# Quick Apps: Min Time-To-Market, Max UX

Martin Alvarez @espinr
XtremeJS– 23 Dec 2021
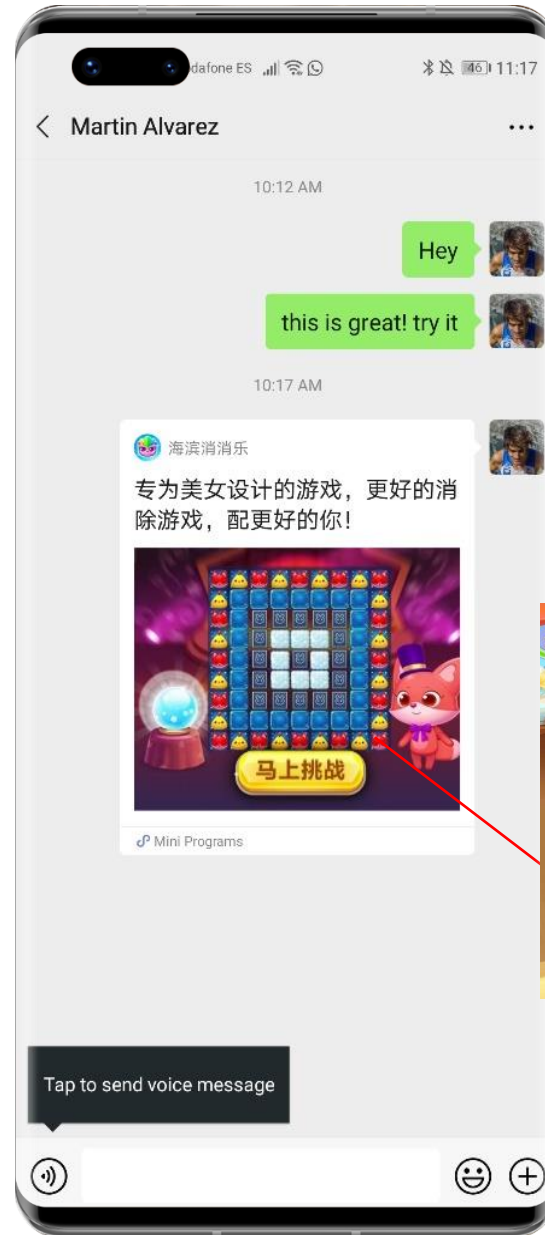
XtremeJS 2021
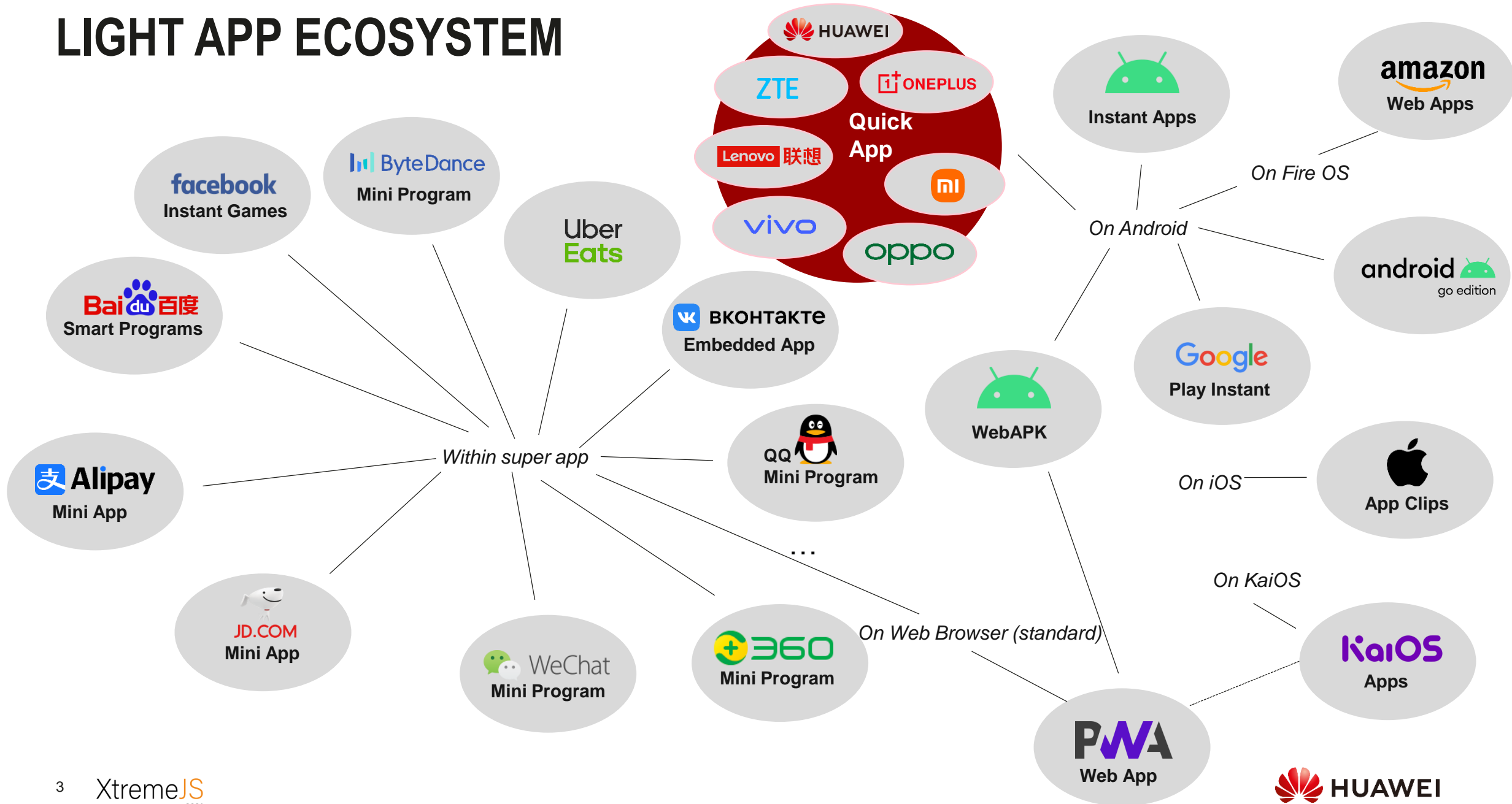
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# NO INSTALLATION APPS

*Direct user interaction*

*Frictionless apps*

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2021

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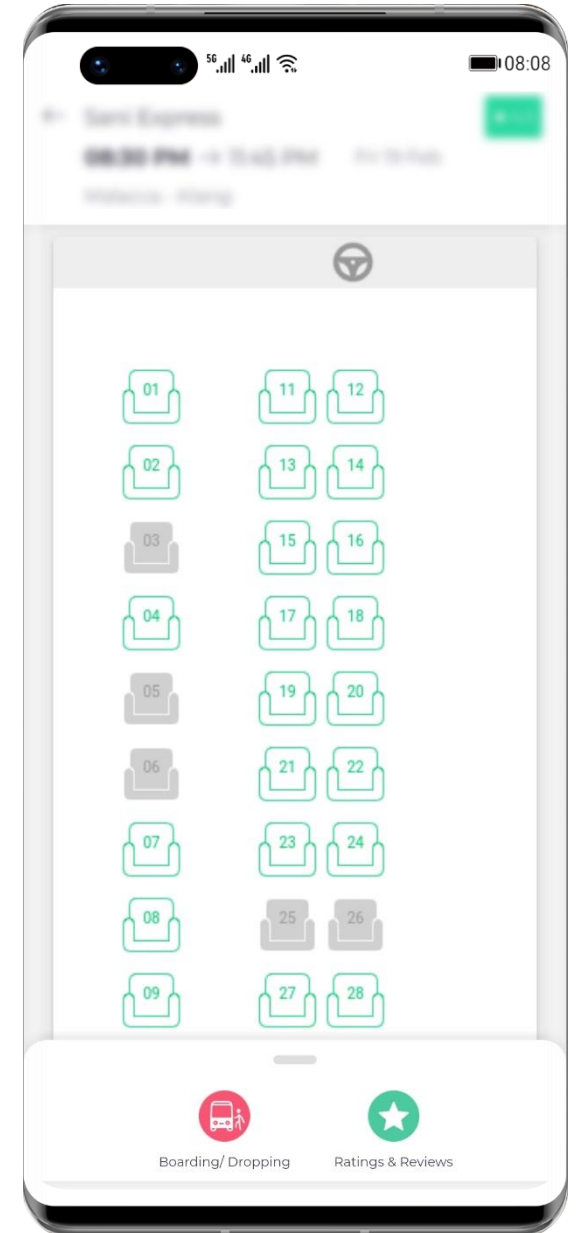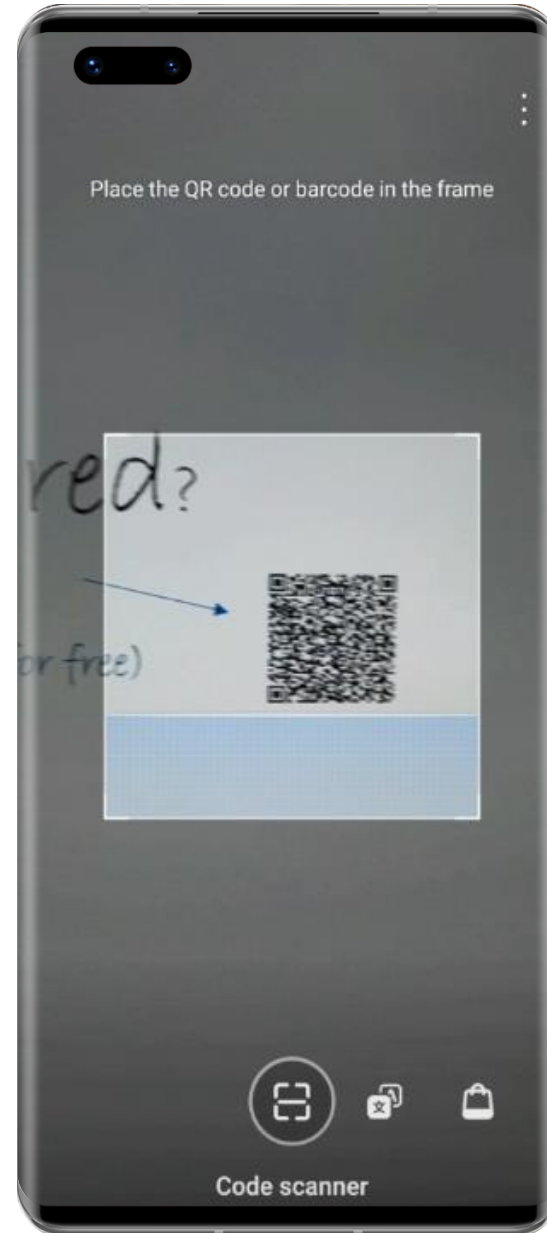# LIGHT APP ECOSYSTEM

# QUICK APP

*An MVVM framework based on Vue.js to develop native-like applications that do not require installation*

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# QUICK APP MAIN FEATURES

Native look & feel
Native performance
Scan QR-code & run
Tap on link & run
No installation

Access to system APIs
Marketplace flexibility
20% code of native
UI predefined elements
Advanced services…

QUICK APPs

NATIVE APPs

WEB APPs

BROWSER

OS

DEVICE

XtremeJS
2021

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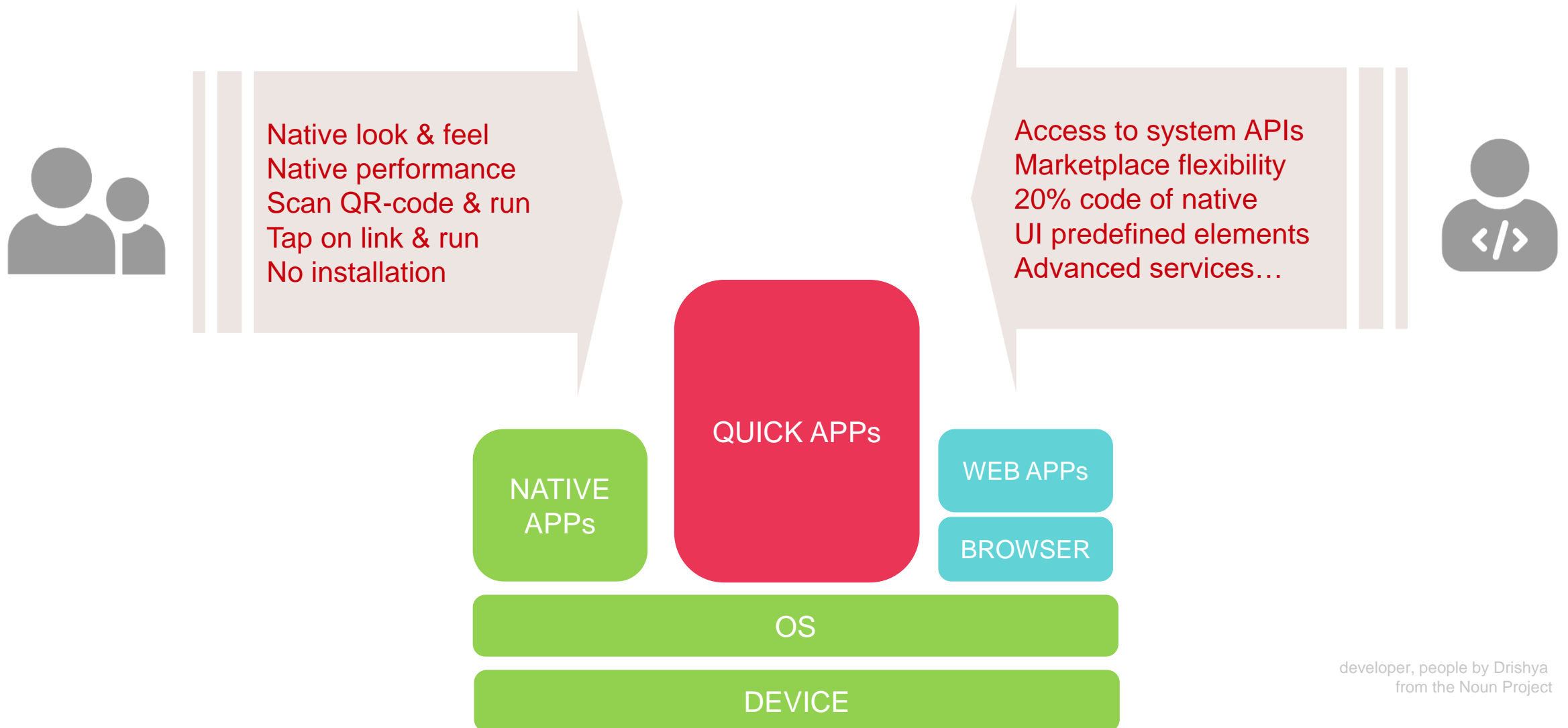
# PRODUCT'S LIFECYCLE SUPPORT

**DISCOVERABILITY**

**USER ACQUISITION**

**MONETIZATION**

**USER RETENTION**

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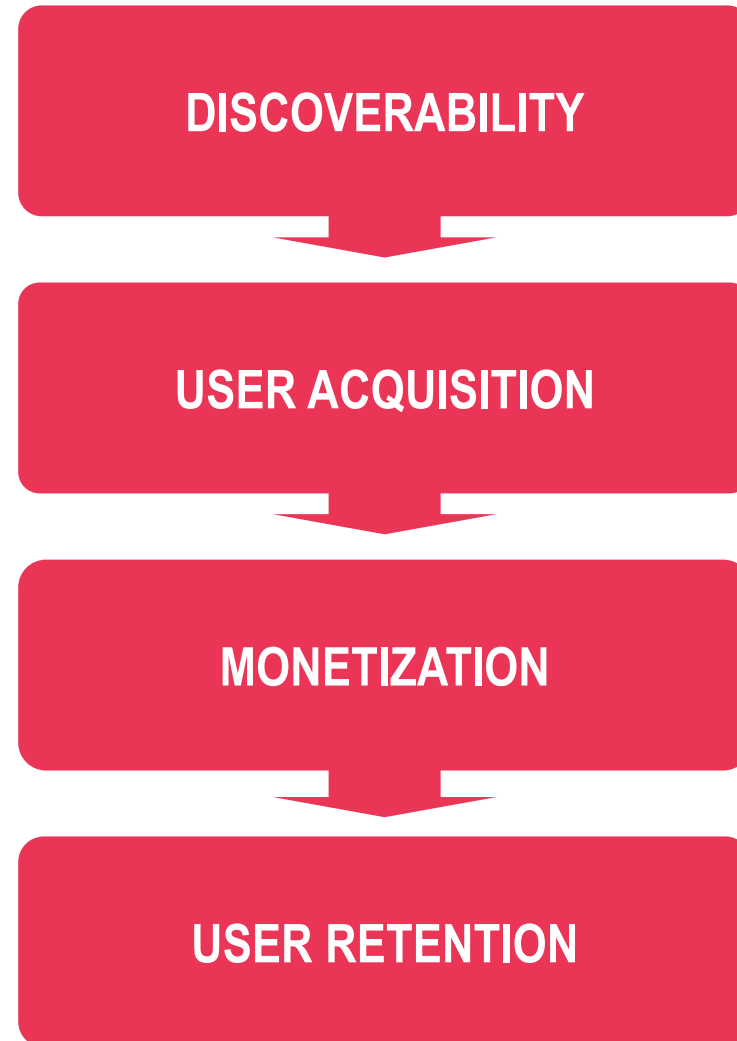
# DISCOVERABILITY
## USER ACQUISITION
## MONETIZATION
## USER RETENTION

*Widgets on dashboard*

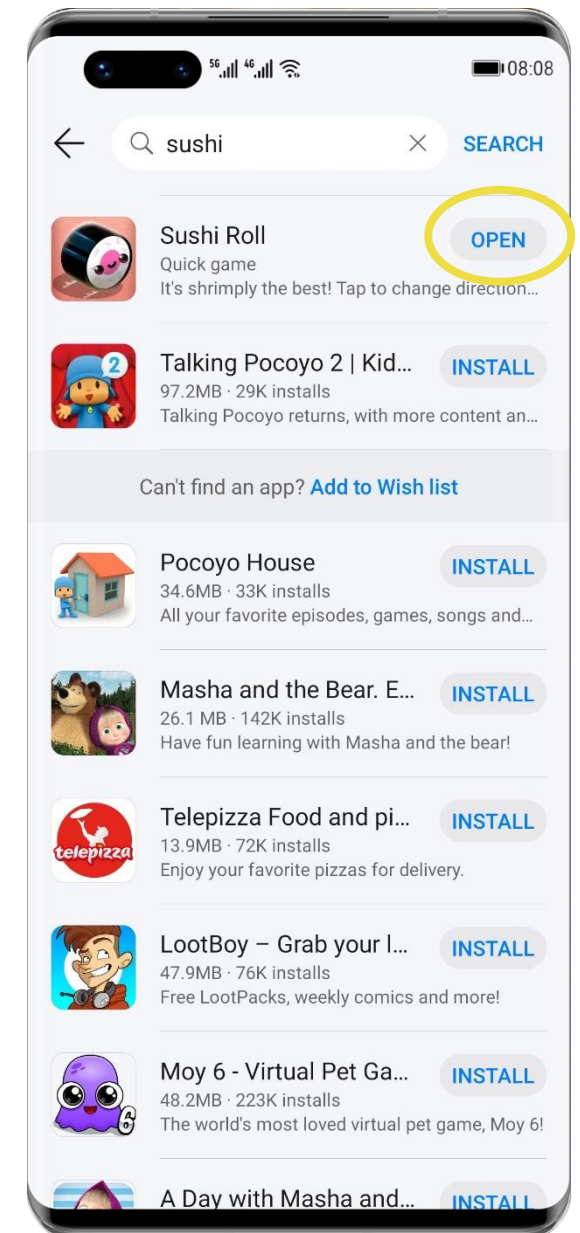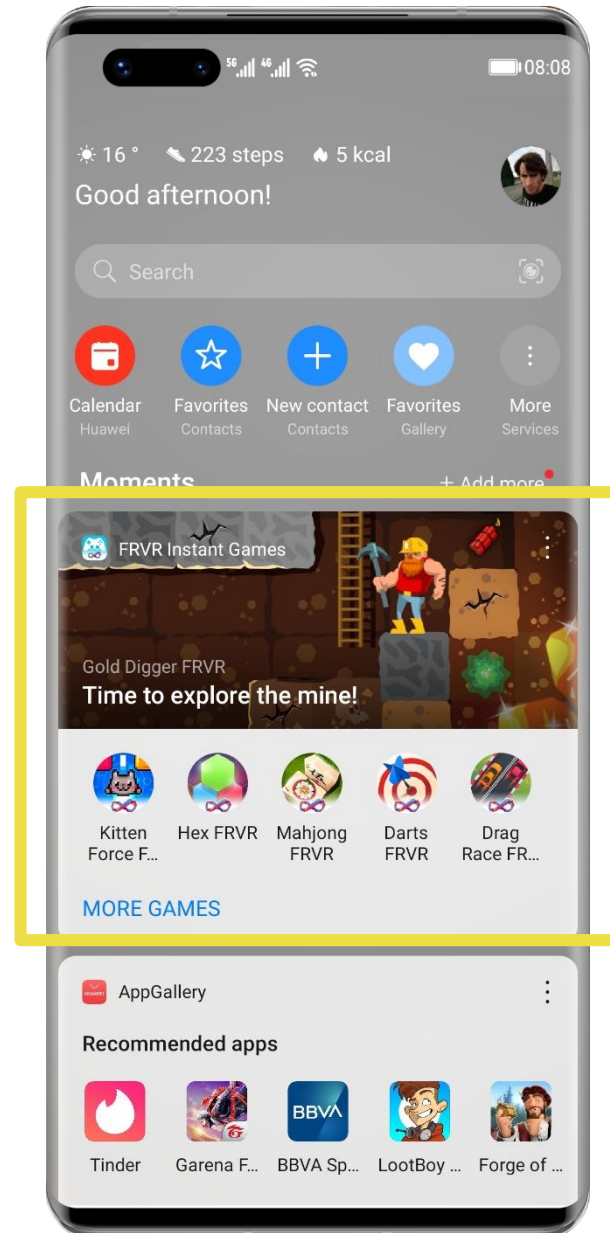*Global search results*

*Web sites (URL links)*

*Links from other apps*

*Listed in app marketplaces*

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# DISCOVERABILITY
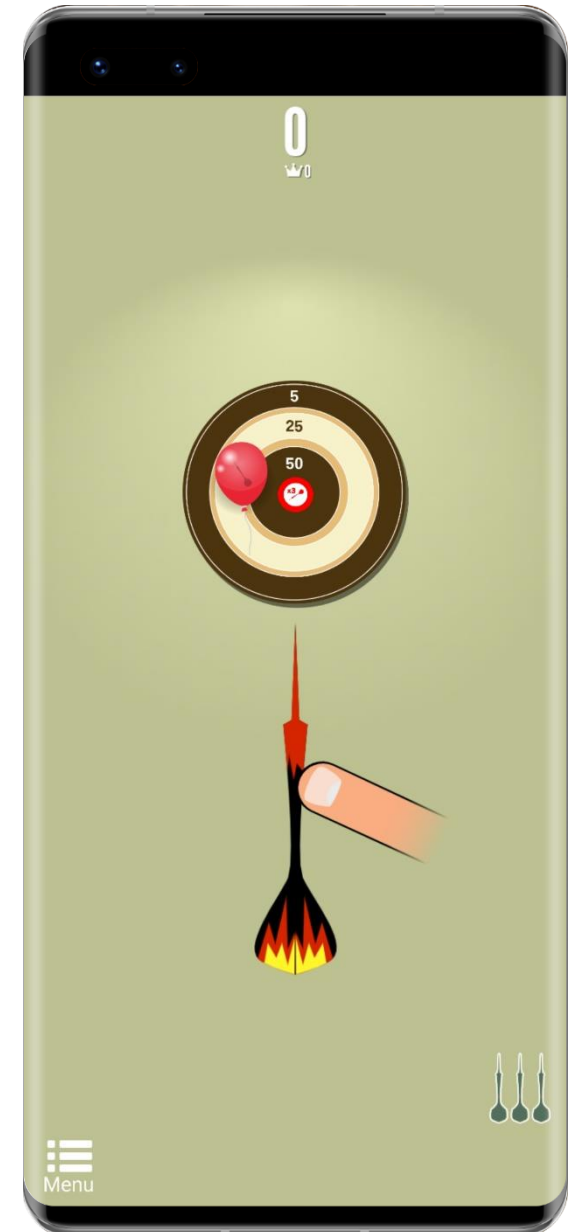# USER ACQUISITION
# MONETIZATION
# USER RETENTION

*Huge discoverability*

*Instant access*

*Minimum friction*

*User identification*

HUAWEI
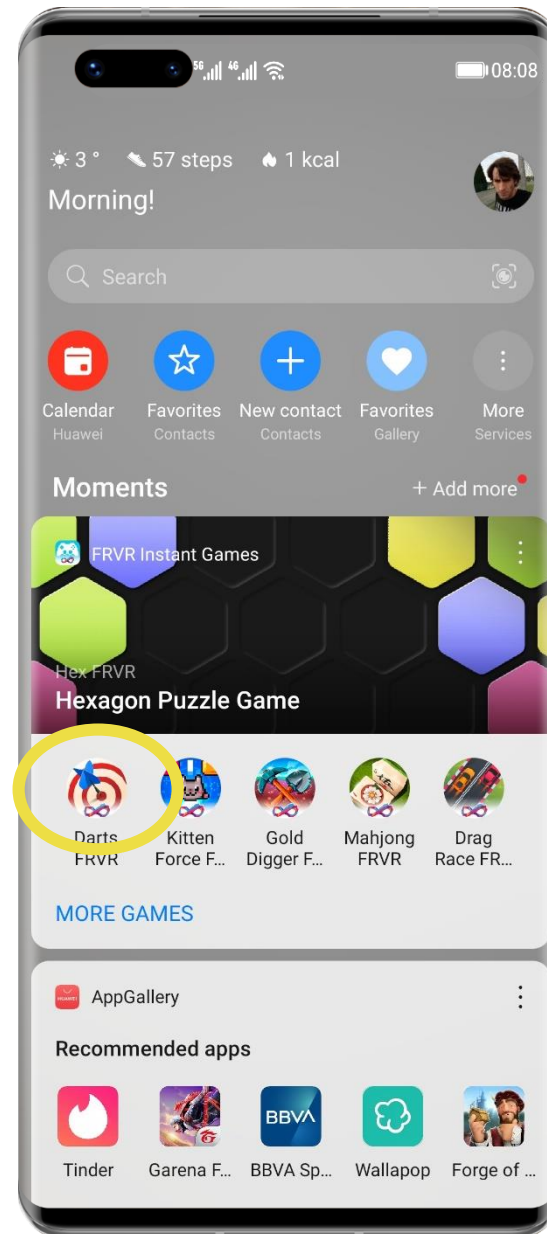
# DISCOVERABILITY
# USER ACQUISITION
# MONETIZATION
# USER RETENTION

*In-app payments*

*In-app ads*

*Rewarded ad videos*



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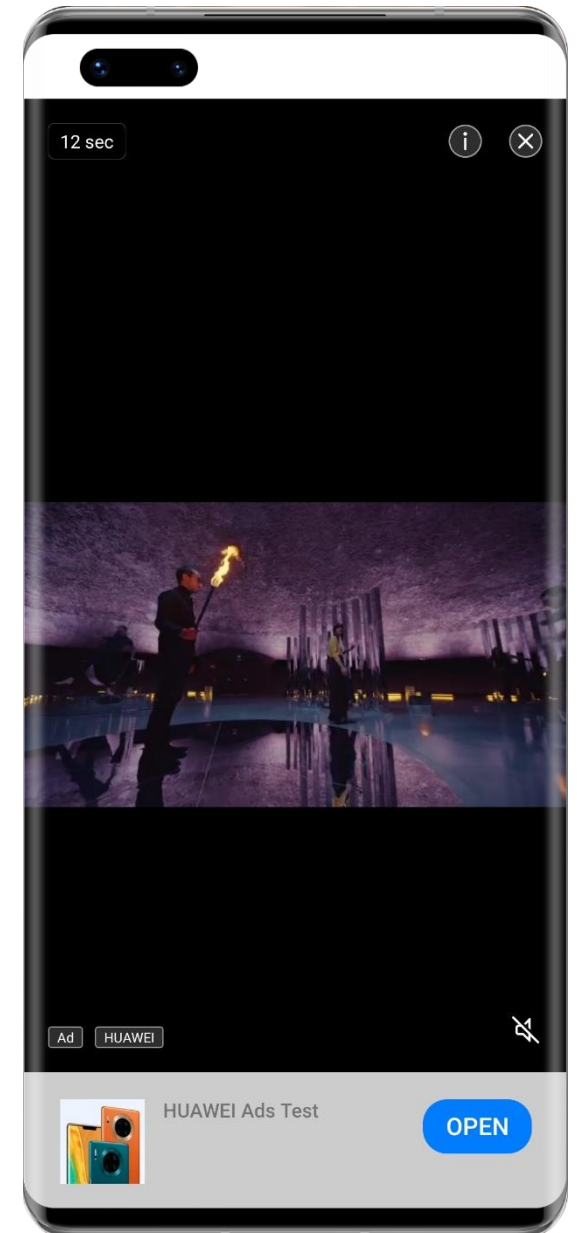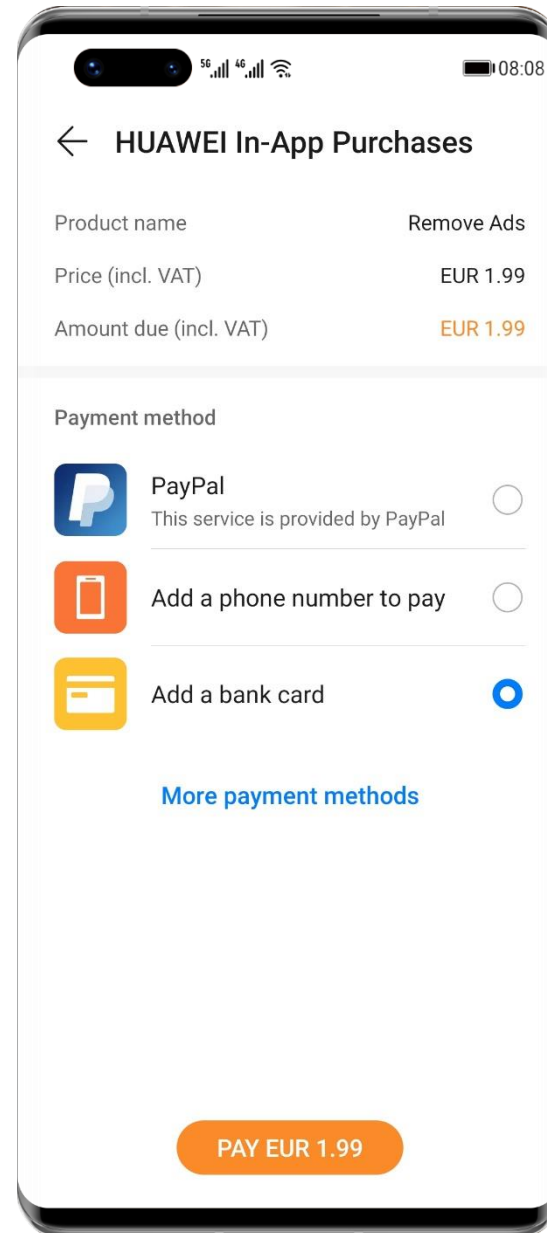
# USER RETENTION

*Tap to open*

*Save shortcut in home screen*

*Remember status*

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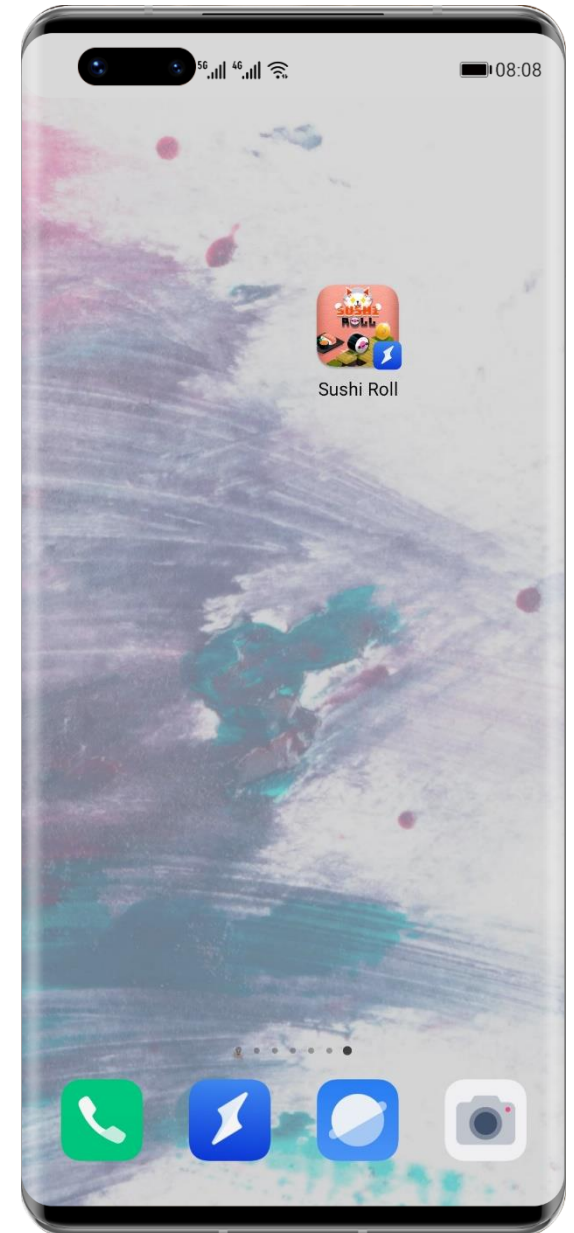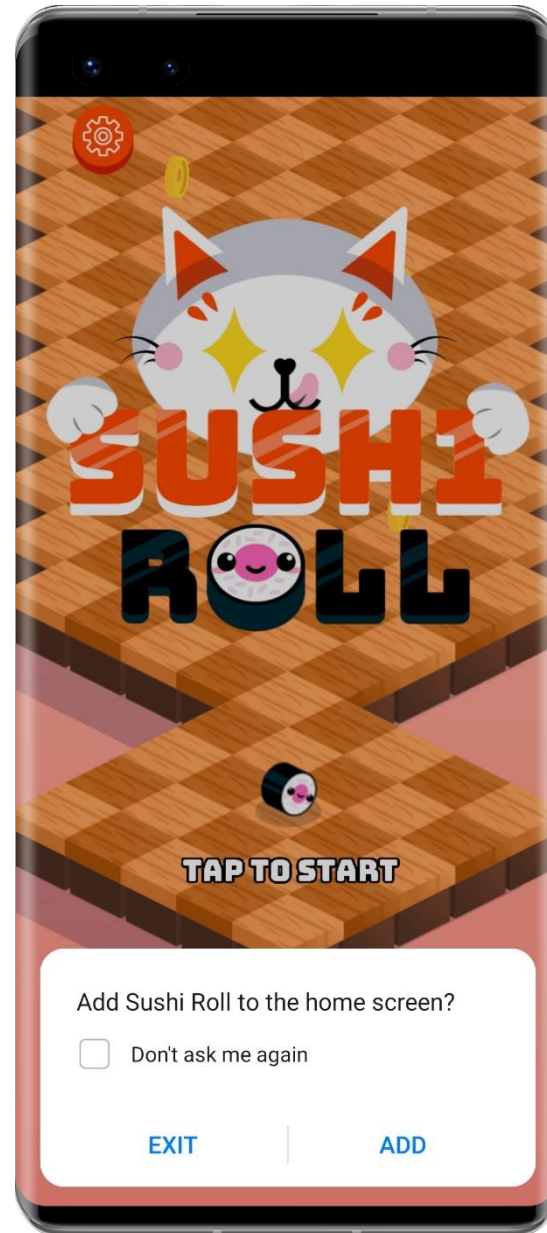
# DISCOVERABILITY
# USER ACQUISITION
# MONETIZATION
# USER RETENTION

*Push notifications*

*Banners in other apps*
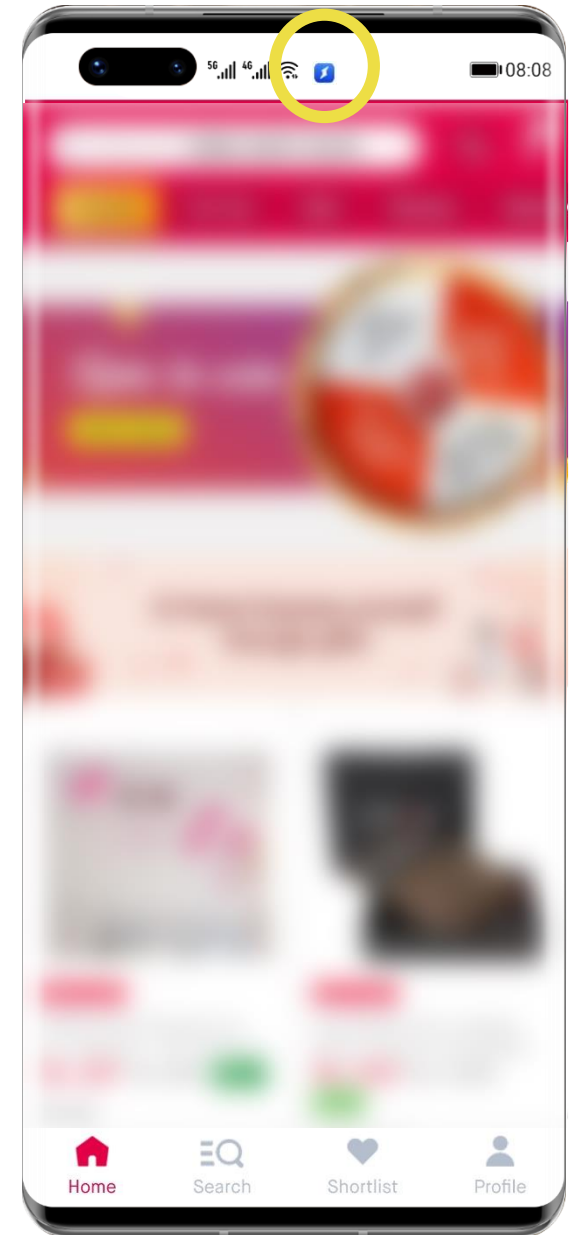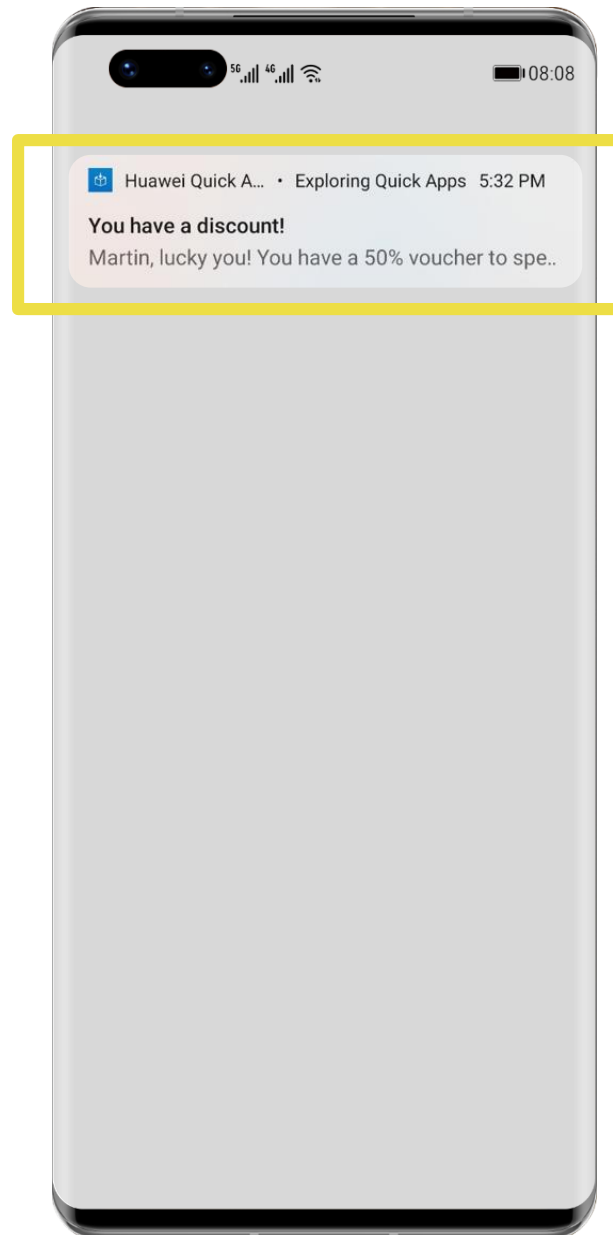
# ALSO ON YOUR HOME SCREEN

*Display as Widgets*

*Direct user interaction*
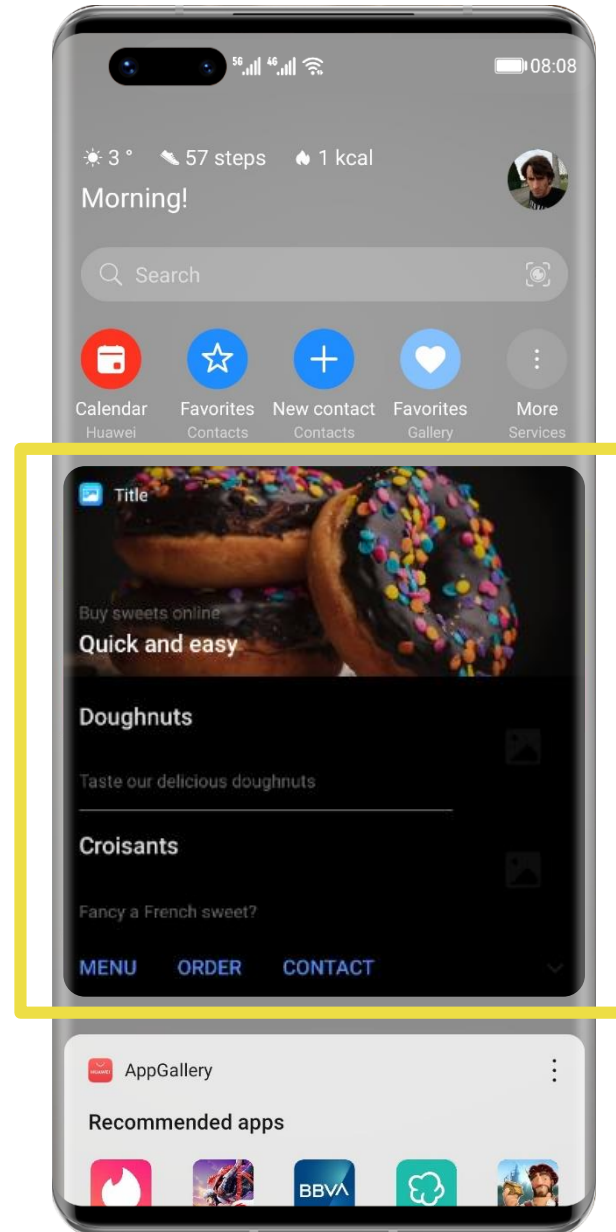
# THE FRAMEWORK

# MVVM FRAMEWORK

*Vue.js-like*

*Declarative rendering*

*Reactive HTML\* templates*

*Reusable UI components*

*One-way data flow*

*Event binding*

*CSS (+ LESS + Saas)*

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```html
<template>
  <div class="main-page">
    <text class="title">{{title}}</text>
    <input class="btn" type="button" value="Press Me" onclick="changeText" />
  </div>
</template>


<script>
export default {
  private: {
    title: 'My first Quick App'
  },
  changeText () {
    this.title = 'hello world'
  }
}
</script>

<style>
  .main-page {
    flex-direction: column;
    justify-content: center;
    align-items: center;
  }
  .btn {
    width: 550px;
    height: 86px;
    margin-top: 75px;
    border-radius: 43px;
    background-color: #4286f5;
    font-size: 30px;
    color: #000000;
  }
</style>
```
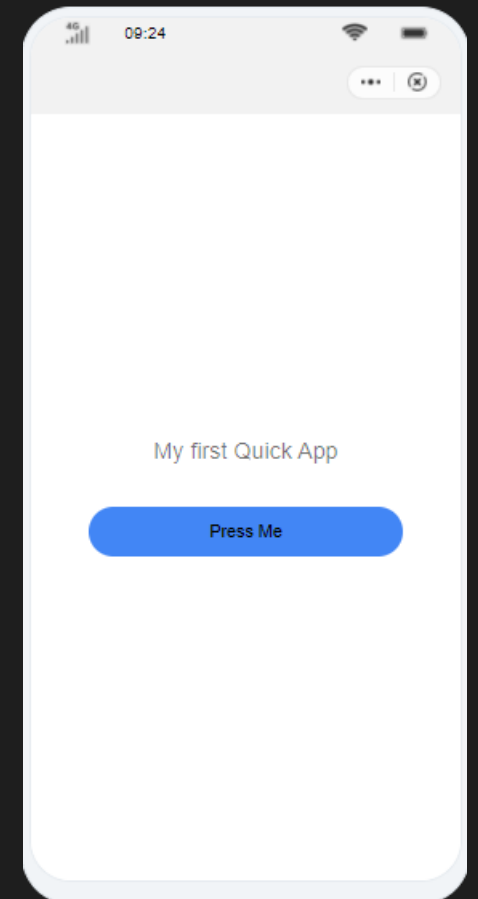
# ARCHITECTURE
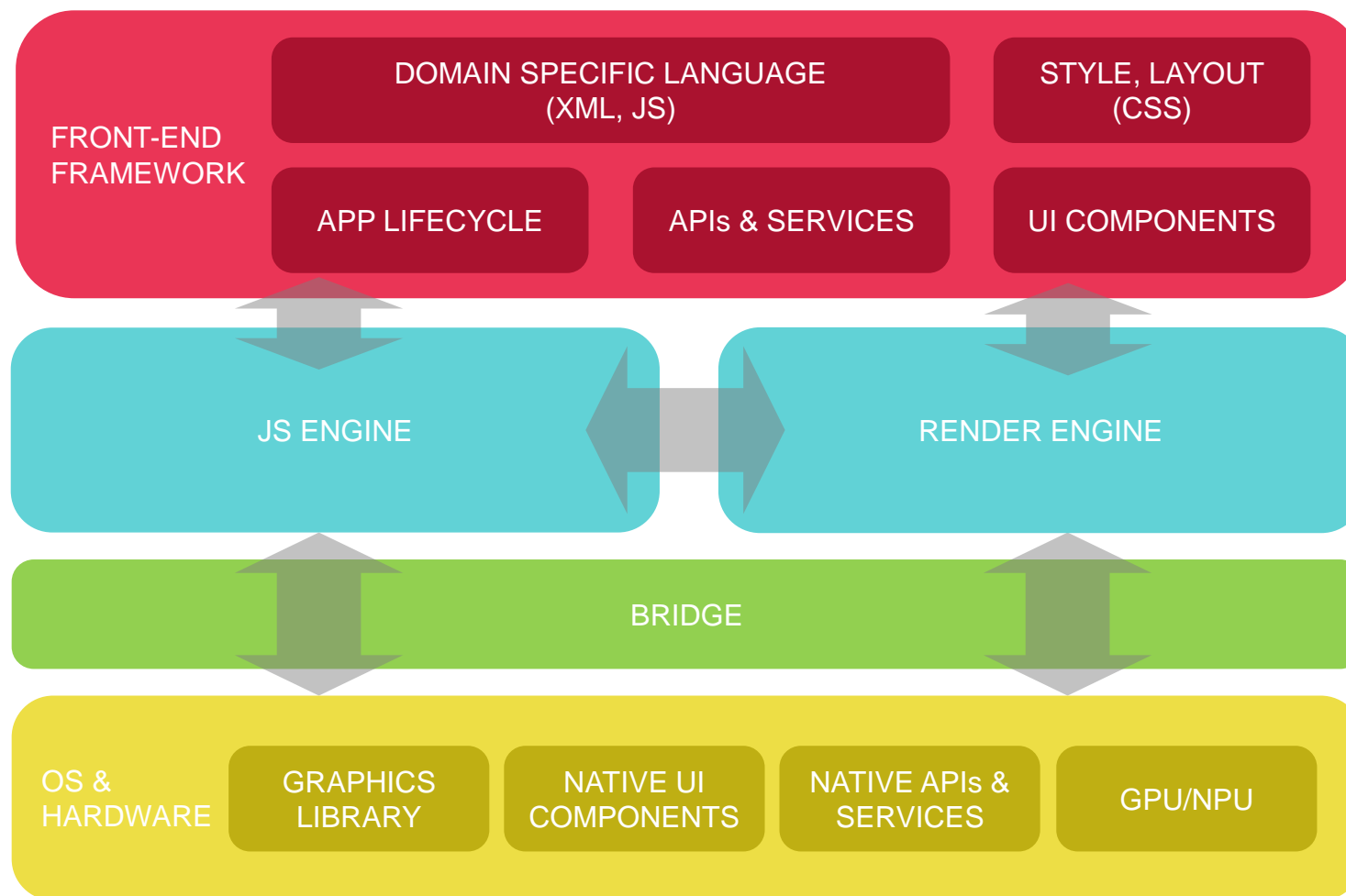
# QUICK APP BUILT-IN UI COMPONENTS

| BASIC COMPONENTS | | CONTAINERS | | FORMS | | VIDEO |
| --- | --- | --- | --- | --- | --- | --- |
| | | | | | | CAMERA |
| A | WEB | DRAWER | RICHTEXT | INPUT | LABEL | CANVAS |
| PROGRESS | RATING | LIST | STACK | OPTION | PICKER | SLIDE VIEW |
| SPAN | TEXT | POPUP | SWIPER | SELECT | SLIDER | MAP |
| MARQUEE | IMAGE | REFRESH | TABS | SWITCH | TEXTAREA | CUSTOM MARKER |

https://quick-app-initiative.ow2.io/developers/components/

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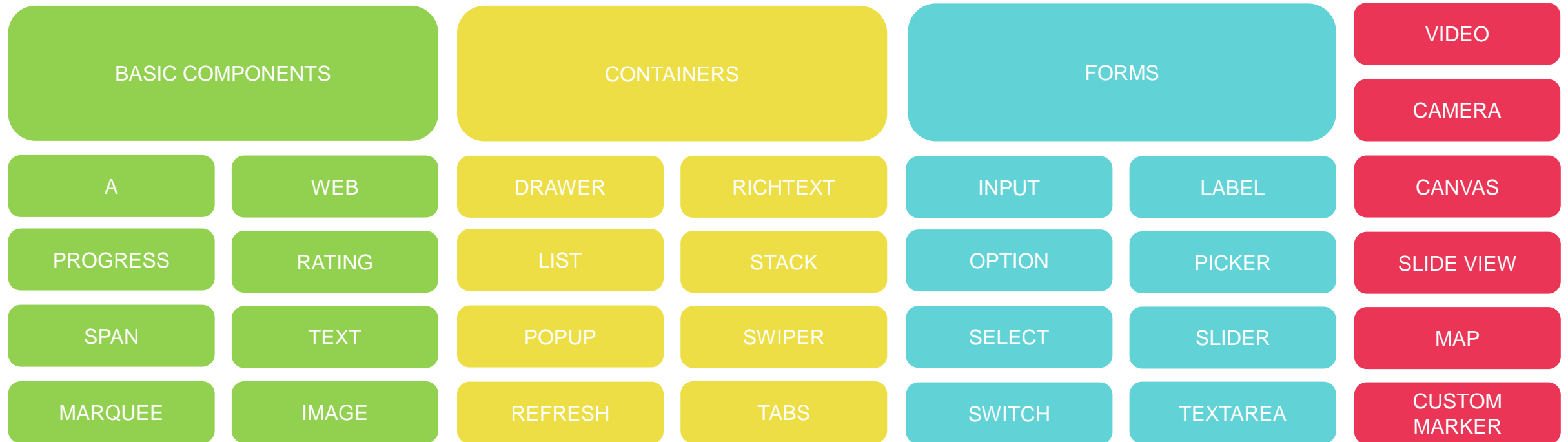
# HELLO WORLD!

```
// File Hello/hello.ux

<template>
  <div class="container">
    <image src="/Common/xtremejs_logo.jpg"></image>
    <text class="title">Hello XtremeJS!</text>
  </div>
</template>

<style lang="sass">
  .container {
    flex-direction: column;
    justify-content: center;
    align-items: center;
  }
  .title {
    font-size: 100px;
  }
</style>

<script>
  module.exports = {
    data: {},
    onInit() {
      this.$page.setTitleBar({
        text: 'XtremeJS 2021',
        textColor: '#000000',
        backgroundColor: '#EDDE45',
        backgroundOpacity: 0.8,
        menu: true
      });
    }
  }
</script>
```

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XtremeJS
Hello XtremeJS!

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# HELLO WORLD!



```
// File Hello/hello.ux

<template>
  <div class="container">
    <image src="/Common/xtremejs_logo.jpg"></image>
    <text class="title">Hi XtremeJS!</text>
  </div>
</template>

<style lang="sass">
  .container {
    flex-direction: column;
    justify-content: center;
    align-items: center;
  }
  .title {
    font-size: 100px;
  }
</style>

<script>
  module.exports = {
    data: {},
    onInit() {
      this.$page.setTitleBar({
        text: 'XtremeJS 2021',
        textColor: '#000000',
        backgroundColor: '#EDDE45',
        backgroundOpacity: 0.8,
        menu: true
      });
    }
  }
</script>
```
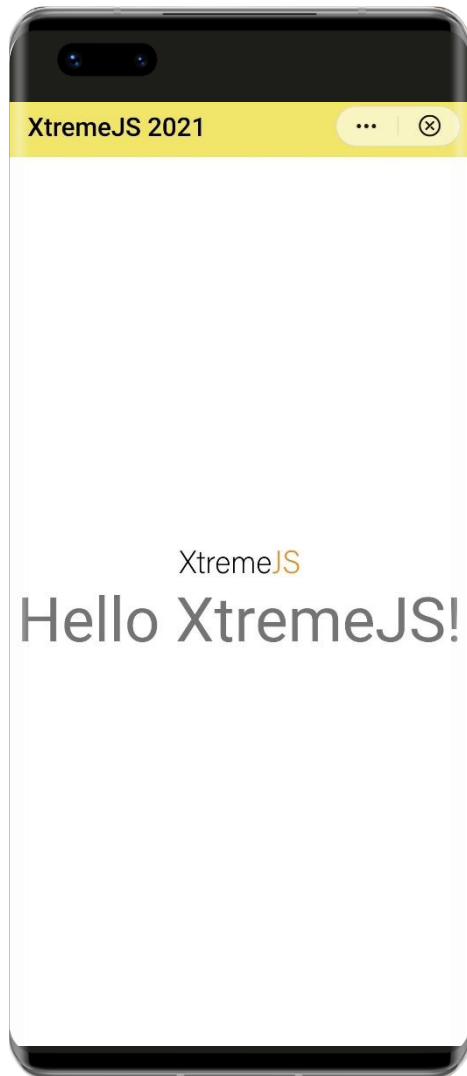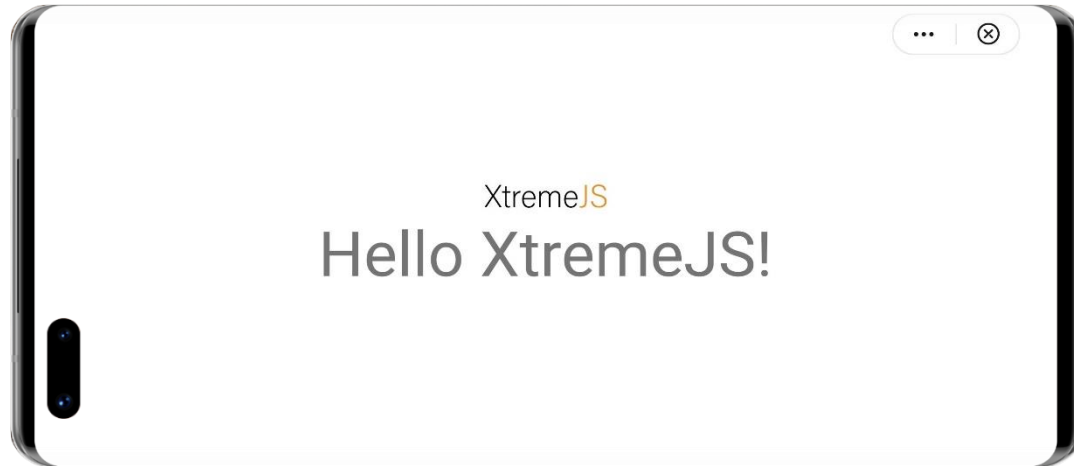
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# manifest.json



```json
{
  "package": "es.espinr.xtremejs",
  "name": "Hello XtremeJS",
  "versionName": "1.0.0",
  "versionCode": 1,
  "icon": "/Common/js_logo.jpg",
  "minPlatformVersion": 1060,
  "features": [],
  "permissions": [
    {
      "origin": "*"
    }
  ],
  "config": {},
  "router": {
    "entry": "Hello",
    "pages": {
      "Hello": {
        "component": "hello.ux"
      }
    }
  },
  "display": {
    "fullScreen": true,
    "titleBar": false,
    "orientation": "landscape",
  }
}
```
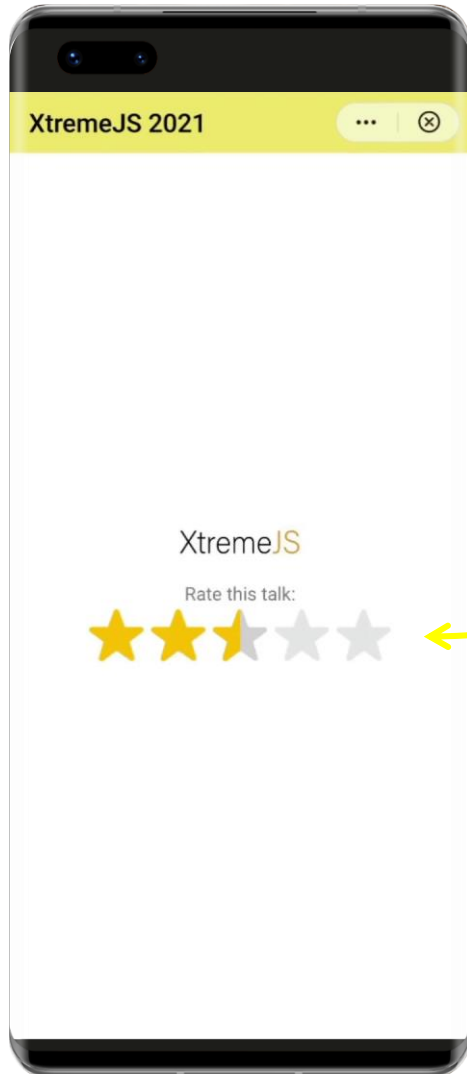
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2021

# MORE COMPONENTS

```
// File Hello/hello.ux

<template>
  <div class="container">
    <image src="/Common/xtremejs_logo.jpg"></image>
    <text class="subtitle">Rate this talk:</text>
    <rating rating="2"></rating>
  </div>
</template>

<style lang="sass">
  rating {
    star-background: url(/Common/img/star_none.png);
    star-foreground: url(/Common/img/star_full.png);
    star-secondary: url(/Common/img/star_half.png);
    height: 100px;
  }
</style>

<script>
  module.exports = {
    data: {},
    onInit() {
      // Init this component
    }
  }
</script>
```

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XtremeJS

Rate this talk:

20

# UI COMPONENTS



```
// File Hello/hello.ux

<template>
  <div class="container">
    <image src="/Common/xtremejs_logo.jpg"></image>
    <text class="subtitle">Rate this talk:</text>
    <rating class="js" rating="2" onchange="onChange"></rating>
  </div>
</template>

<style lang="sass">
  rating {
    star-background: url(/Common/img/star_none.png);
    star-foreground: url(/Common/img/star_full.png);
    star-secondary: url(/Common/img/star_half.png);
    height: 100px;
  }
  .js {
    /* Js File by AomAm from NounProject.com */
    star-background: url(/Common/img/js_star_none.png);
    star-foreground: url(/Common/img/js_star_full.png);
    star-secondary: url(/Common/img/js_star_half.png);
  }
</style>

<script>
  module.exports = {
    data: {},
    onInit() {
      // Init this component
    }
  }
</script>
```
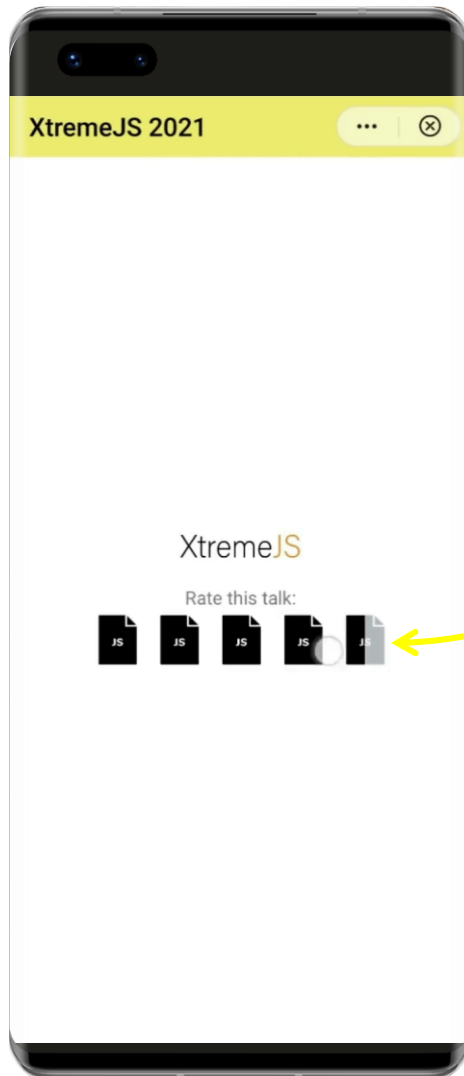
# REACTIVITY



```
<template>
  <div class="container">
    <image src="/Common/xtremejs_logo.jpg"></image>
    <text class="subtitle">Rate this talk</text>
    <rating rating="2" onchange="onChange"></rating>
    <text>value: {{myValue}}</text>
  </div>
</template>

<style lang="sass">
  /* Some styles here*/
</style>

<script>
  module.exports = {
    data: {
      displayImage: mapImages['0'],
      myValue: 0,
    },
    onChange(e) {
      // Store the current rating in the local variable
      this.myValue = e.rating
    },
  }
</script>
```
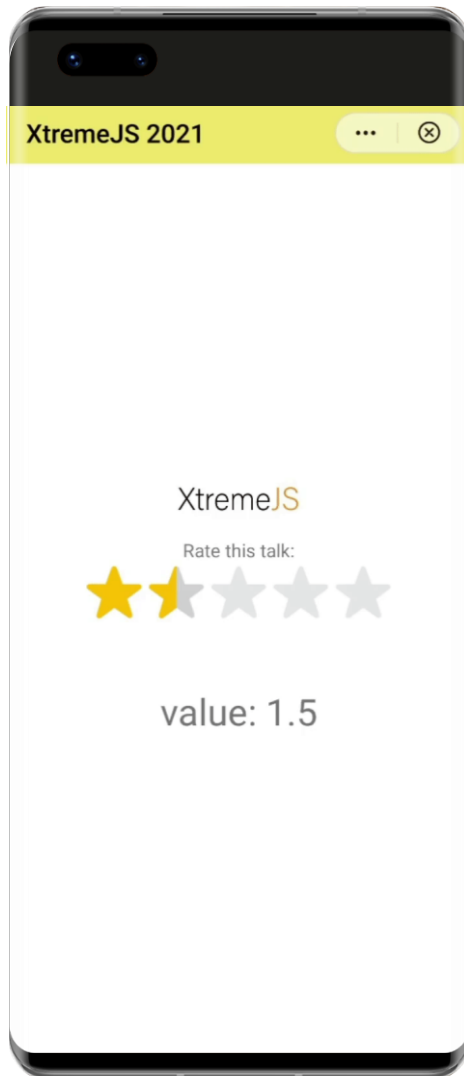
# MORE INTERACTION



```html
<template>
  <div class="container">
    <image src="/Common/xtremejs_logo.jpg"></image>
    <text class="subtitle">Rate this talk:</text>
    <rating rating="2" onchange="onChange"></rating>
    <div class="display-value">
      <image src="{{displayImage}}"></image>
    </div>
  </div>
</template>

<style lang="sass">/* Some styles here*/</style>

<script>
const mapImages = {
  '0': '/Common/img/rating-stars-00.png',
  '0.5': '/Common/img/rating-stars-05.png',
  /* More lines with a map of { values - image } */
  '5': '/Common/img/rating-stars-50.png',
}
module.exports = {
  data: {
    displayImage: mapImages['0'],
    myValue: 0,
  },
  onChange(e) {
    this.myValue = e.rating
    this.updateDisplayImage()
  },
  // Update the image at the bottom of the page
  updateDisplayImage(){
    this.displayImage = mapImages[this.myValue.toString()]
  }
}
</script>
```
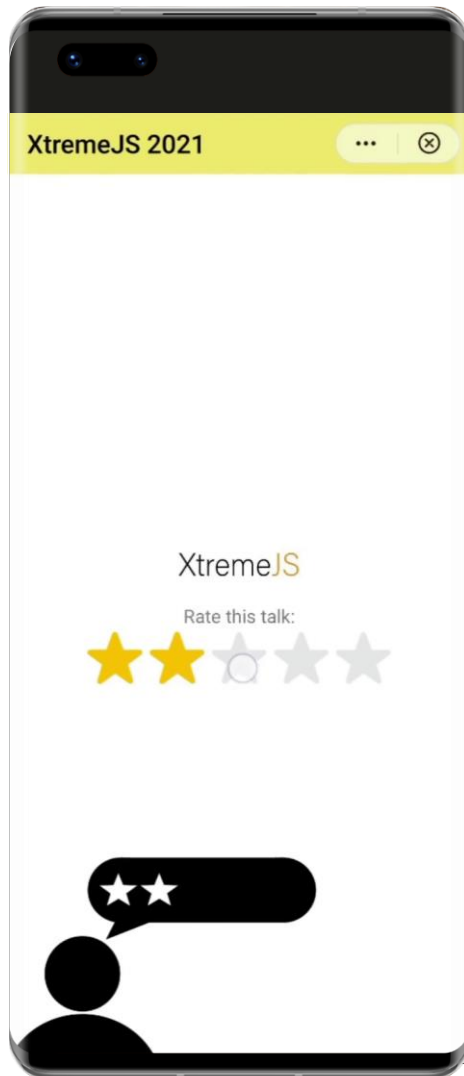
# RUNTIME FRAMEWORK



JS ENGINE

RENDER ENGINE
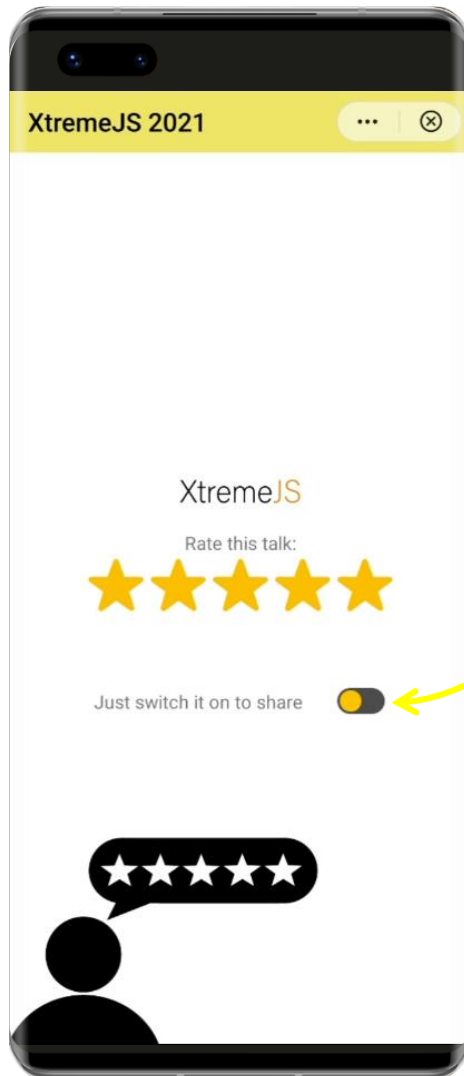
PAGE 1
(JavaScript)

PAGE 2
(JavaScript)

PAGE 1
(<template>, CSS)

PAGE 2
(<template>, CSS)

event

data

event

data

JS BRIDGE

NETWORK

STORAGE

FILE SYSTEM

SENSORs

CAMERA

…

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# APIs & SERVICES

| SYSTEM & NETWORK | | INPUT - OUTPUT | | DEVICE FEATURES | | VENDOR SERVICES |
|---|---|---|---|---|---|---|
| RUN IN BACKGROUND | CRYPTOGRAPHY | QR CODE | QUICK APPS SHARING | NETWORK STATUS | DEVICE AUDIO VOLUME | (AI) TEXT TRANSLATION |
| SHORTCUT (INSTALLATION) | ZIP MANAGEMENT | AUDIO RECORDINGS | CLIPBOARD | BATTERY | DEVICE ALARMS | (AI) SPEECH RECOGNITION |
| SYSTEM CONFIGURATION | STORAGE | CANVAS | EXTERNAL SHARING | BRIGHTNESS | CONTACTS | PAYMENTS |
| PACKAGE MANAGEMENT | FILE SYSTEM | ANIMATIONS | PUSH NOTIFICATIONS | GEOLOCATION | CALENDAR | AUTH. |
| APP INFO | WEB SOCKETS | IMAGES | WEB VIEW | SENSORS | SMS | STATISTICS |
| ROUTING | FETCH | AUDIO | DIALOGS | VIBRATOR | WIFI | ADS |
| DEVICE INFO | UPLOAD DOWNLOAD | VIDEO | IN-APP NOTIFICATIONS | DAILY STEPS | BLUETOOTH | USER ACCOUNT |

https://quick-app-initiative.ow2.io/developers/services/

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# USE DEVICE'S APIs

```html
<template>
  <div class="container">
    <image src="/Common/xtremejs_logo.jpg"></image>
    <text class="subtitle">Rate this talk:</text>
    <rating rating="2" onchange="onchangeRating"></rating>
    <div class="share">
      <label>Just switch it on to share </label>
      <switch onchange="onchangeSwitch"></switch>
    </div>
    <div class="display-value">
      <image src="{{displayImage}}"></image>
    </div>
  </div>
</template>

<style lang="sass">
  /* Some styles here*/
  .share {
    switch {
      thumb-color: #ffc400;
    }
  }
</style>

<script>
  module.exports = {
    data: {
      displayImage: mapImages['0'],
      myValue: 0,
    },
    onchangeSwitch(e) {
      // if enabled, share the results of the review
    },
  }
</script>
```
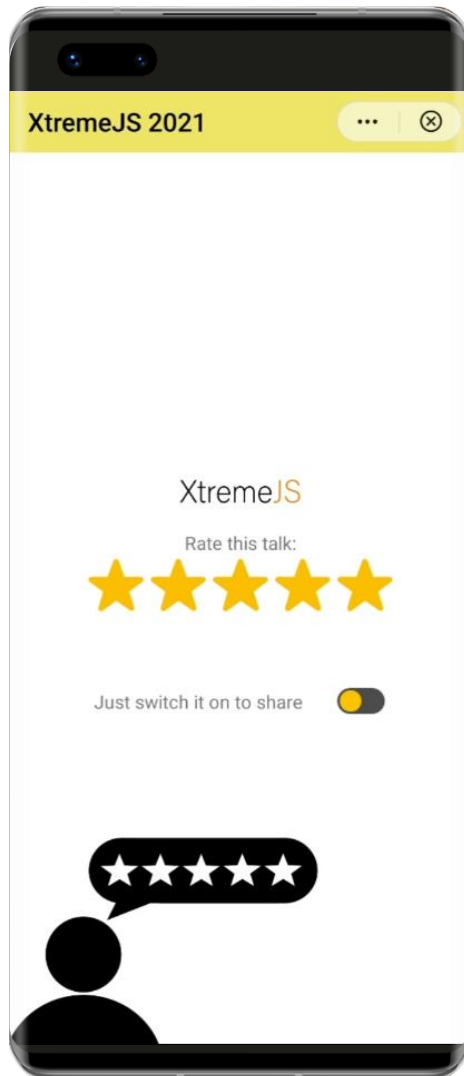
# IMPORT THE MODULE



```html
<template>
  <div class="container">
    <image src="/Common/xtremejs_logo.jpg"></image>
    <text class="subtitle">Rate this talk:</text>
    <rating rating="2" onchange="onchangeRating"></rating>
    <div class="share">
      <label>Just switch it on to share </label>
      <switch onchange="onchangeSwitch"></switch>
    </div>
    <div class="display-value">
      <image src="{{displayImage}}"></image>
    </div>
  </div>
</template>

<style lang="sass">/* Some styles here*/</style>

<script>
import share from '@system.share'

module.exports = {
  data: {
    displayImage: mapImages['0'],
    myValue: 0,
  },
  onchangeSwitch(e) {
    // if enabled, share the results of the review
    if (e.checked) {
      share.share({
        type: "text/plain",
        data: `Hey!, this XtremeJS is a ${this.myValue}-
stars event. Check it out!`,
        success(data) { /* Do whatever you want */ },
        fail(data, code) { /* Do whatever you want */ },
        complete() { /* Do whatever you want */ }
      });
    }
```
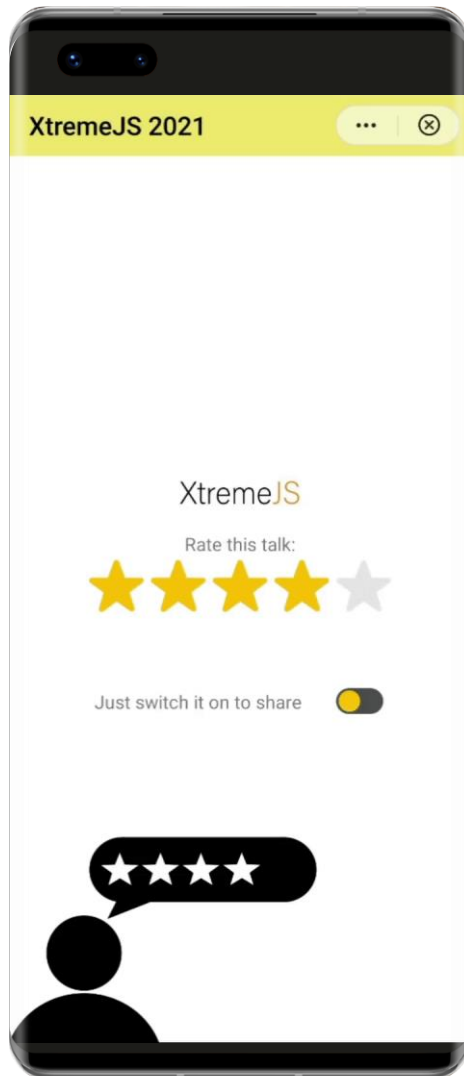
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# JUST USE IT



```html
<template>
  <div class="container">
    <image src="/Common/xtremejs_logo.jpg"></image>
    <text class="subtitle">Rate this talk:</text>
    <rating rating="2" onchange="onchangeRating"></rating>
    <div class="share">
      <label>Just switch it on to share </label>
      <switch onchange="onchangeSwitch"></switch>
    </div>
    <div class="display-value">
      <image src="{{displayImage}}"></image>
    </div>
  </div>
</template>

<script>
  import share from '@system.share'

  module.exports = {
    data: {
      displayImage: mapImages['0'],
      myValue: 0,
    },
    onchangeSwitch(e) {
      // if enabled, share the results of the review
      if (e.checked) {
        share.share({
          type: "text/plain",
          data: `Hey!, XtremeJS is a ${this.myValue}-stars event. Check it out!`,
          success(data) { /* Do whatever you want */ },
          fail(data, code) { /* Do whatever you want */ },
        });
      }
    }
  }
</script>
```

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# APIs & SERVICES

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|---|---|---|---|---|---|---|
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https://quick-app-initiative.ow2.io/developers/services/

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**STILL SOME CHALLENGES…**

# QUICKAPP
INITIATIVE

Open source community **hosted by OW2**

**Vendor-neutral**

Collaborative task forces

*Join us now!* →

https://quick-app-initiative.ow2.io

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# Thank you.

@espinr
martin.alvarez.espinar@huawei.com

Code at: https://github.com/espinr/quick-app-samples

More info:



https://quick-app-initiative.ow2.io

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# Thank you.

Bring digital to every person, home and organization for a fully connected, intelligent world.

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