

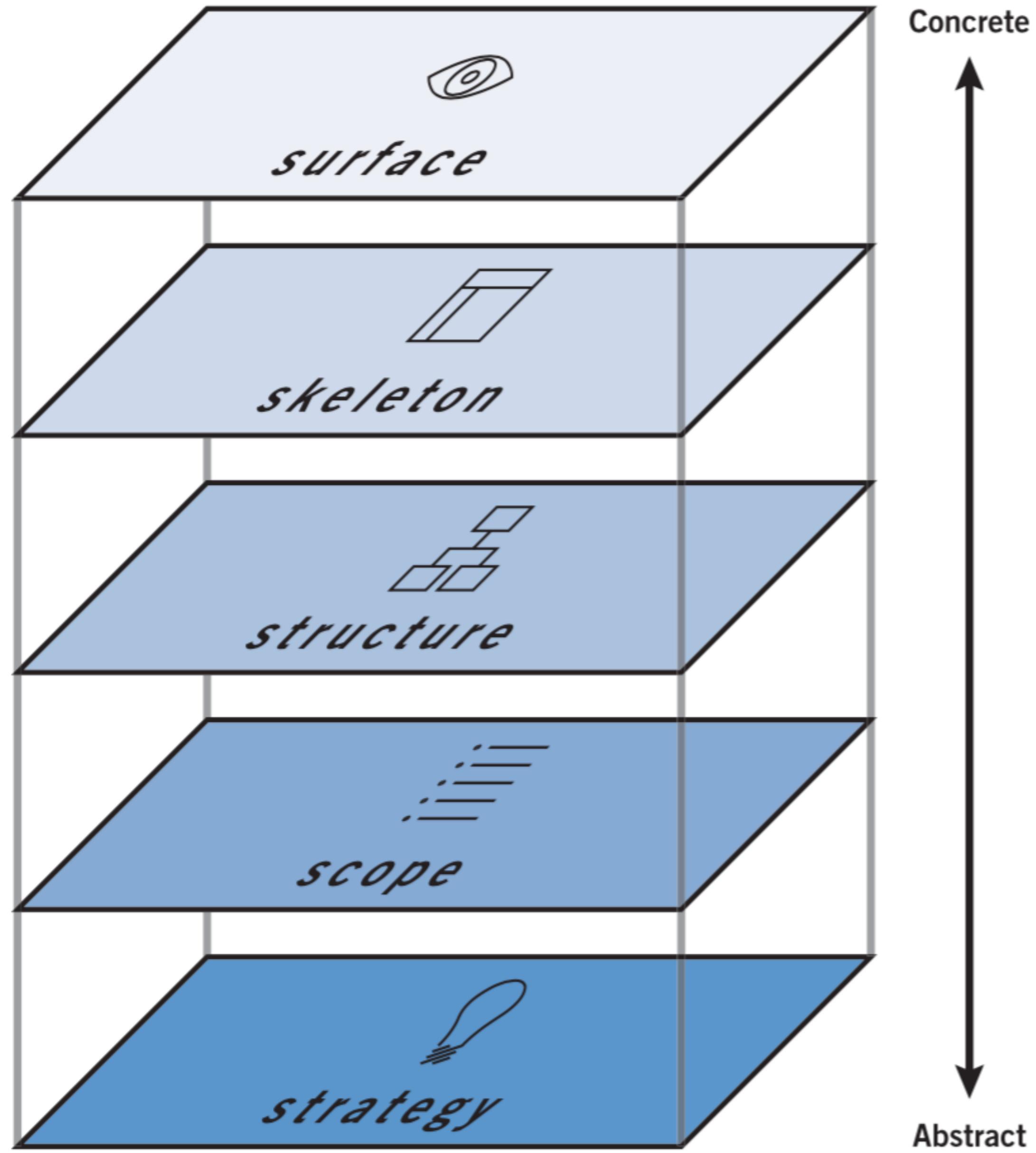
Web Developer's Learning from App Development

Steve Yang

The [Stackup](#) Team

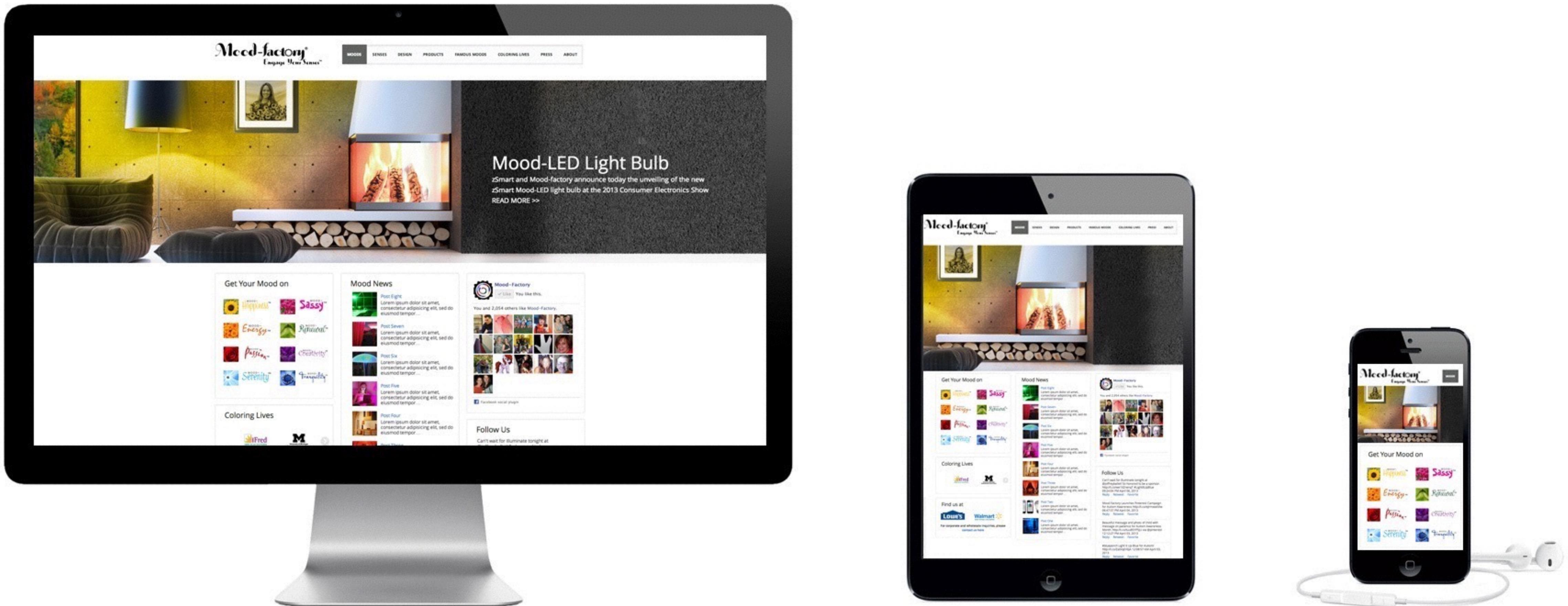
`steve@stackup.guru`

Sep. 13, 2015

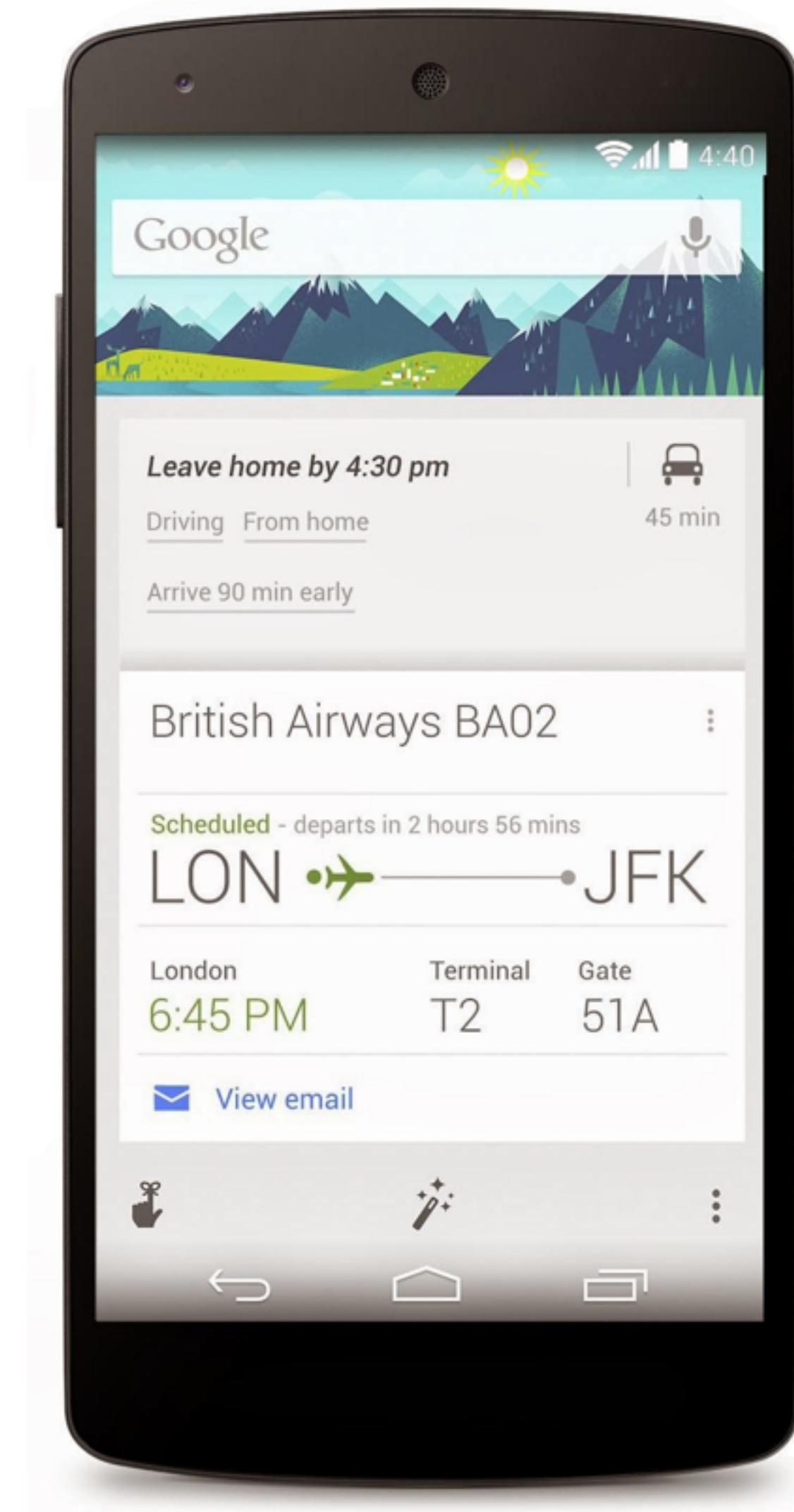
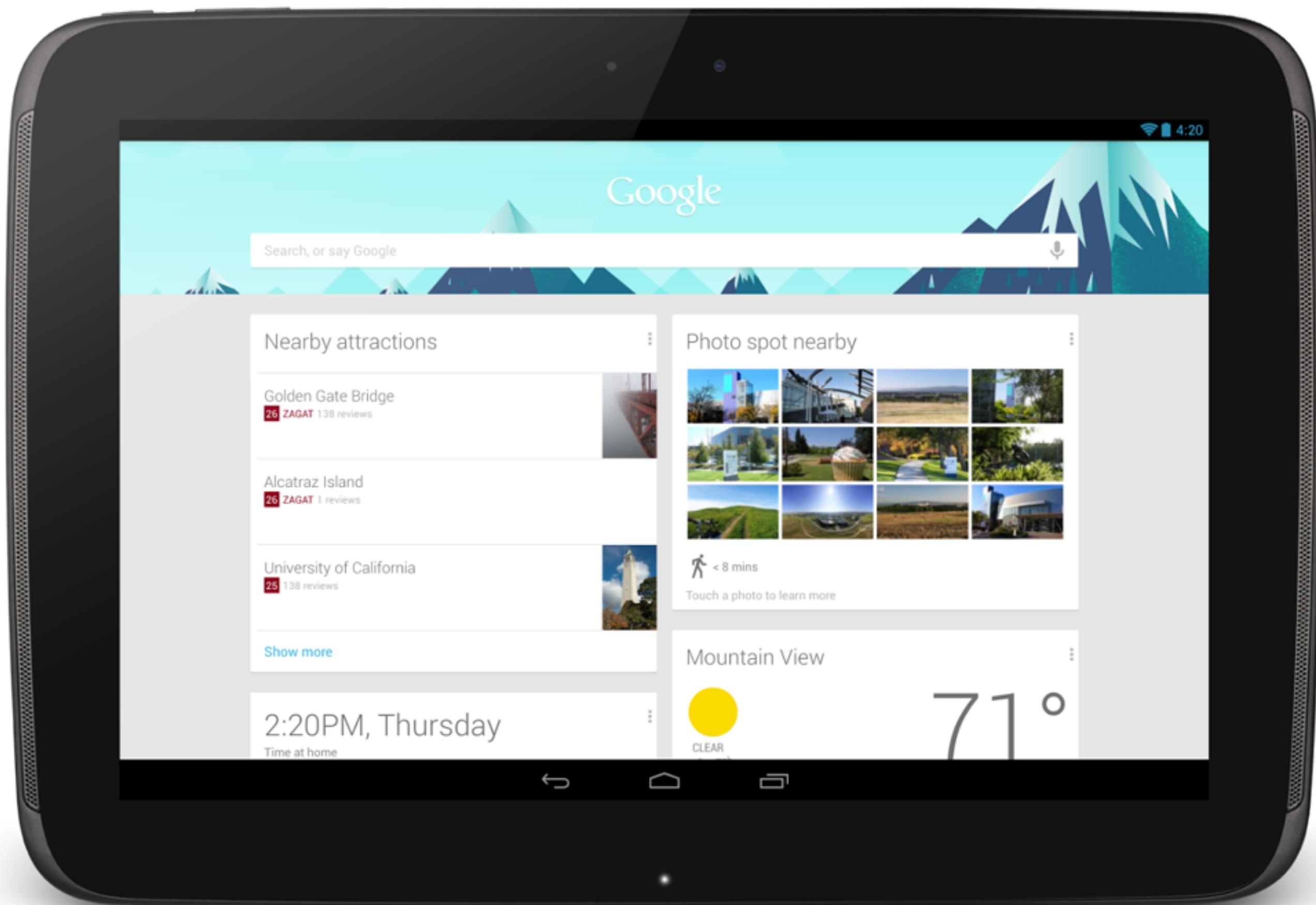


Issue 1: Screen Size Matters

The Responsive Web approach



The Responsive Web approach



However, not all layouts are responsive

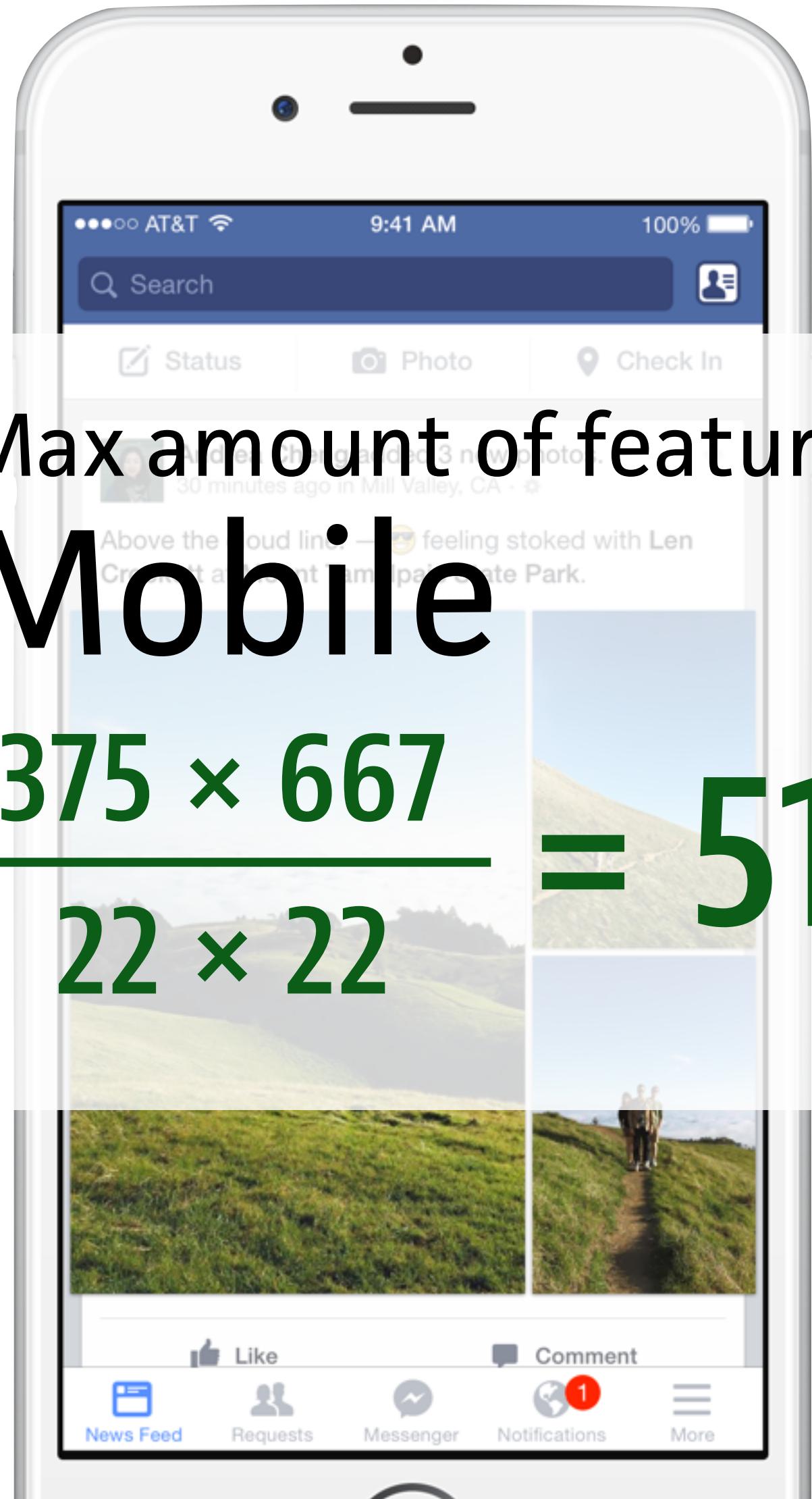
Max amount of features on
Desktop Screen

$$\frac{1024 \times 768}{22 \times 22} = 1625$$



Max amount of features on
Mobile

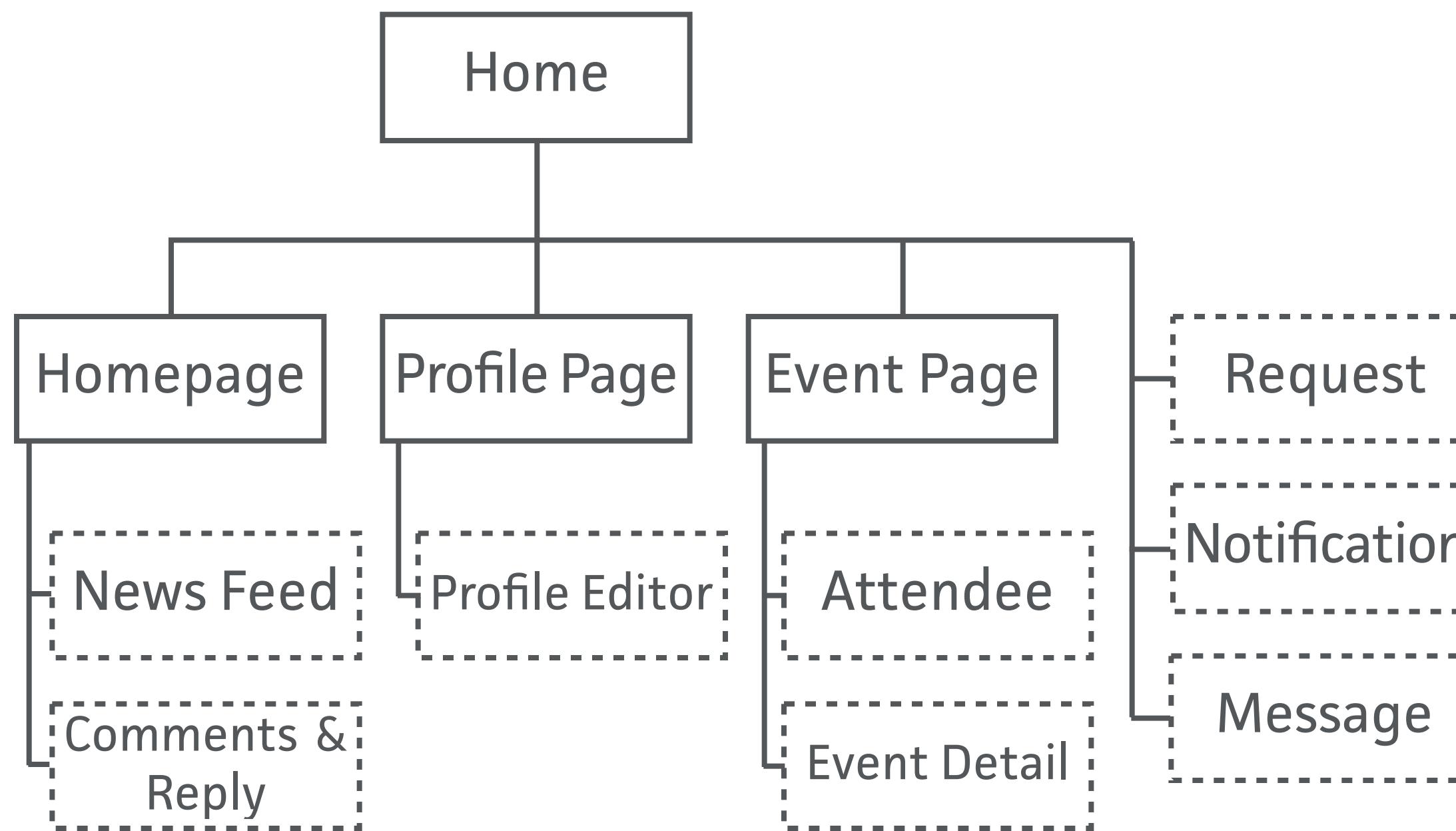
$$\frac{375 \times 667}{22 \times 22} = 516$$



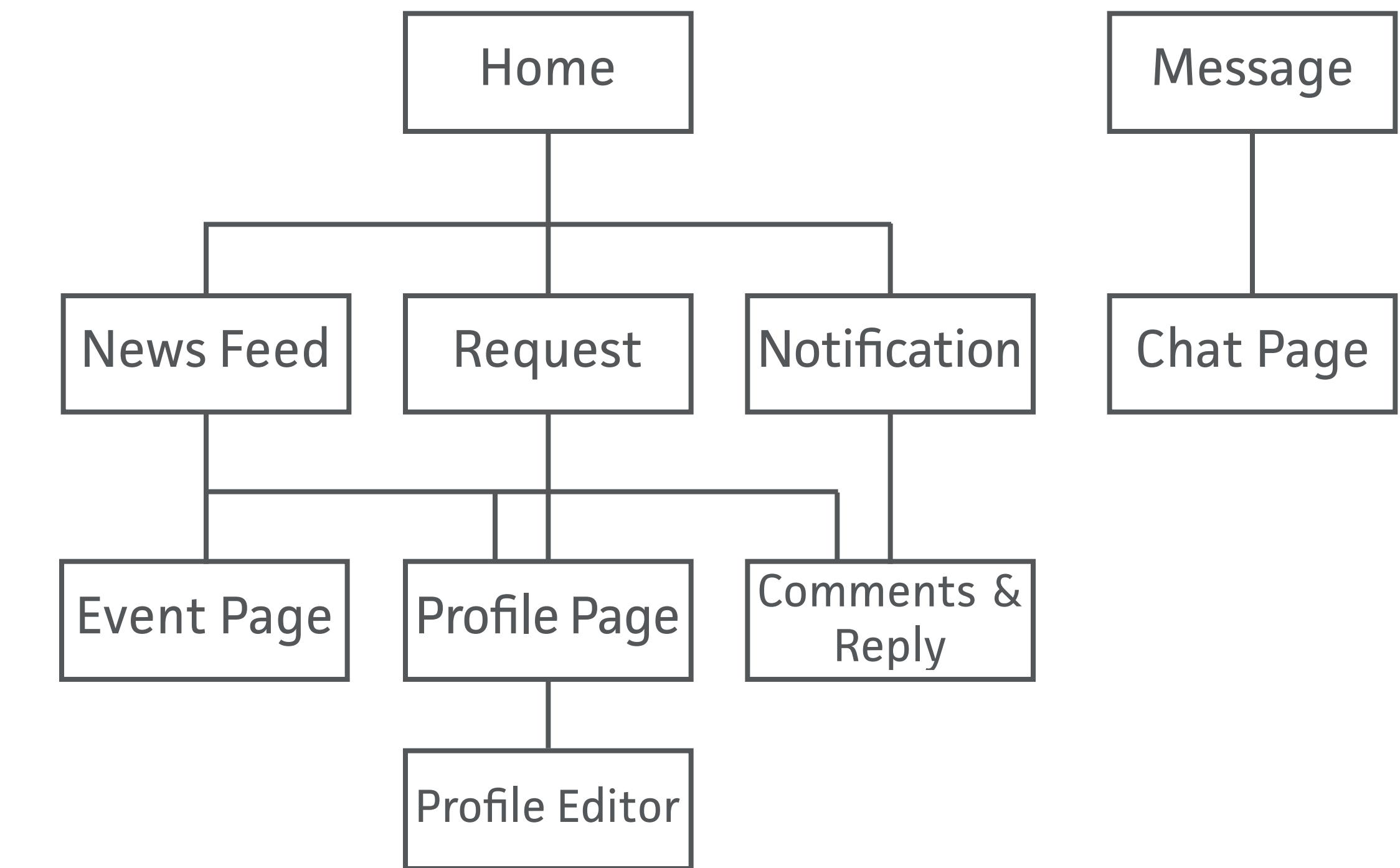
The Difference in Information Architecture

Using Facebook as an Example

Desktop Architecture

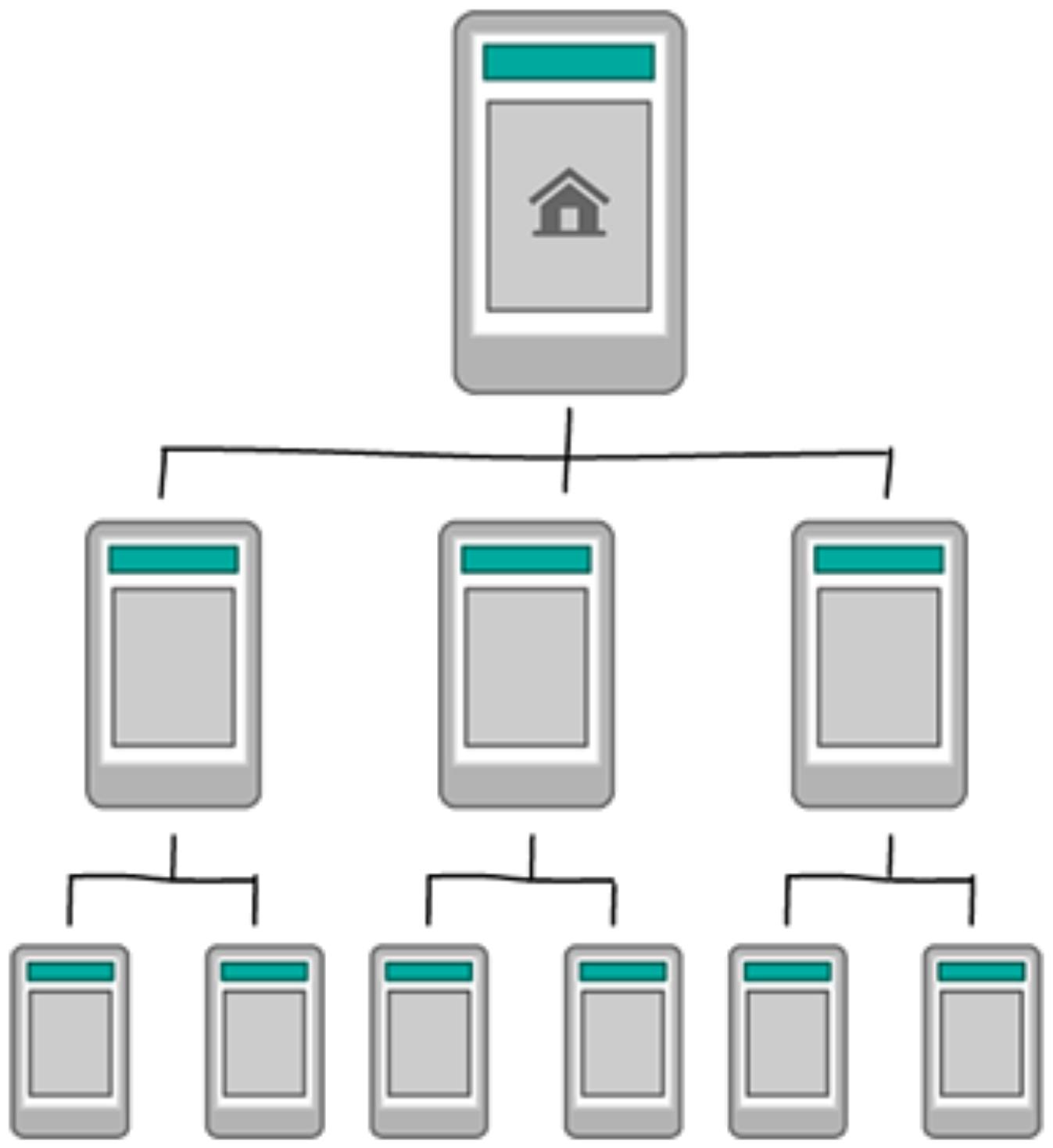


Mobile Architecture

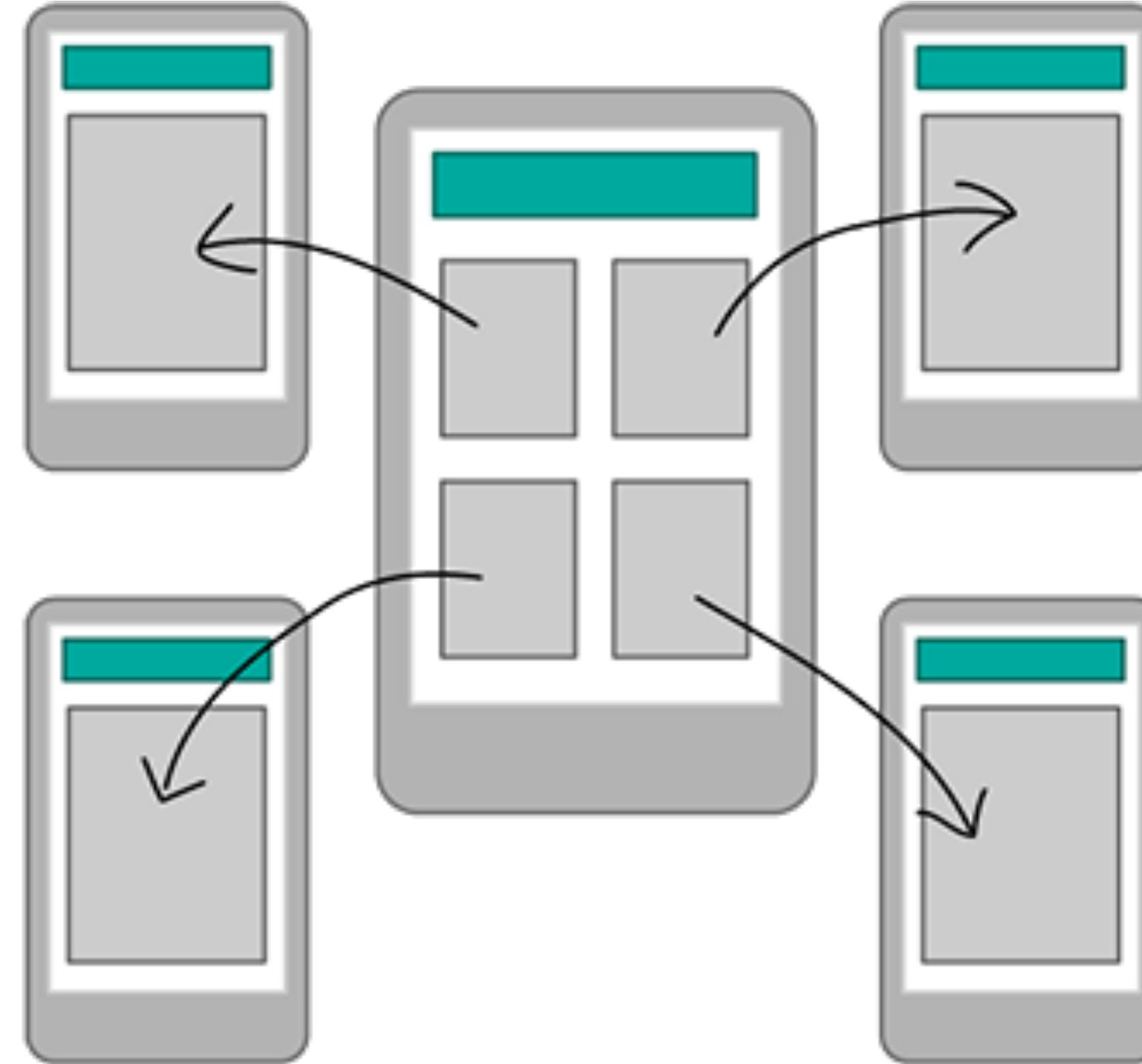


Mobile Information Architecture

Hierarchy

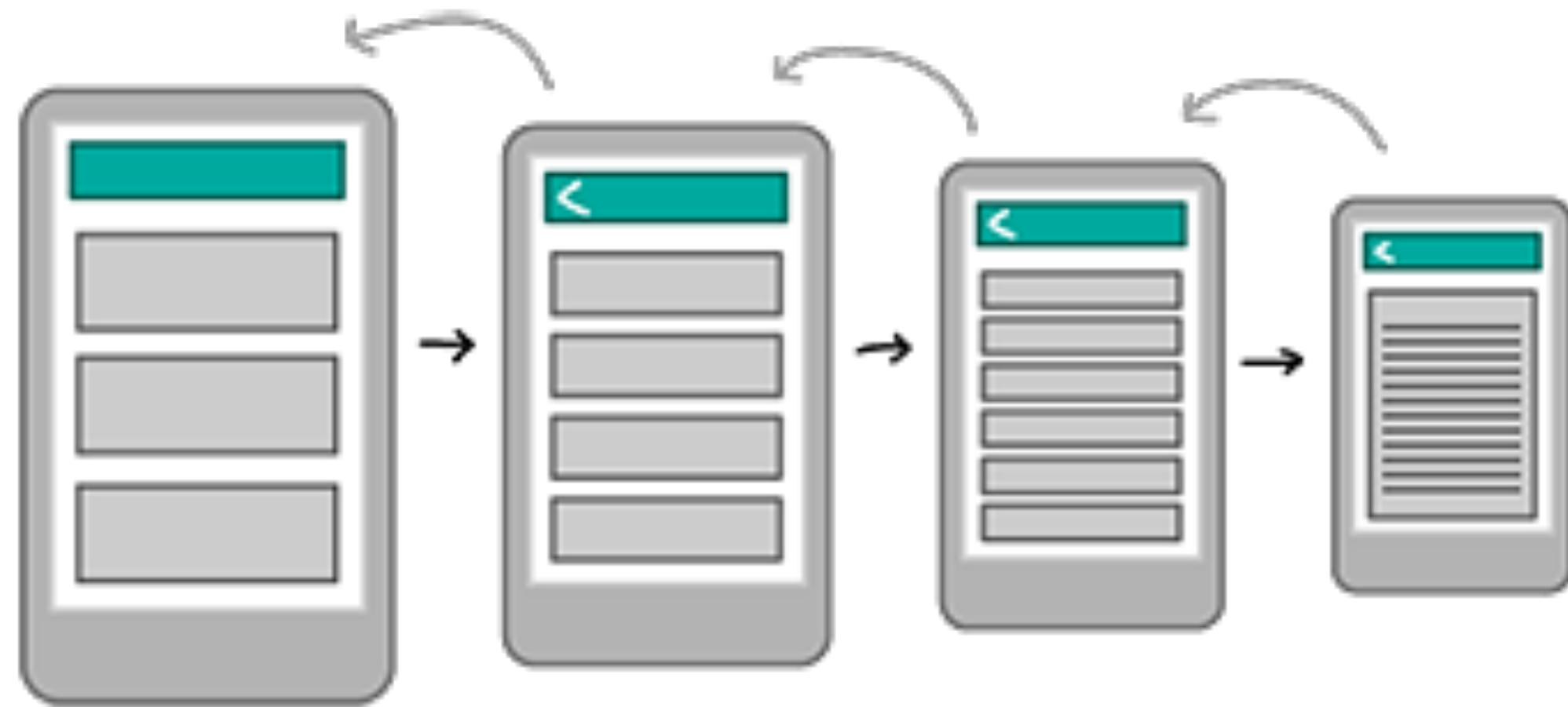


Hub & Spoke

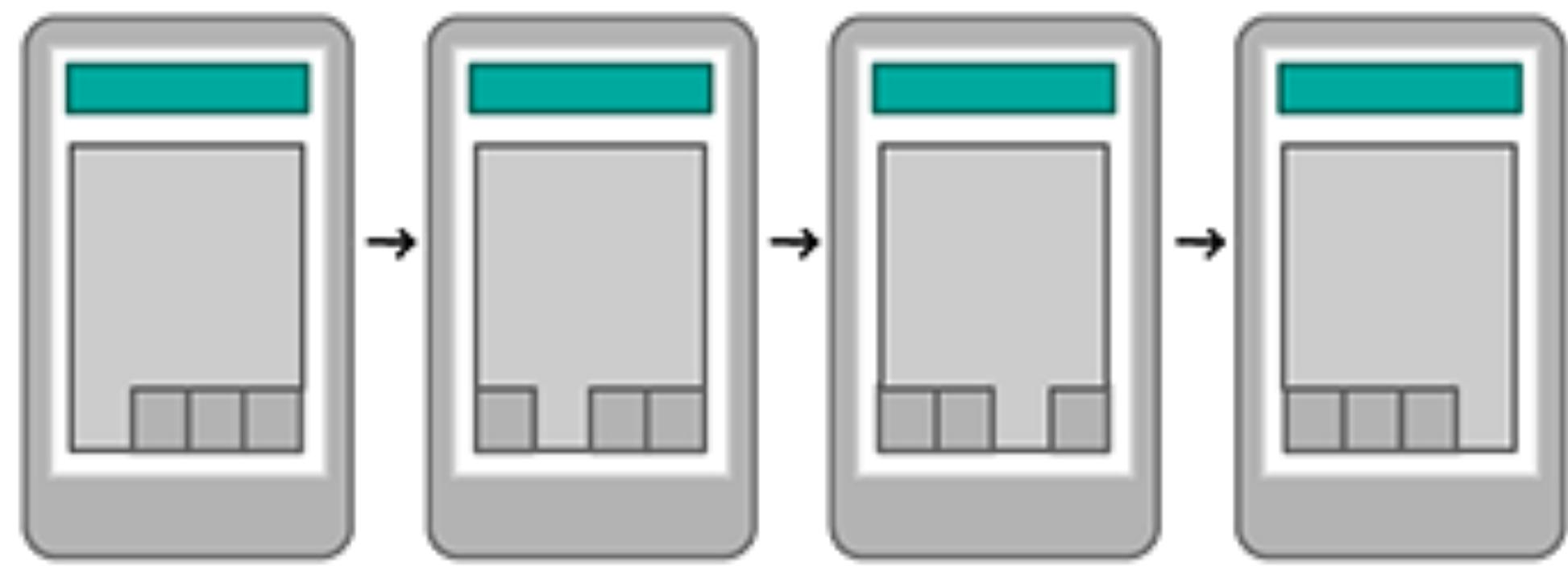


Mobile Information Architecture (cont.)

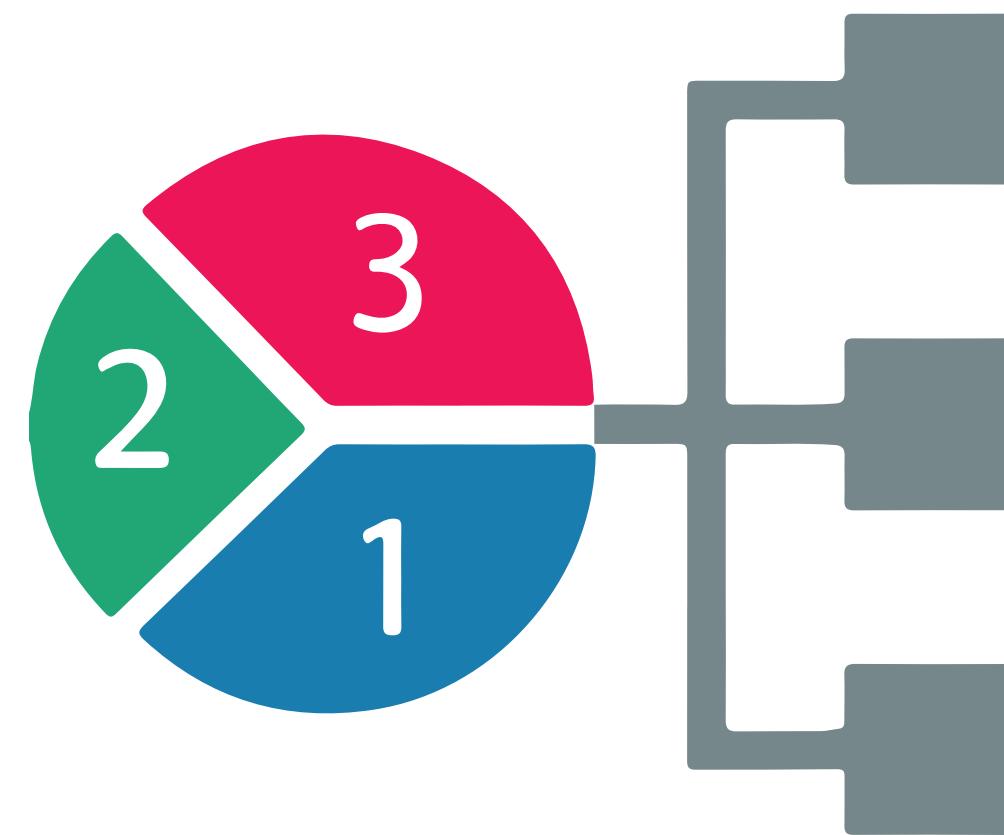
Nested Doll



Tabbed View



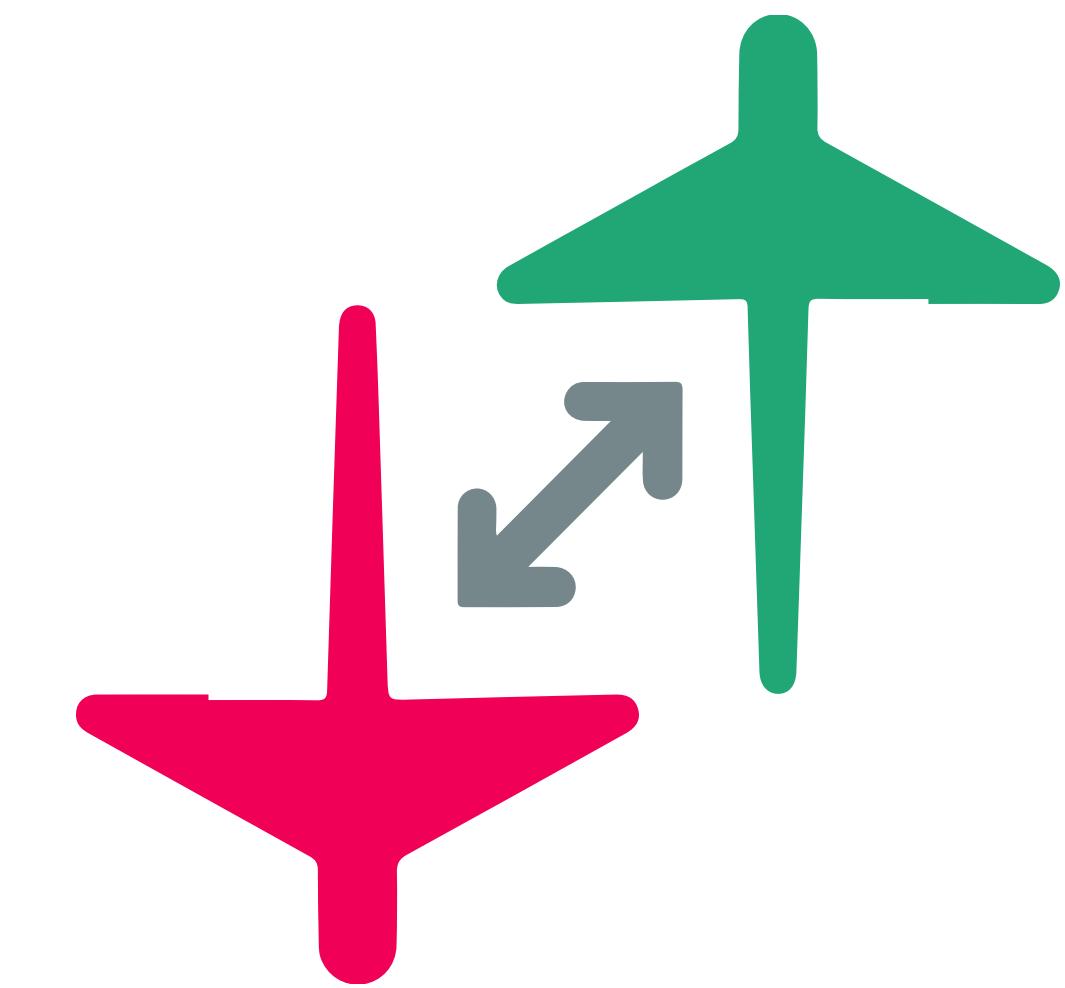
Impact on Tech-Stack



Componentize
the App



Loading
Optimization



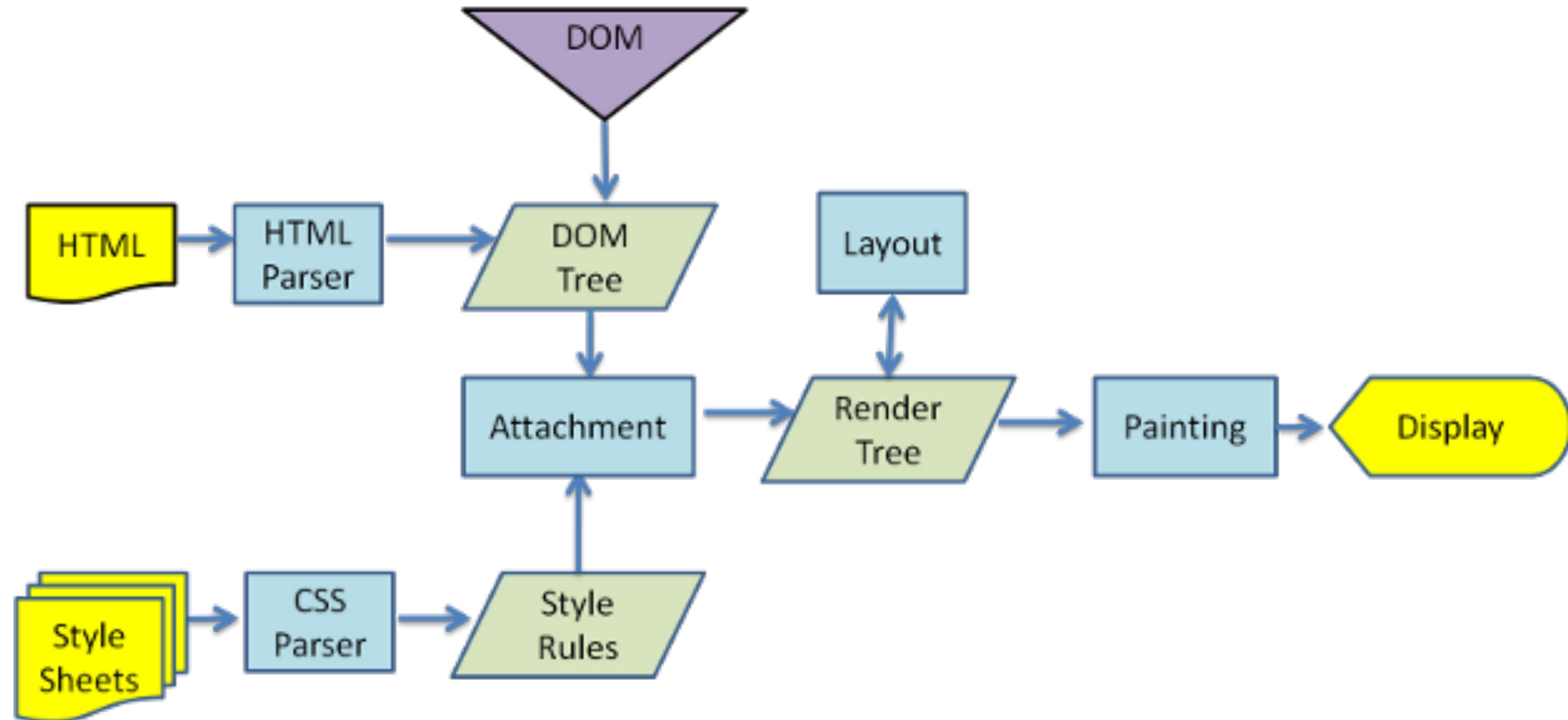
Transition Design
& Implementation

Issue 2: Digging into User Experience

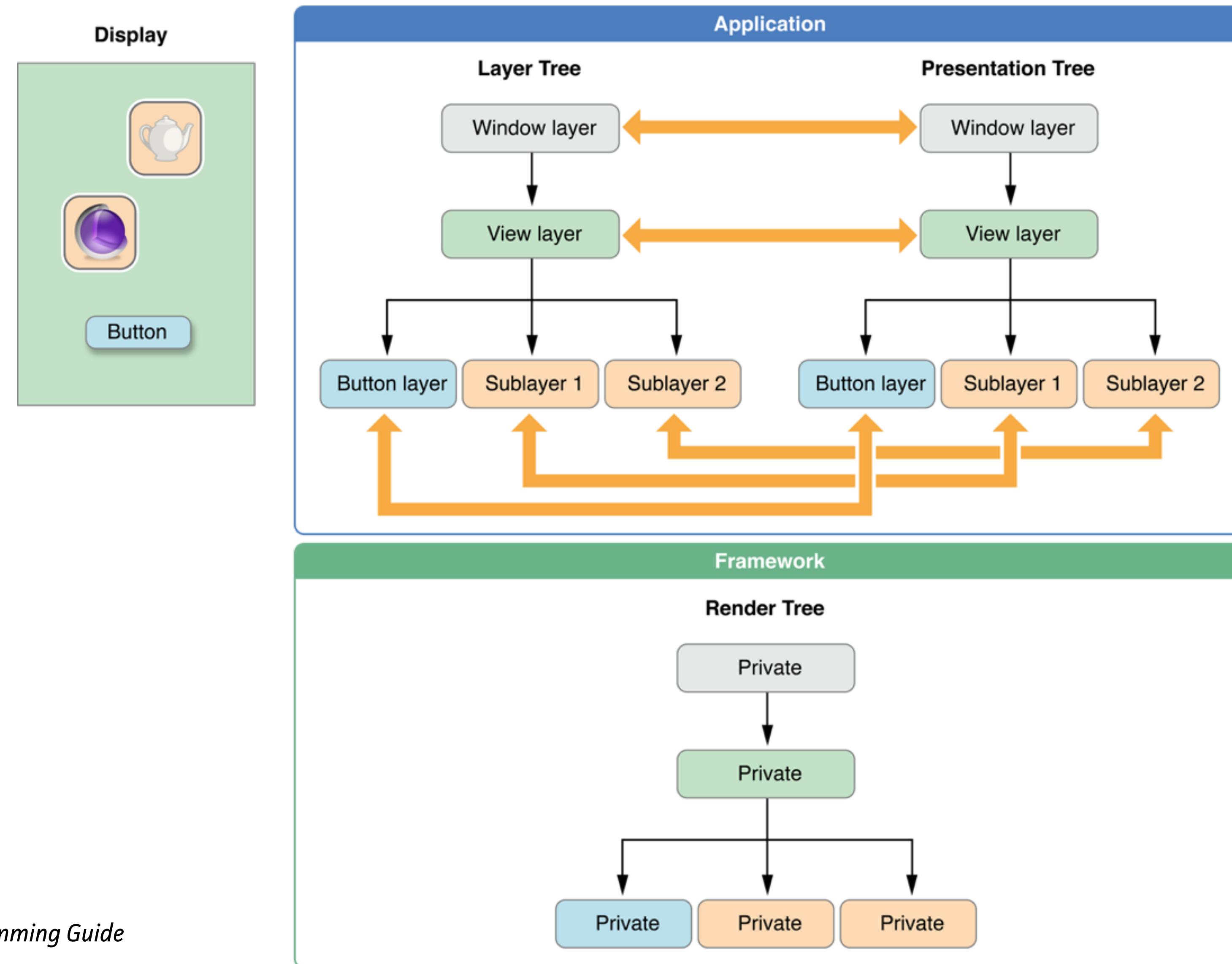


Mimicking Native App Experience

WebKit Rendering



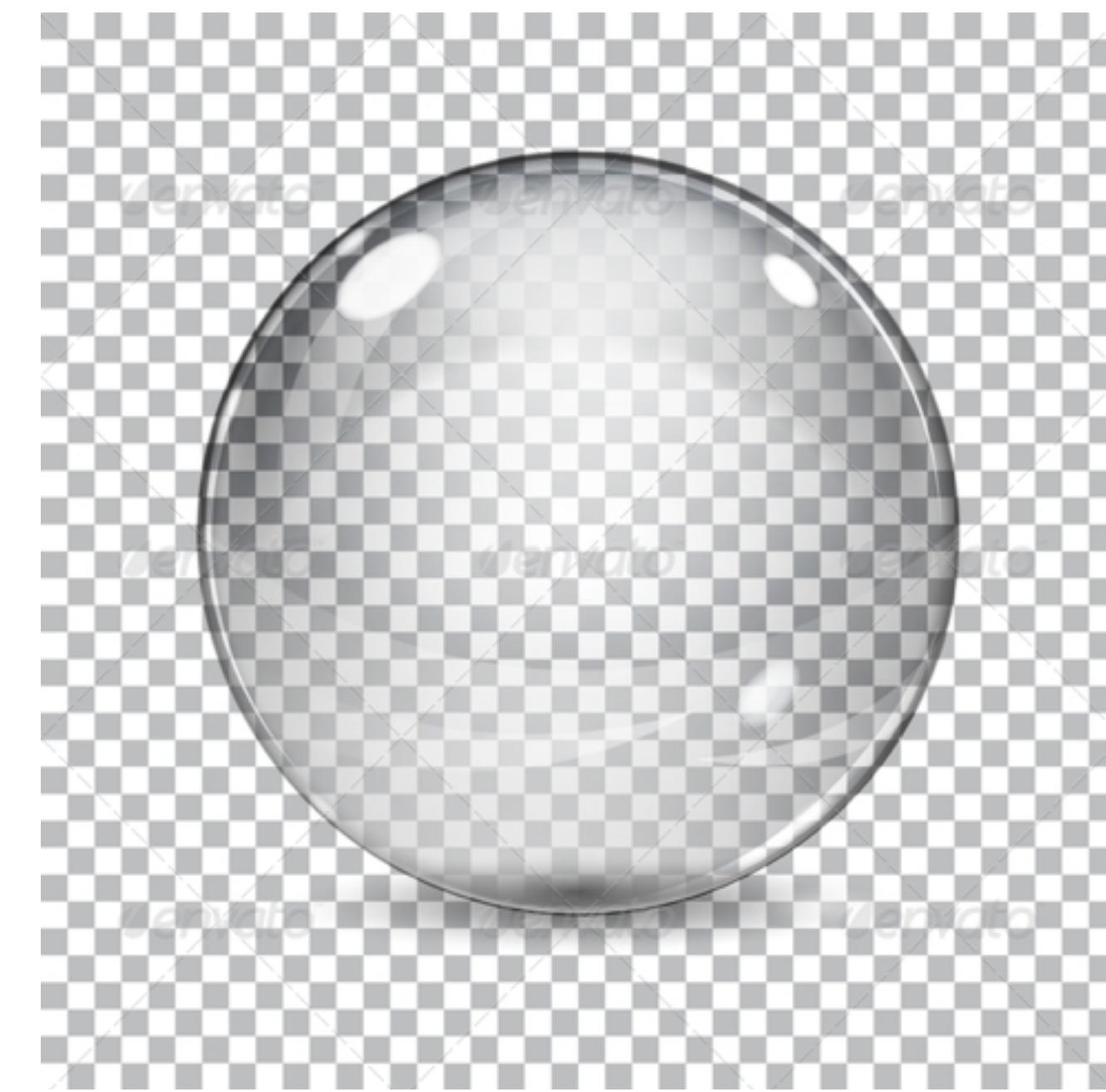
iOS Rendering



Performance Concerns: Rendering

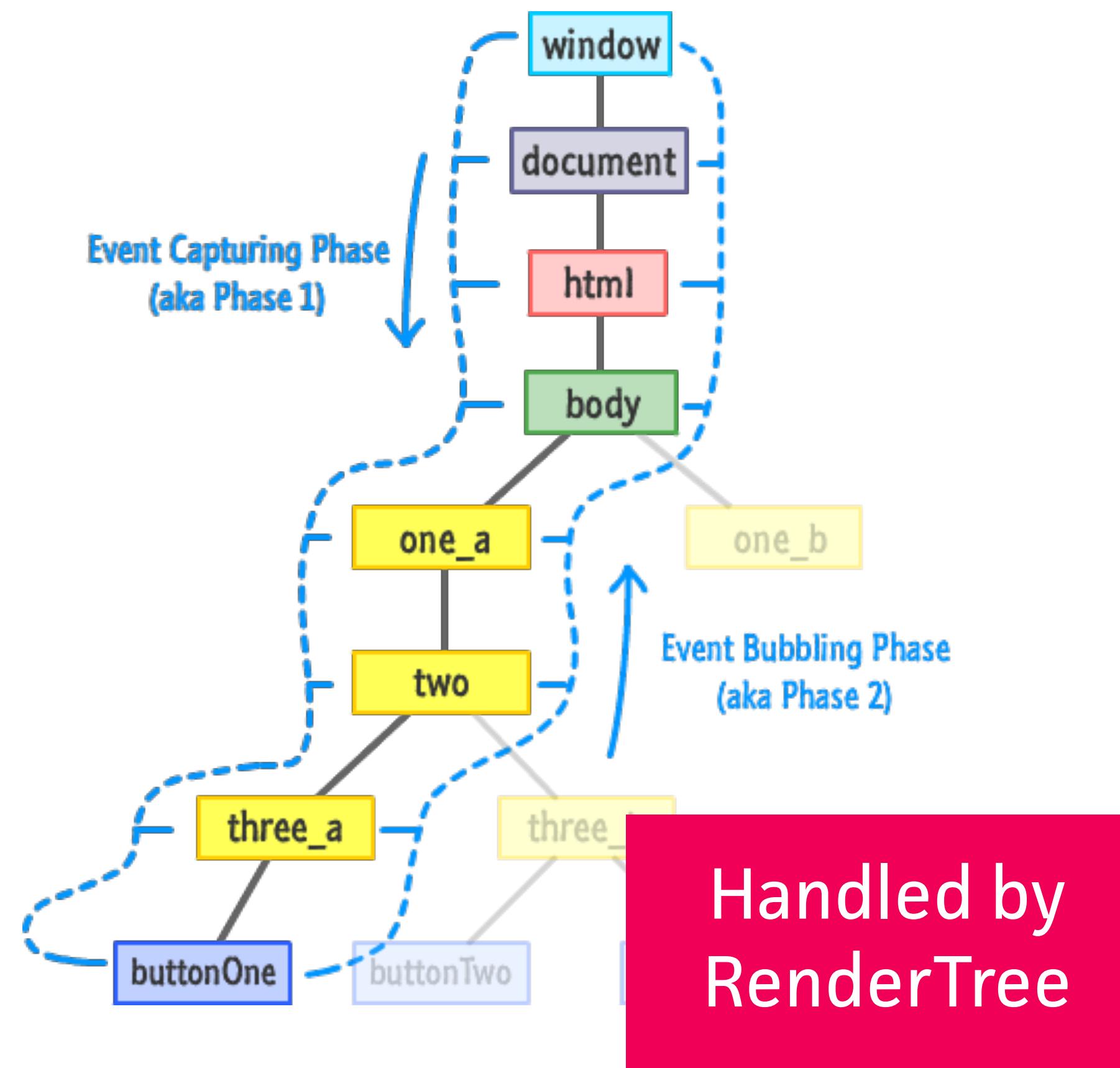


Stack of Objects

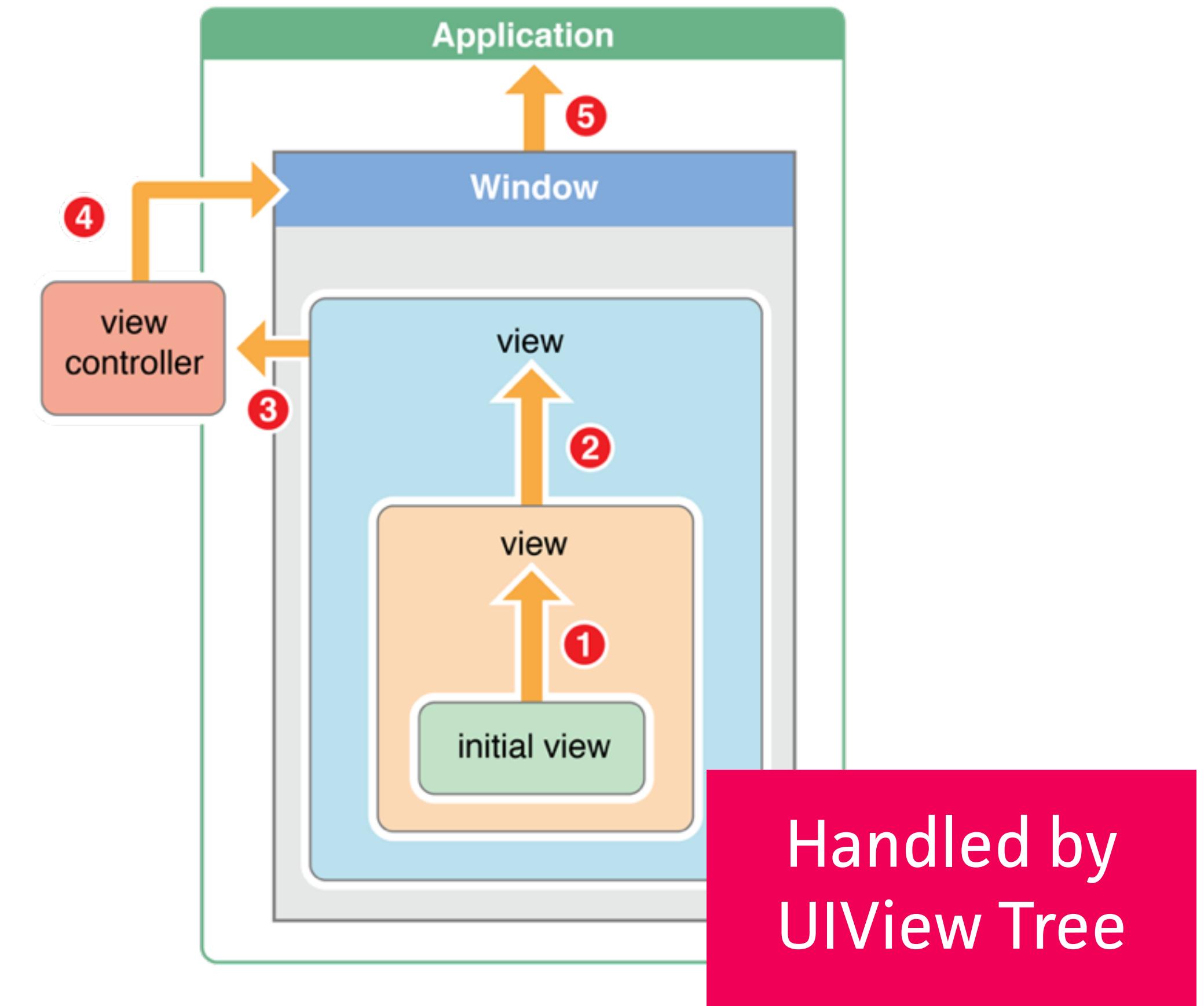


Transparent Objects

Performance Concerns: Hit Testing & Event Handling



WebView



Native

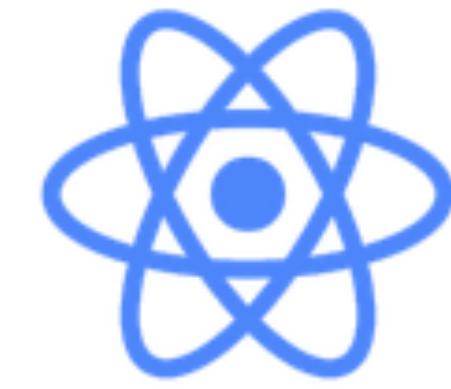
Impact on Tech-Stack



Resource
Management



Aware of
Micro-Interaction



React Native

And Even
Better Solution

Issue 3: Platform Specific Features

Native Services



Location
Service



VoIP

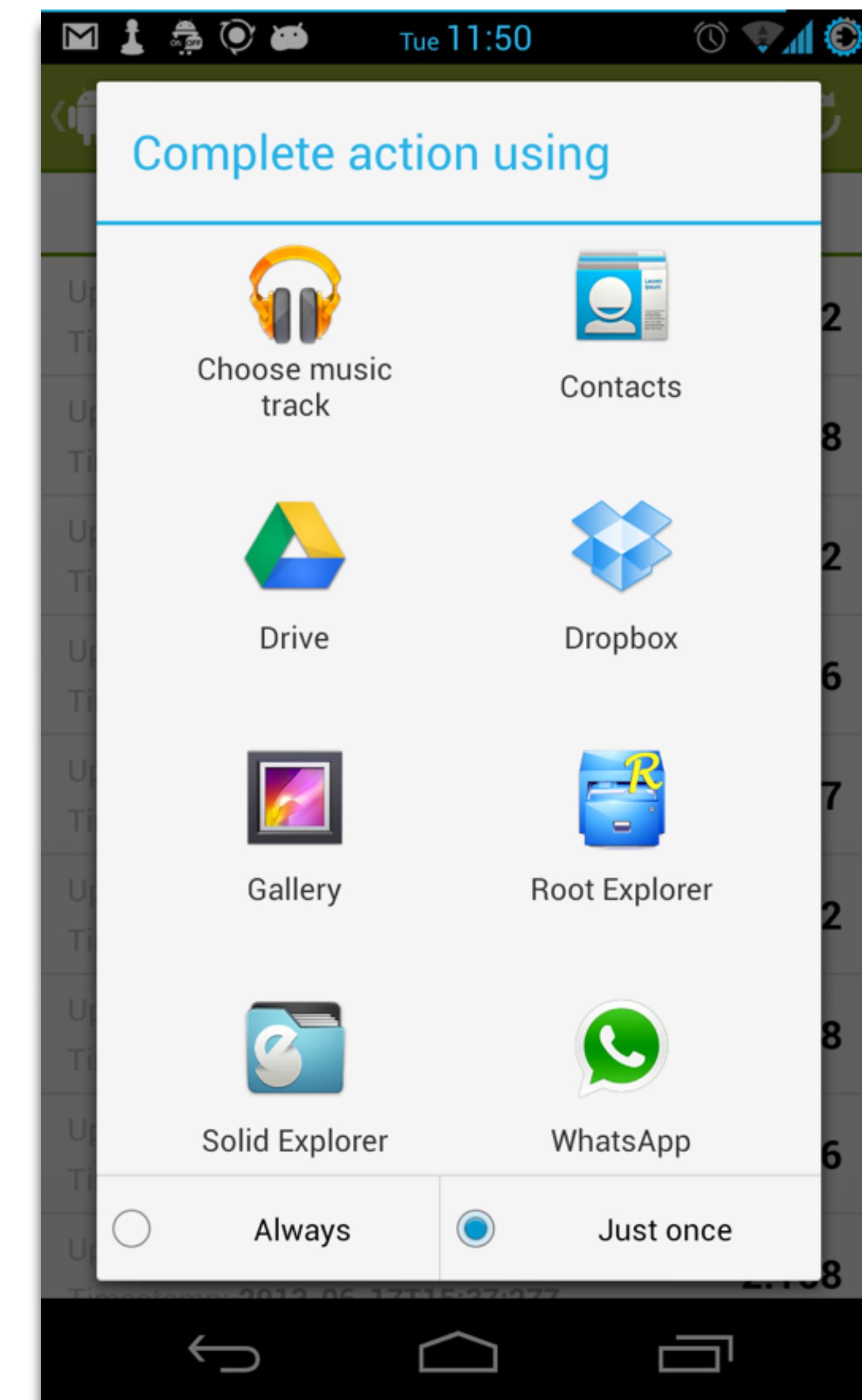
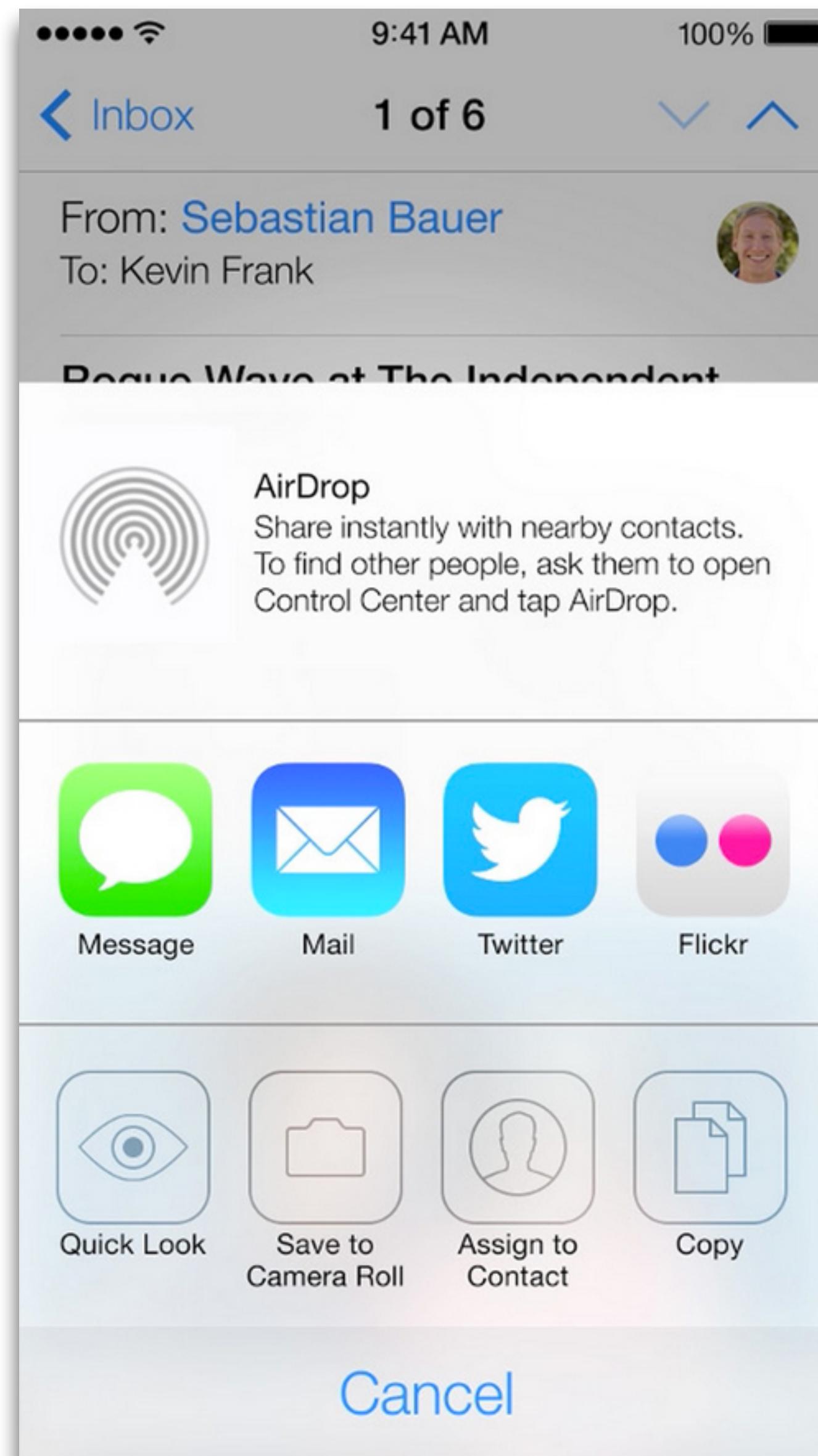


Sensor &
Connectivity



Permanent
Storage

Inter-App Communication



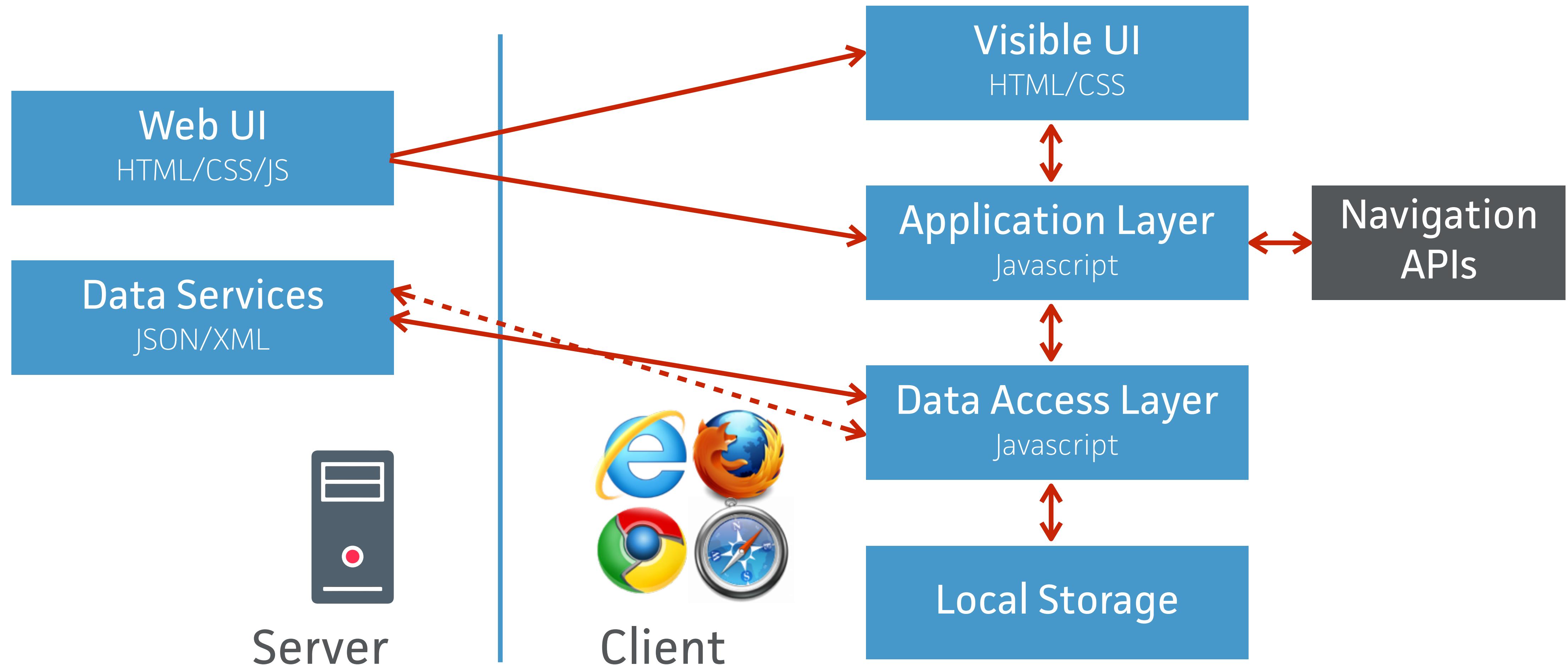
Impact on Tech-Stack



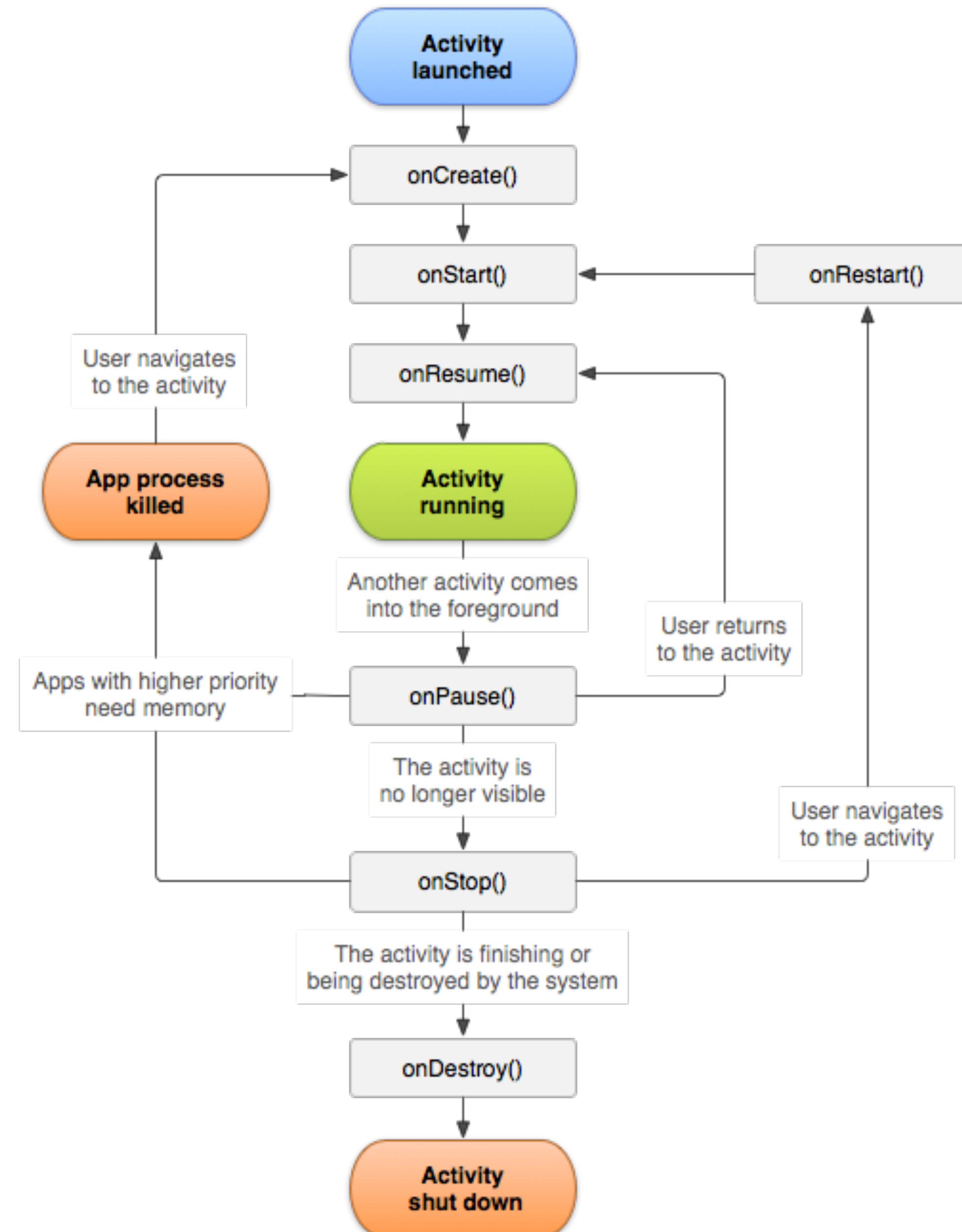
Native Experience from Hybrid App

Issue 4: Life Cycle Management

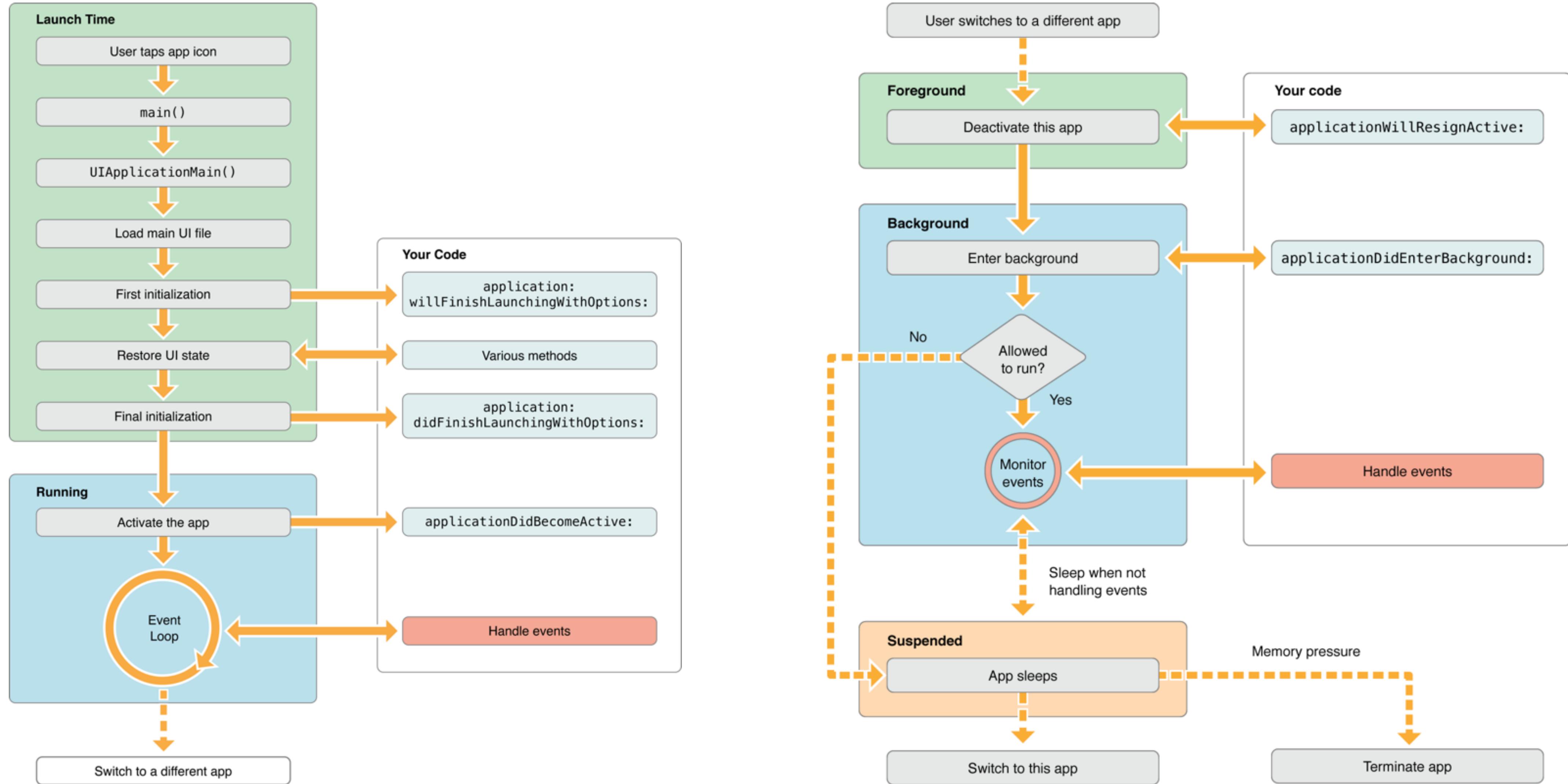
Web Service Lifecycle



App Lifecycle



App Lifecycle

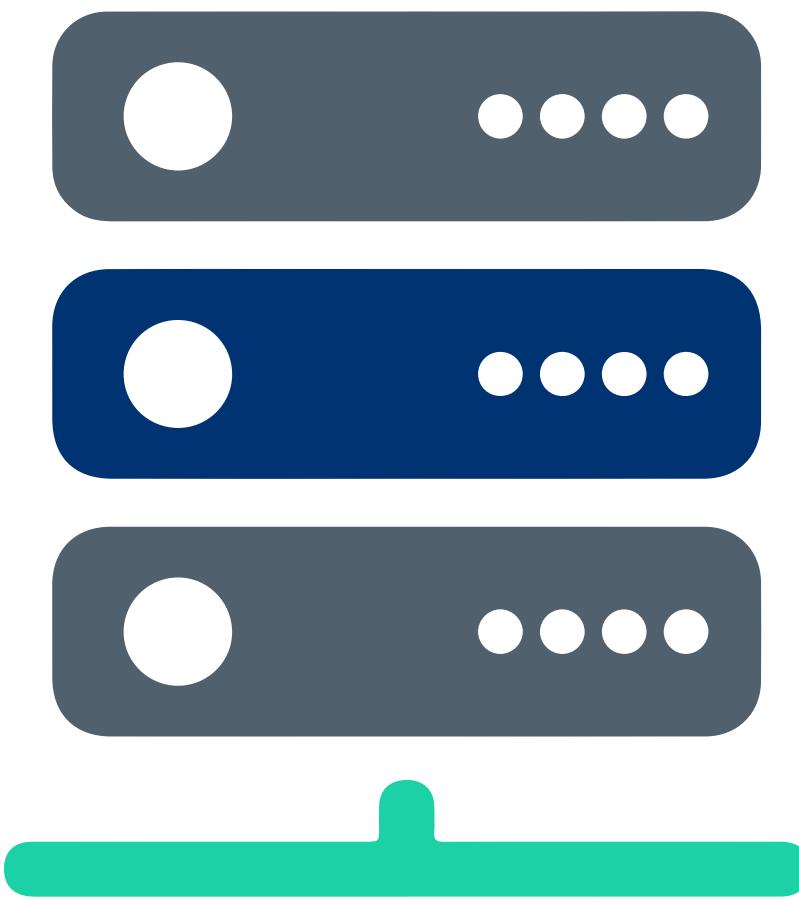


Source: Apple, *The App Life Cycle*

Impact on Tech-Stack

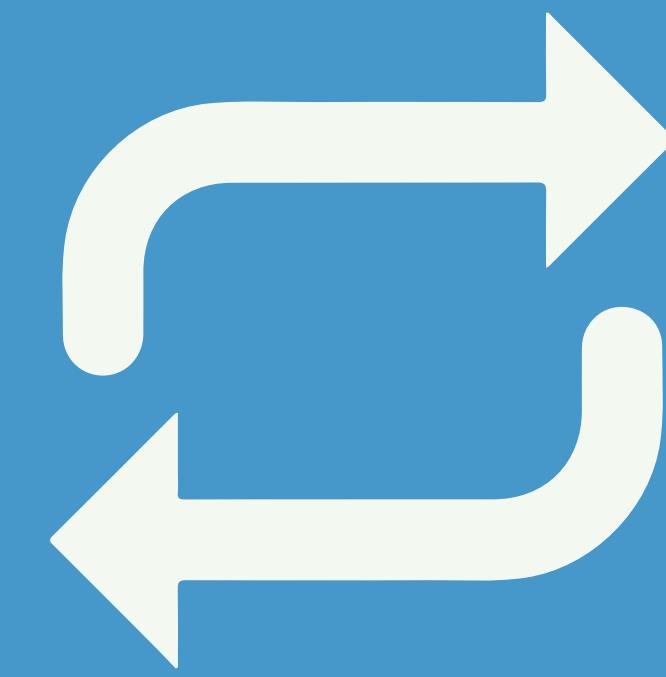
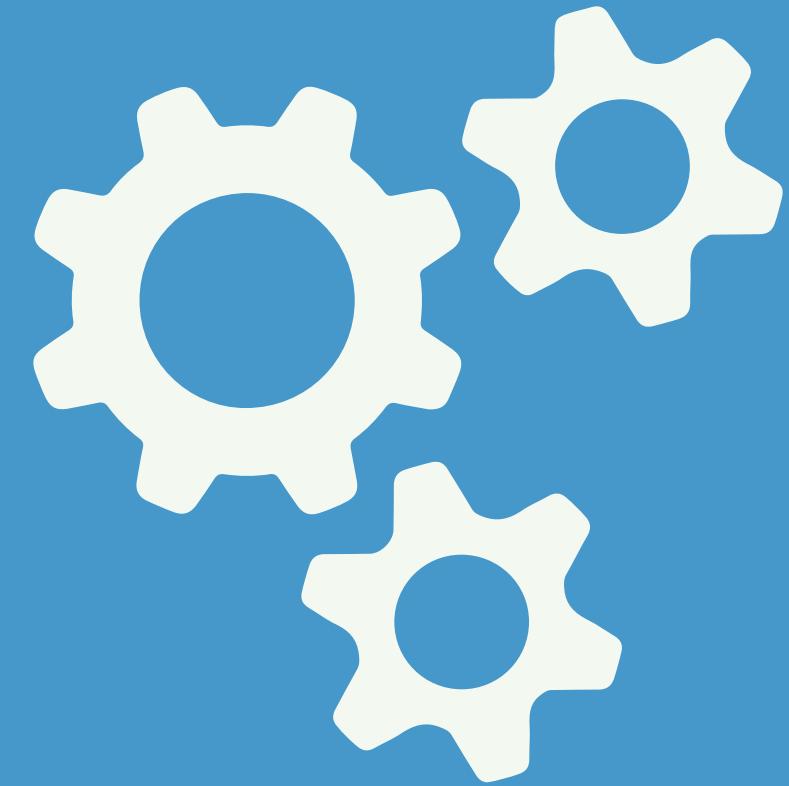
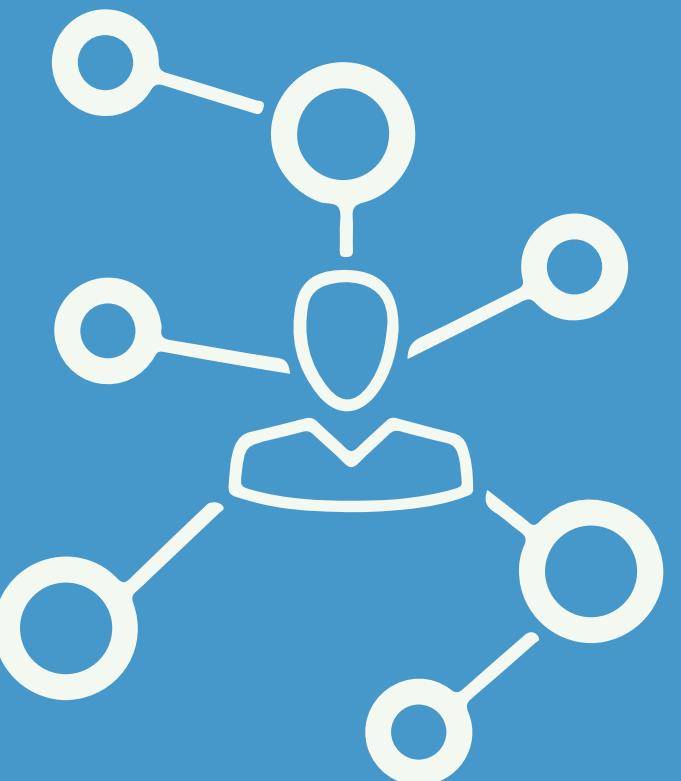
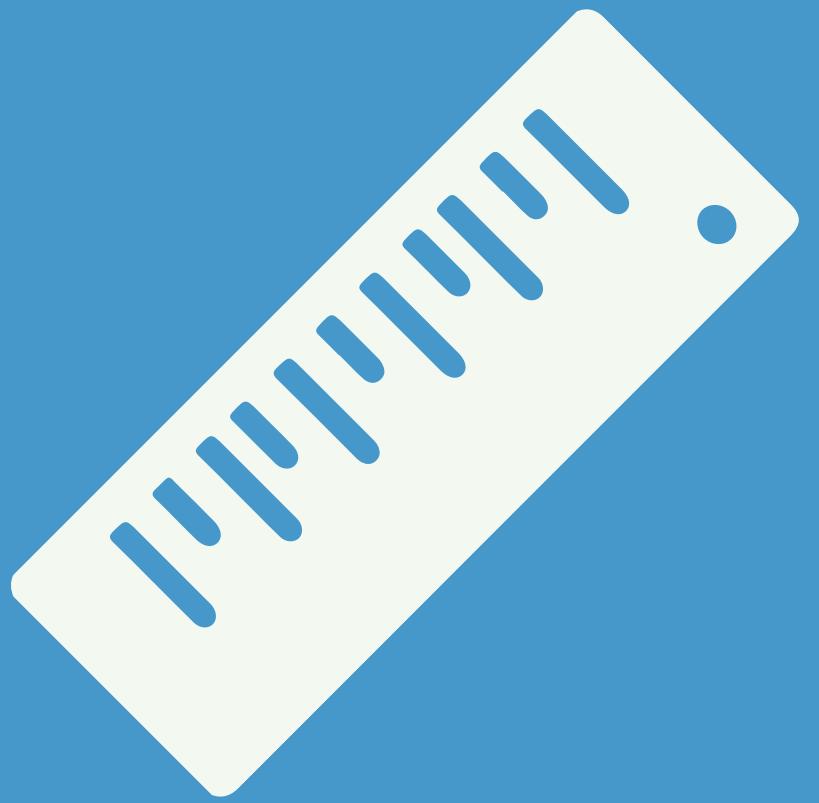


URI for Everything



Preserving State

Summary



Thank you.

The Stackup Team
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