

An Introduction to Multi-Platform Design Systems

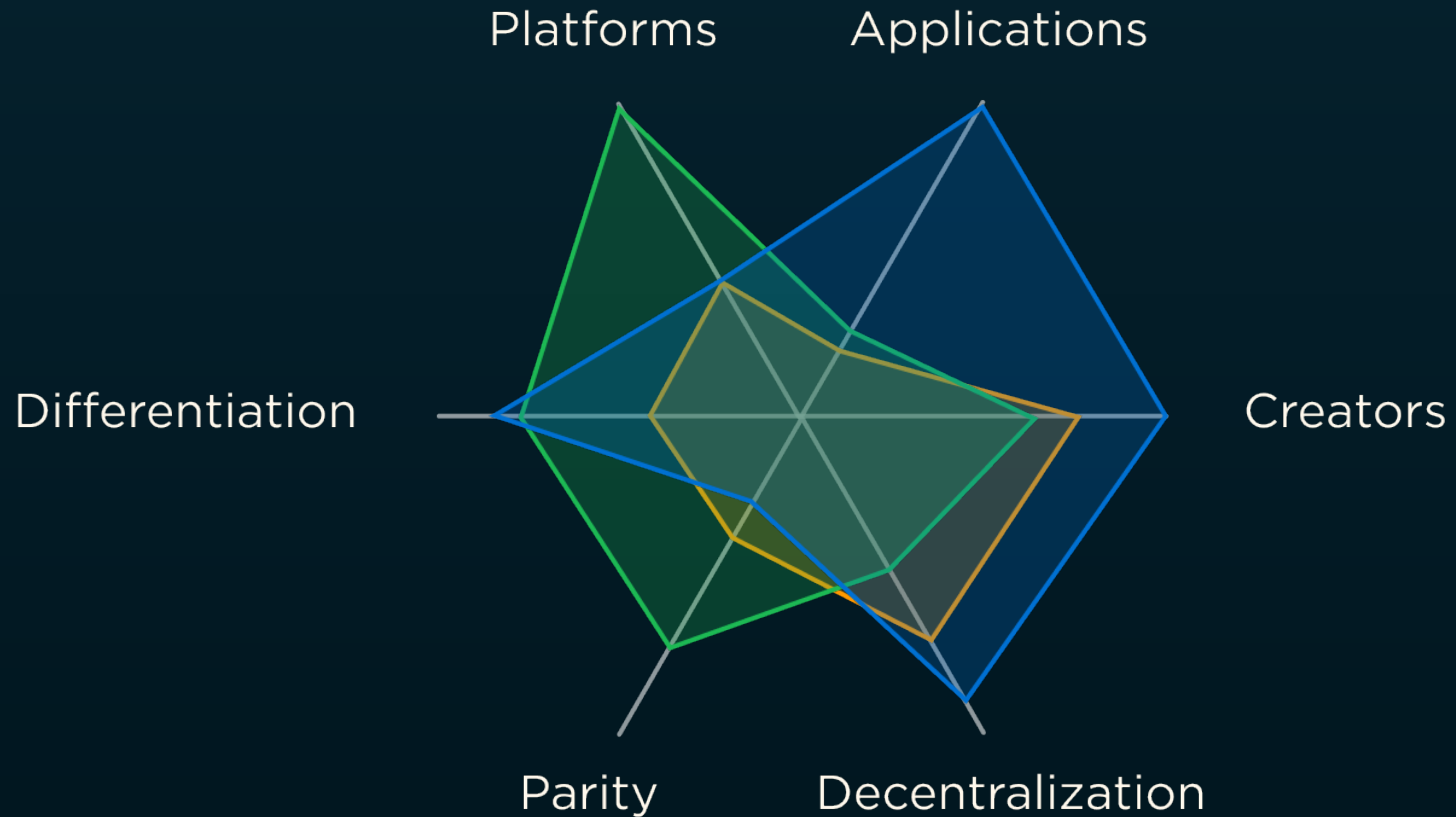
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@dbanksdesign

bit.ly/clarity2020-multiplatform

Less than 10% of public design systems support platforms other than the web.*

* dbanks.design/blog/multi-platform

Differentiating factors



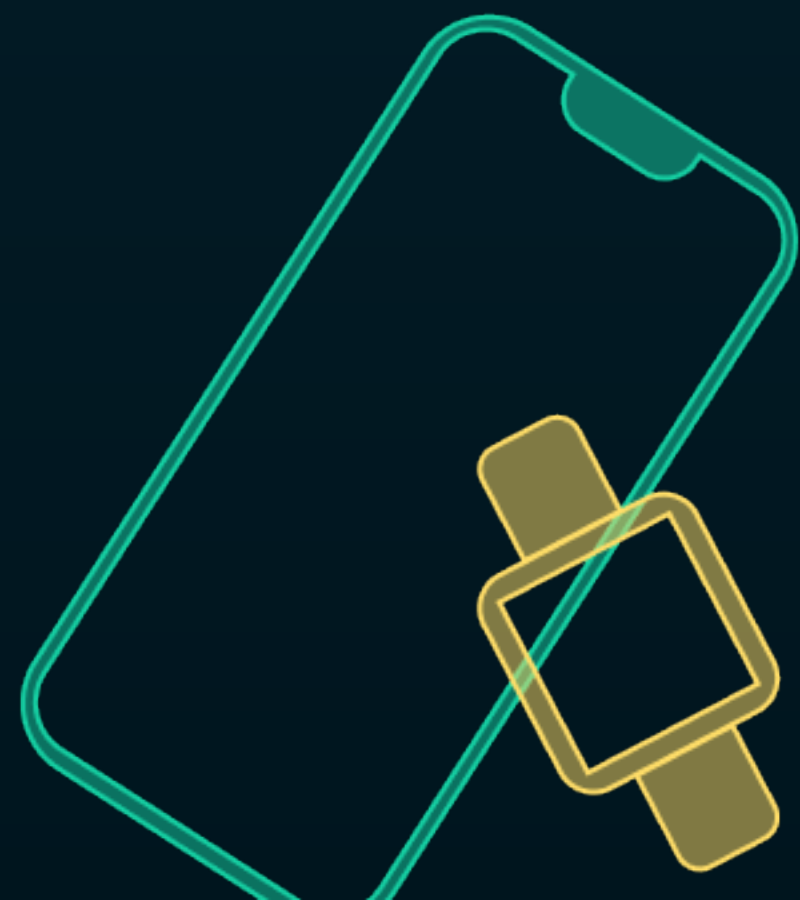


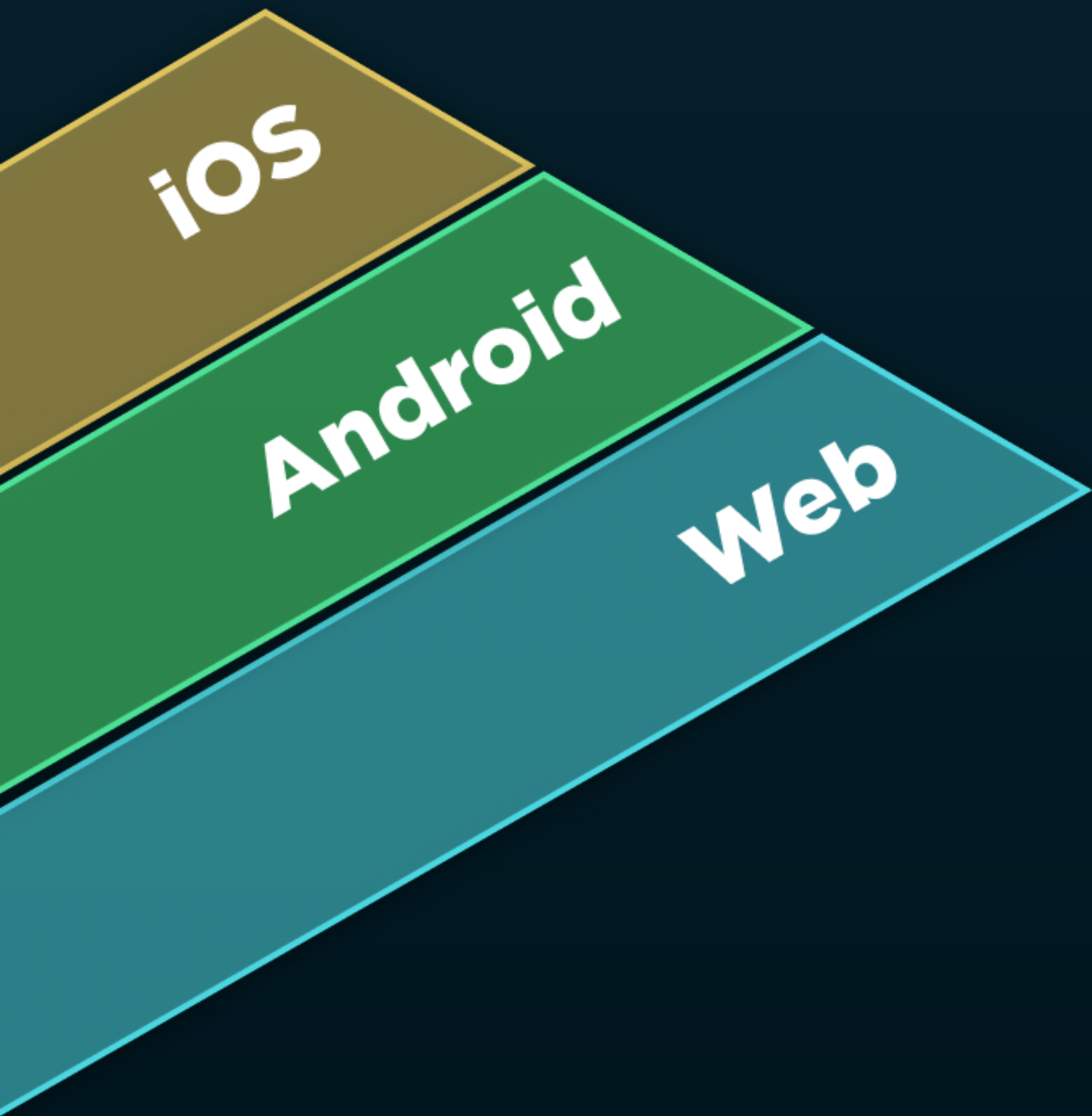
Consistency

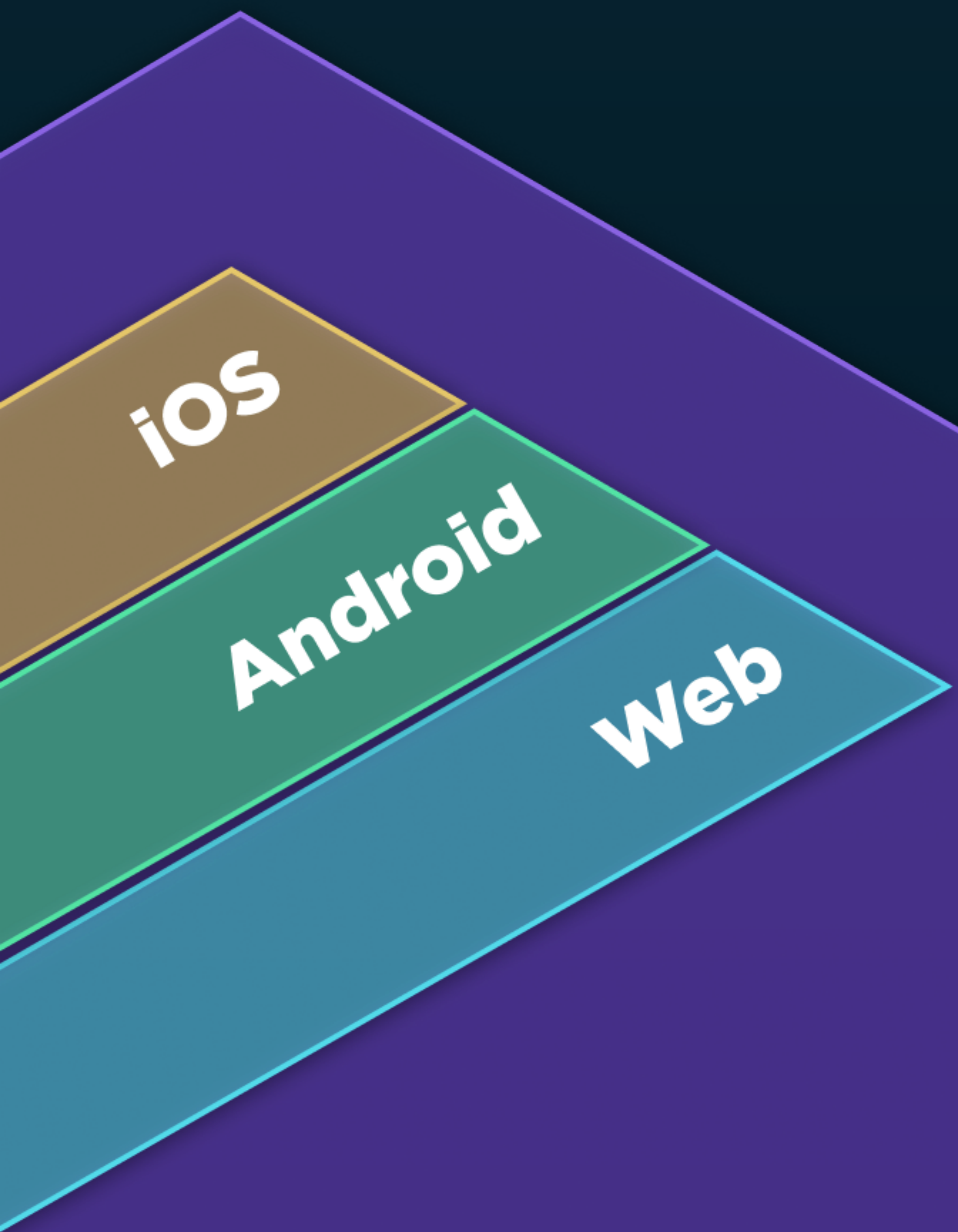


Cohesion

**Applications don't need
to look exactly the same
across all platforms.**

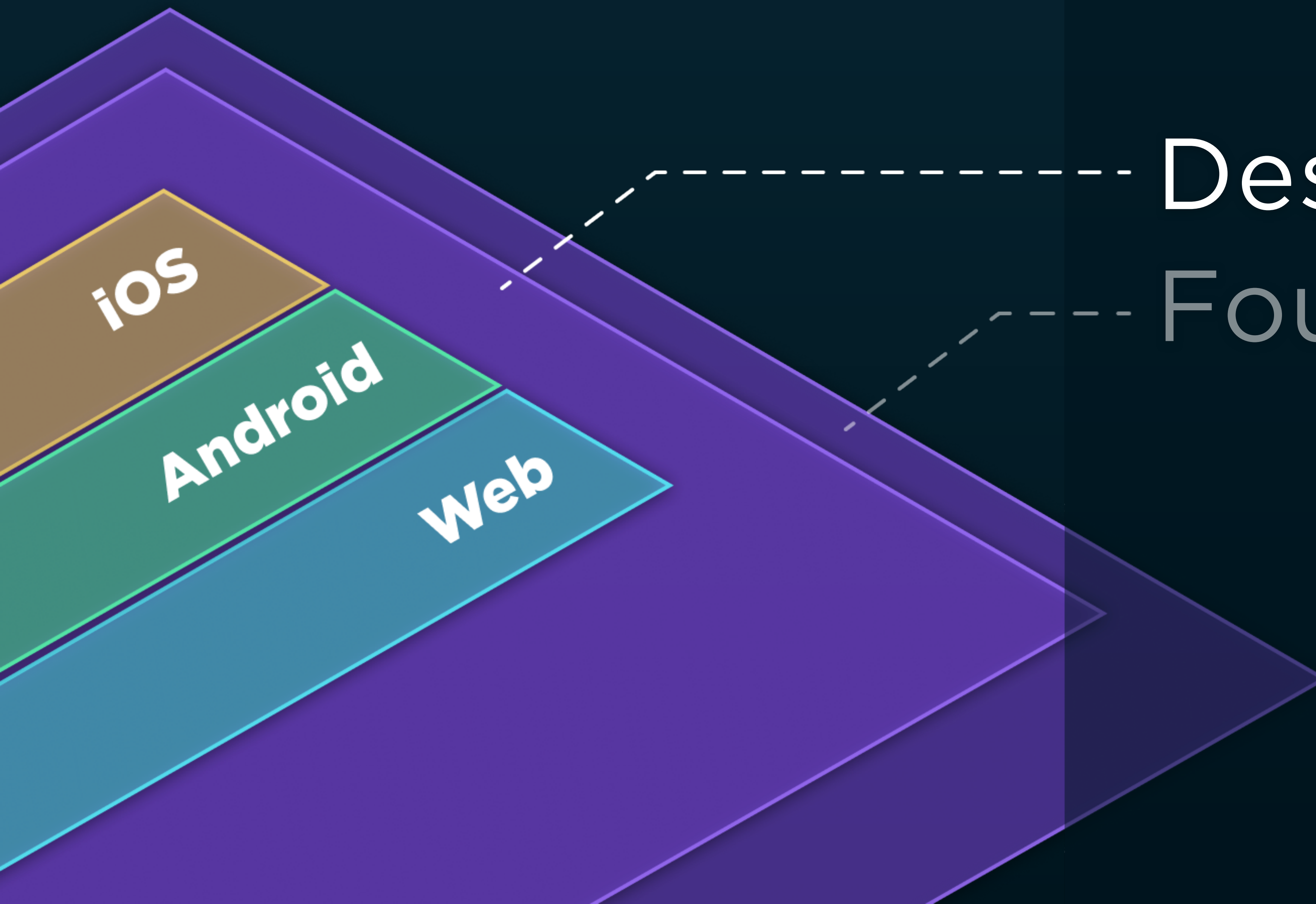




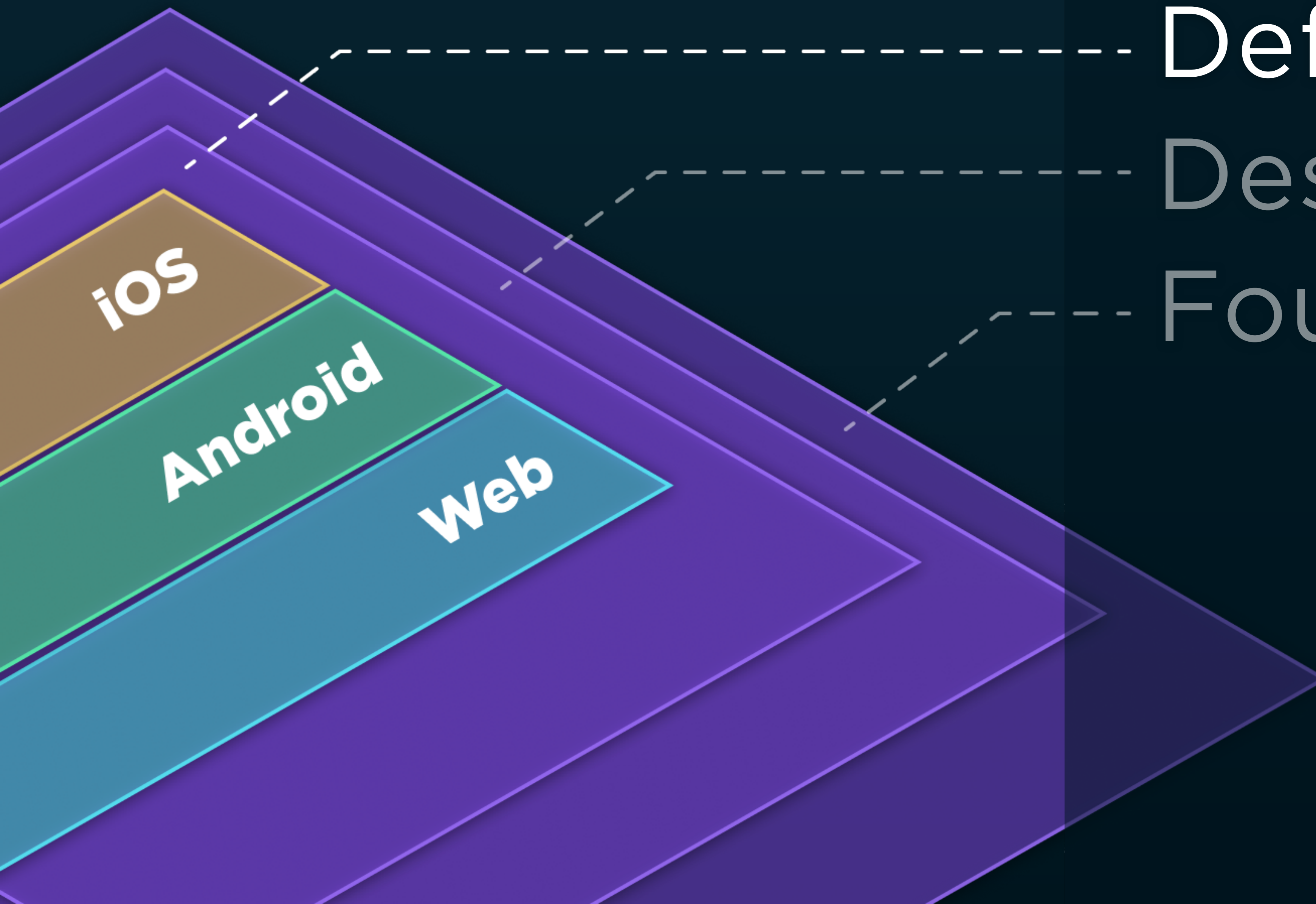


Foundations

- Principles
- Brand
- Content strategy
- Localization
- Communications



Design tokens
Foundations



Definitions

Design tokens

Foundations

Component Definitions

```
<example-banner  
  variant="warning"  
  title="Uh oh"  
  description="Something bad happened" />
```

```
<com.example.component.Banner  
  app:variant="warning"  
  app:title="Uh oh"  
  app:description="Something bad happened" />
```

```
let banner = Banner(  
  variant: .warning,  
  title: "Uh oh",  
  description: "Something bad happened"  
);
```

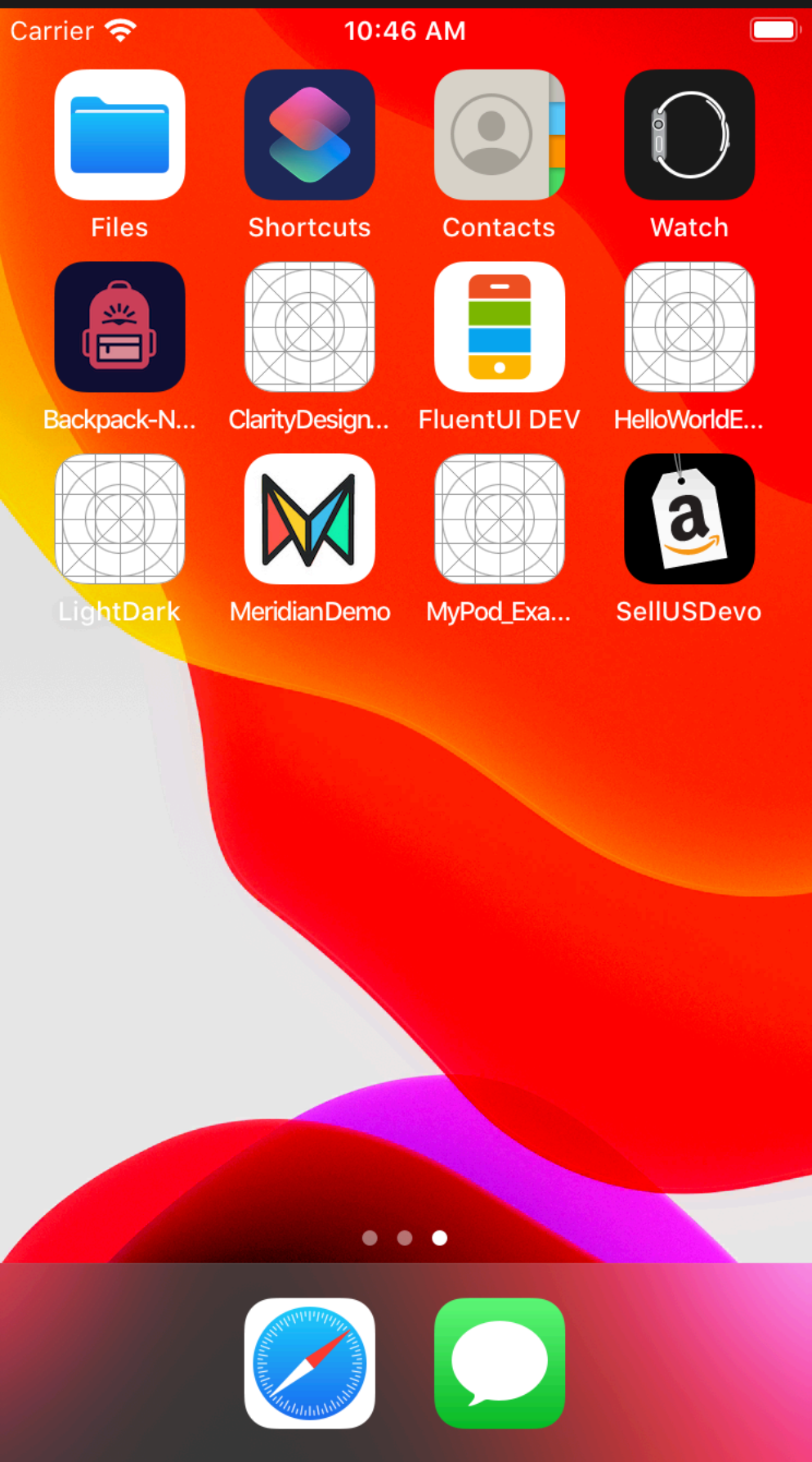



We design and build in parallel so any discussions on details that come up during implementation (and there are usually many) get addressed and considered together.

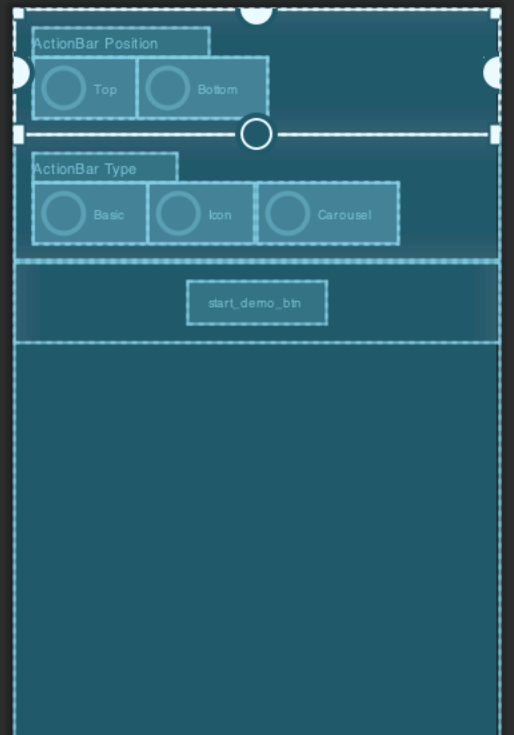
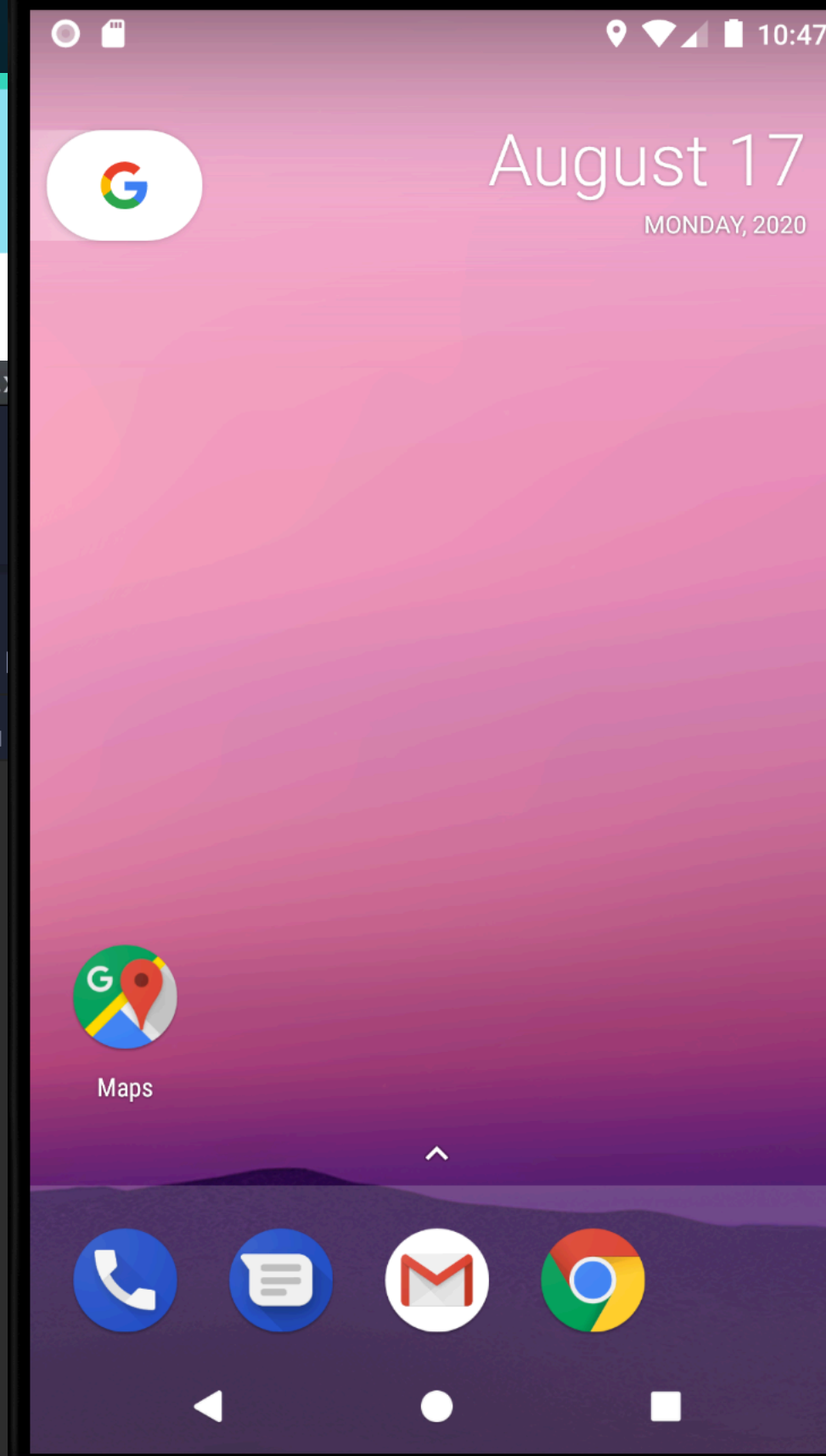
*A system built on parity: How to treat all of your users equally
by Linzi Berry, Kathy Ma, Sam Soffes from Lyft*



**Systems should support
how creators work.**



```
fluentui-android [~/Dev/fluent/fluentui-android] - .../FluentUI.Demo/src/main/res/layout/activity_action_bar_layout...
java > com > microsoft > fluentui > actionBar > FLUENTUI.DEMO NEXUS 6 API 29
Project: FluentUI
  manifests
  java
    com.microsoft.fluentui
      actionBar
        ActionBarLayout
        Indicator
        IndicatorView
      appBarlayout
      bottomsheet
      calendar
      datetimepicker
      drawer
      listitem
      managers
      peoplepicker
      persona
      popupmenu
      search
      snackbar
      theming
      toolbar
      tooltip
      util
      view
      widget
      java (generated)
Resource Manager
activity_action_bar_layout.xml
1 <?xml version="1.0" encoding="utf-8"?>
2 <android.support.constraint
3   .ConstraintLayout
4     xmlns:android="http://schemas
5     .android.com/apk/res/android"
6     xmlns:app="http://schemas.android
7     .com/apk/res-auto"
8     android:layout_width="match_parent"
9     android:layout_height="match_parent"
10    android:showDividers="middle">
11    <LinearLayout
12      android:id="@+id/
13    /position_selection"
14      android:layout_width="0dp"
15      android:layout_height
16    ="wrap_content"
17      android:orientation="vertical"
18      android:padding="16dp"
19
20    app:layout_constraintEnd_toEndOf
21    ="parent"
22
23    app:layout_constraintStart_toStartOf
24    ="parent"
25
26    app:layout_constraintTop_toTopOf
27    ="parent">
28
29    <TextView
30
31    style="@style/TextAppearance.FluentUI
32    .Heading"
33
34
35
36
37
38
39
40
```





Efficiency



Autonomy

Low friction environments

The image displays a development environment for mobile application development. On the left, an IDE window titled "HomeController.java — SPURJavaPlayground" shows the following Java code:

```
17 public class HomeController extends MobileController {
18     ... private final String PAGE_COMPONENT_ID = "sampleNavigationPageId";
19
20     ... @Path(SampleUrls.HOME_URL)
21     ... public String handleRequest() throws Exception {
22         ... final BannerBuilder banner = BannerBuilderFactory.createBuilder(getAppVersion())
23         ...
24         ...
25         ...
26
27         ... final Navigat
28         ... Navigat
29         ...
30         ...
31         ...
32         ...
33         ...
34         ...
35         ...
36         ...
37         ...
38         ...
39         ... withRow( textRowId , TEXTICON.TEXT_FORMAT, Text Example ,
40         ... SampleUrls.PF_PROTOCOL + SampleUrls.TEXT_URL)
41         ... withRow("toolbarRowId", TextIcon.BORDER_BOTTOM, "Toolbar Example",
42         ... SampleUrls.PF_PROTOCOL + SampleUrls.TOOLBAR_URL)
```

A file explorer window is overlaid on the code, showing a directory structure with "DemoApp" and "style-dictionary" folders.

On the right, a simulated iPhone SE (2nd generation) is shown with a home screen featuring a red background and various app icons: Calendar, Photos, Maps, Reminders, News, Health, Wallet, and Settings. The status bar at the top of the phone shows "Carrier", signal strength, Wi-Fi, and the time "9:39 PM".

At the bottom of the IDE, a terminal window shows the following output:

```
SPURJavaPlayground [mainline] % ./scripts/launchiOS
com.amazon.AmazonSeller: 97601
SPURJavaPlayground [mainline] %
```

The bottom status bar of the IDE indicates the current file is "mainline*", the cursor is at "Ln 25, Col 59", and the encoding is "UTF-8 LF Java".



Rely less on mockups

Lowest fidelity
to express intent

Get to code
quicker

Designer &
developer pairing



Distribute creation

Spread
ownership

Own the
full experience

Meet creators
where they are



**Meet people
where they are**



Cohesion



Autonomy

Over 25% of public
design systems support
multiple platforms next
year.

Thank You!

Danny Banks
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