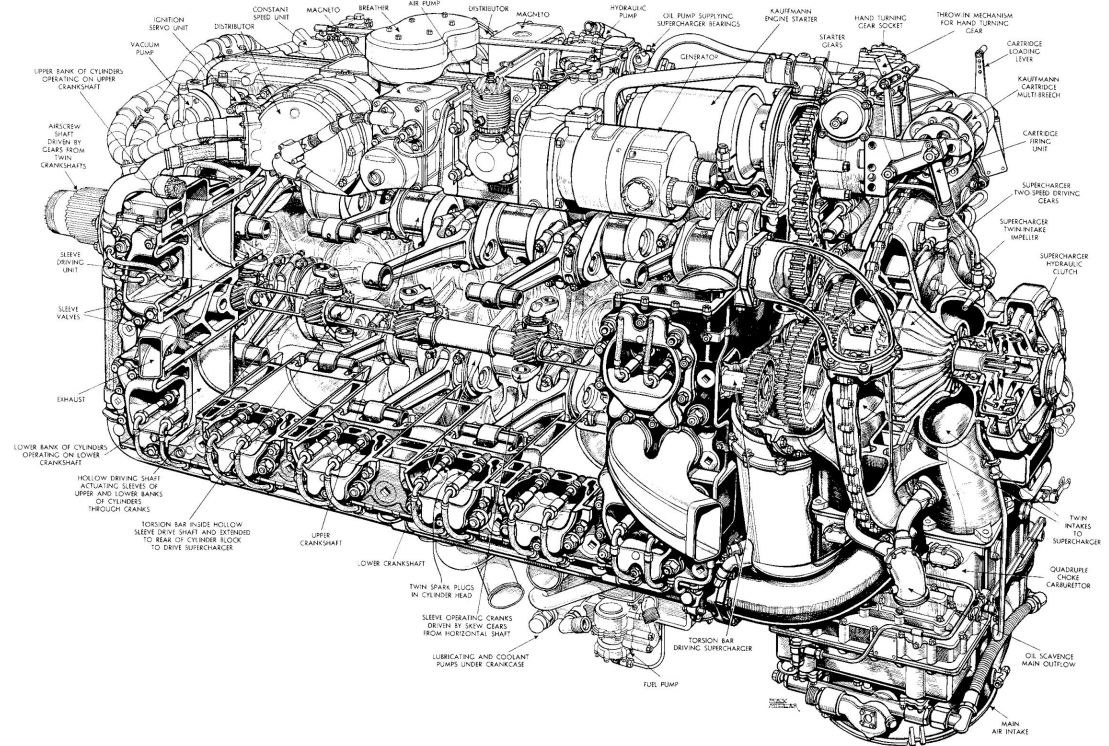
# Systems Design

esprehn@, seththompson@  
BlinkOn 7

Figuring  
out how to  
add this...



...to this



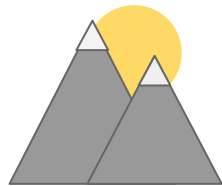
# MISSION

The Systems Design program ensures that the Chromium codebase is architected to support a **simple, efficient, and high quality implementation** of the web platform **that can fluidly evolve** with the demands of the greater web ecosystem.

# PROGRAM ROLE

Systems Design is not a gatekeeper of Chromium's architecture, but rather a consultant / evangelist / enabler of a healthy codebase and forward-looking engineering practices.

# RISE



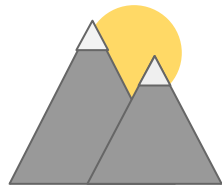
**Research** our engine and others (both web and other systems like iOS/Android) and produce documents for knowledge spreading, as well as documents about ideas for our system to evolve.

**Identify** systems in the engine (ex. Paint and Layout) that could be improved by changing the way they interact.

**Simplify** our implementation through refactoring projects and design guidance.

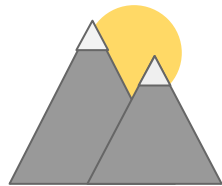
**Enable** folks to rapidly evolve the code base and web platform with libraries, documentation, and tracking of projects and backlogs (aka air-traffic control).

# RESEARCH



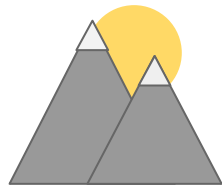
- Produce comparative analyses of other platforms
- Study history of Chromium contributions, processes, and codebase changes
- Track metrics and measurements to understand how Chromium evolves over time

# IDENTIFY



- Review design docs across Blink / Chromium
- Find overlap between problem spaces, projects, and feature implementations
- Find similar functionality that could be refactored into shared components

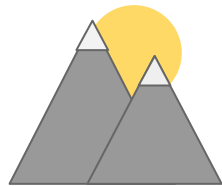
# SIMPLIFY



- Kick off refactoring projects such as Blink Onion Soup
- Advocate for simplification of Chromium through deduplication, servicification, and frameworkification



# ENABLE

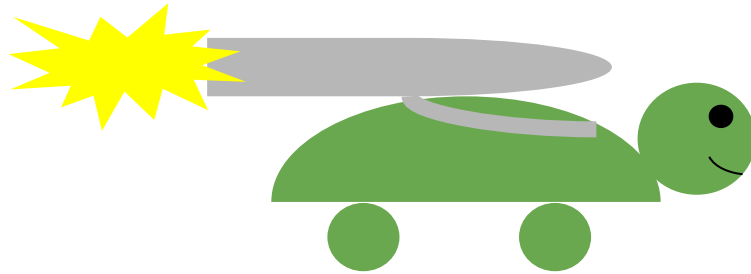


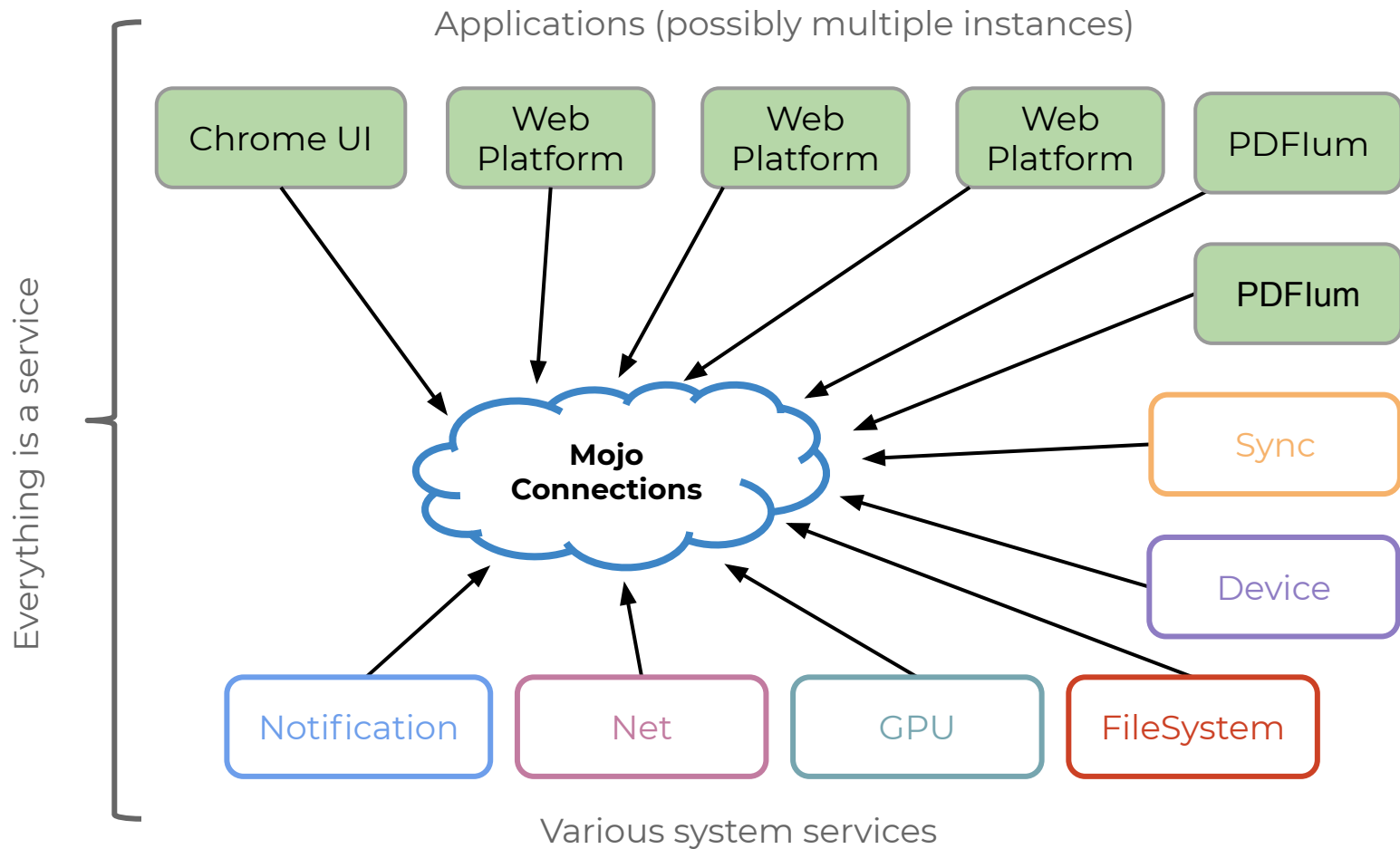
- Implement opinionated frameworks and libraries to simplify bootstrapping new Chromium services
- Host meetings, summits, and convergences to bring together the right stakeholders to solve cross-cutting architectural problems
- Maintain a backlog of Systems Design projects, problems, or ideas
- Perform high-level developer outreach and internal team outreach to keep up with an evolving web ecosystem

What we're doing already.

# SERVICIFICATION

The process by which Chromium becomes a set of mojo services bringing increased [stability](#), [testability](#), and [long term velocity](#).



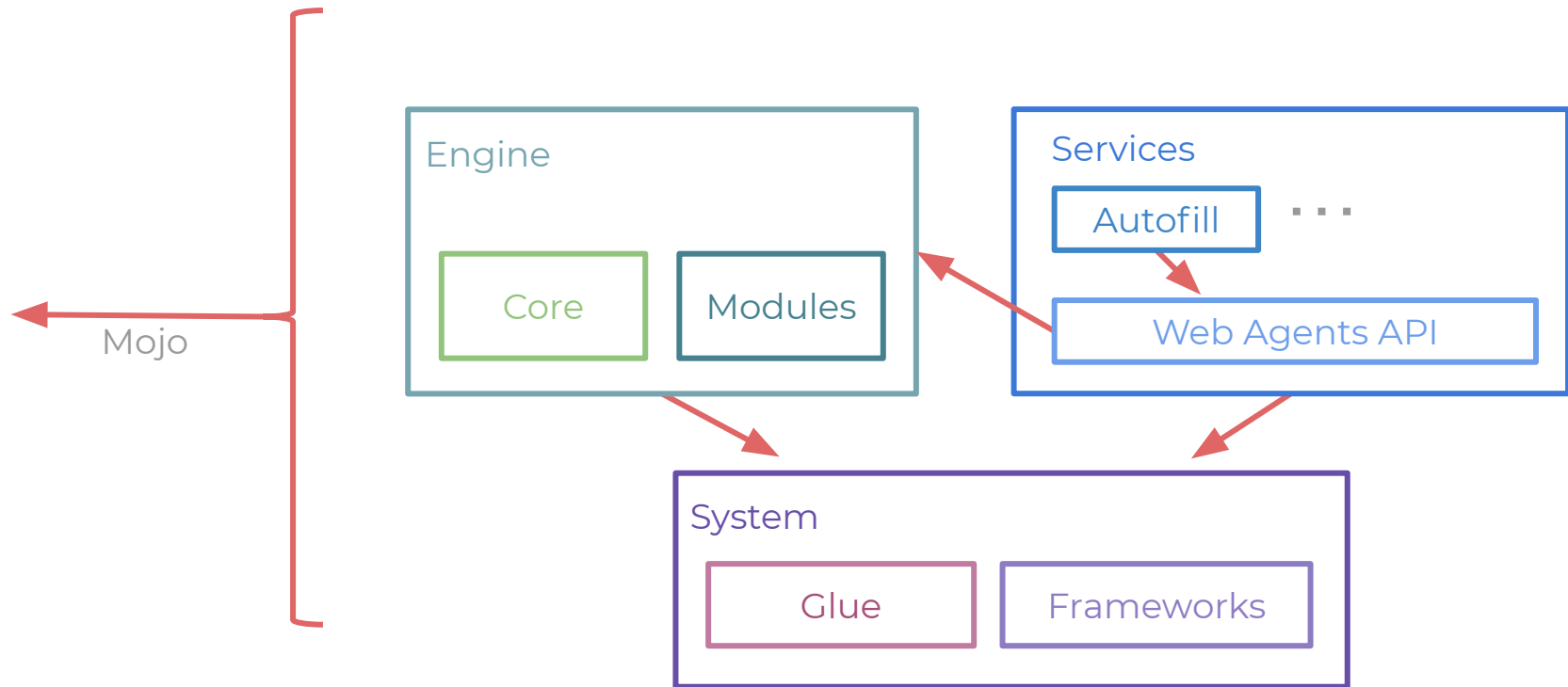


# BLINK ONION SOUP

The long term effort to **make sense** of the layering of the codebase, **simplify** decade old abstractions, and **allow faster evolution** of the web platform.

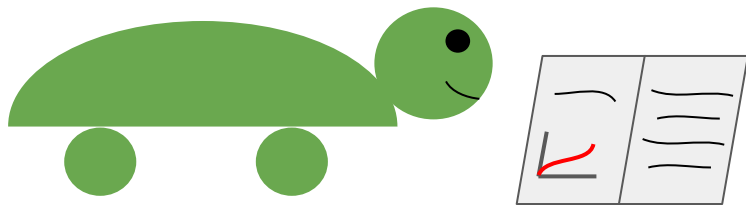


# BLINK ONION ~~SOUP~~ SERVICE

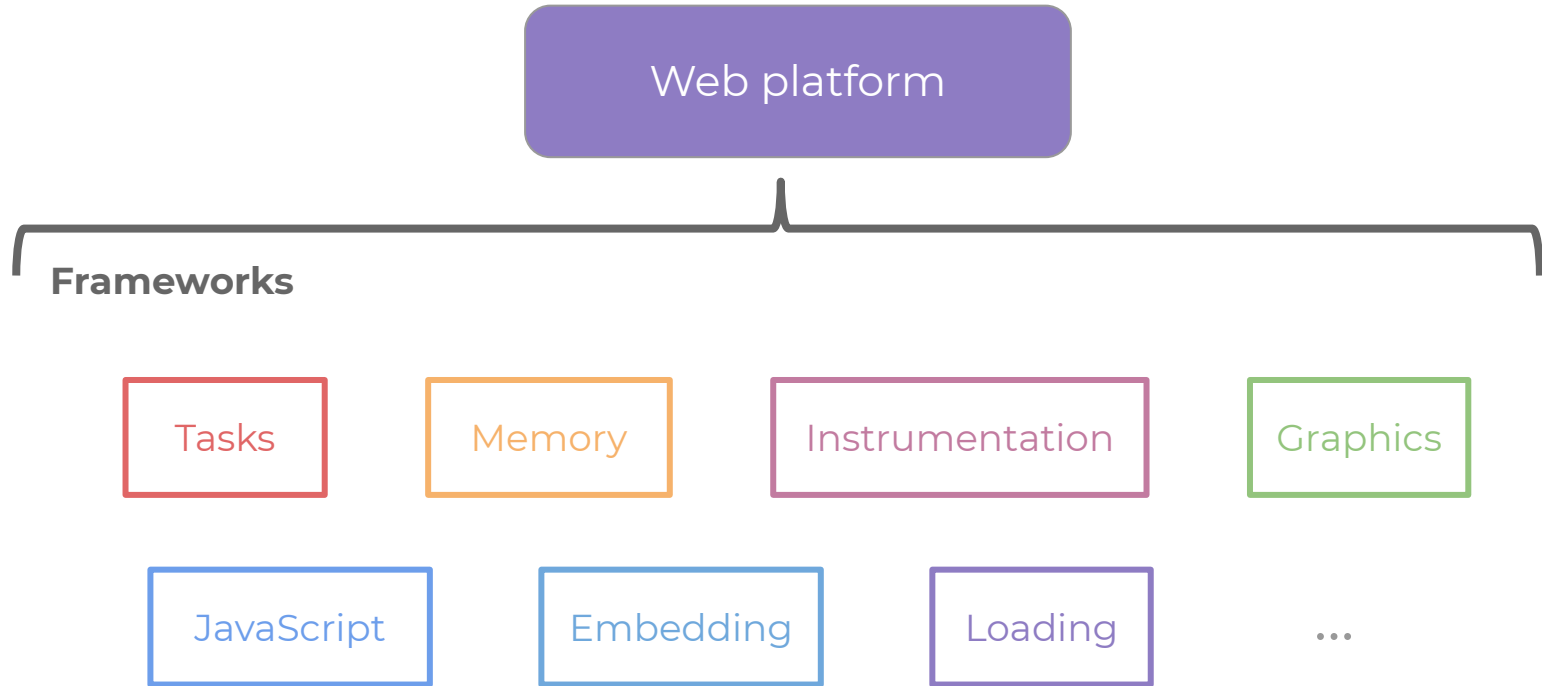


# FRAMEWORKIFICATION

The process by which Blink becomes a set of **opinionated libraries** for writing **mojo services** and building other **application platforms**.



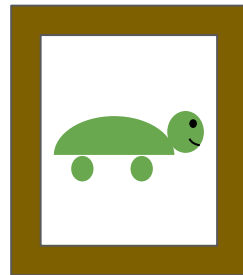
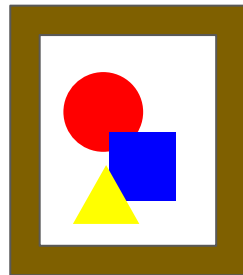
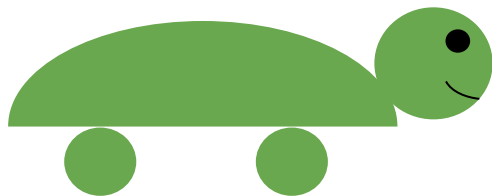
# FRAMEWORKS



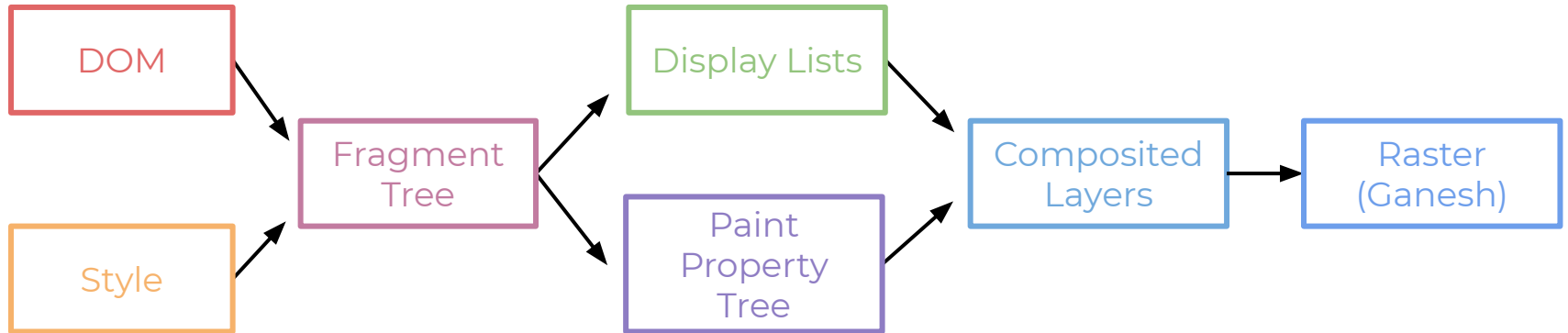


# NEXTGEN ENGINE

Rethinking our rendering abstractions. Enabling [complex layout models](#), futuristic looking [paint effects](#), improved [performance](#), and better [maintainability](#).

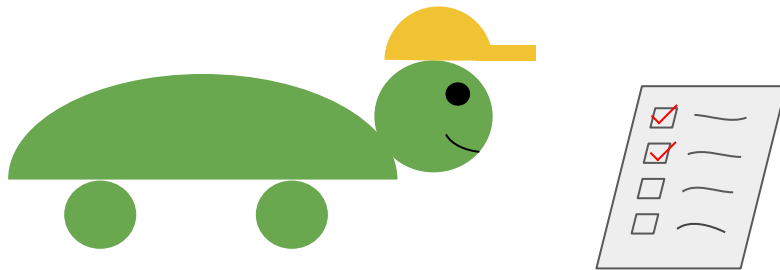


# NEXTGEN ENGINE

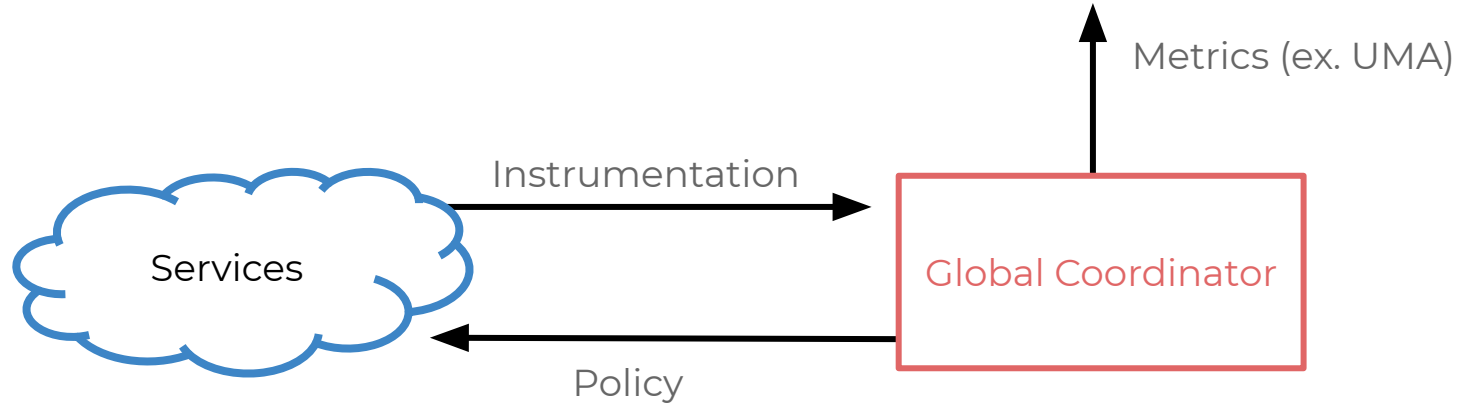


# SPEED ARCHITECTURE

Centralizing our instrumentation to enable **unobtrusive reporting** of complex metrics. Building a global coordination system to **schedule** and **allocate resources** across all tabs, frames and services.



# SPEED ARCHITECTURE



# NEXT STEPS

Read the North-Star Doc:

[bit.ly/blink-systems-design-intro](https://bit.ly/blink-systems-design-intro)

Follow mailing list for updates:

[platform-architecture-dev@chromium.org](mailto:platform-architecture-dev@chromium.org)

Reach out with comments/feedback:

[seththompson@chromium.org](mailto:seththompson@chromium.org)

[esprehn@chromium.org](mailto:esprehn@chromium.org)