



Performance with Cordova

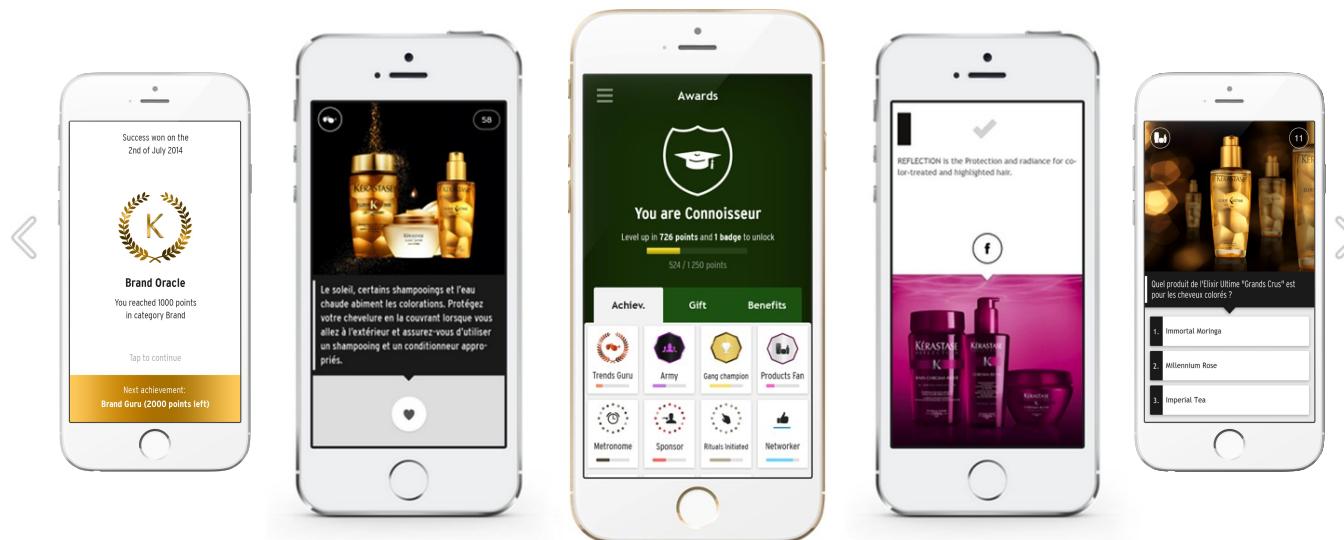
Phone Gap Meetup – 2015, January 20th



Agenda

- Λ SPARTED at a glance
- Λ Context and issues
- Λ Solutions benchmark
- Λ Chosen solution
- Λ Results

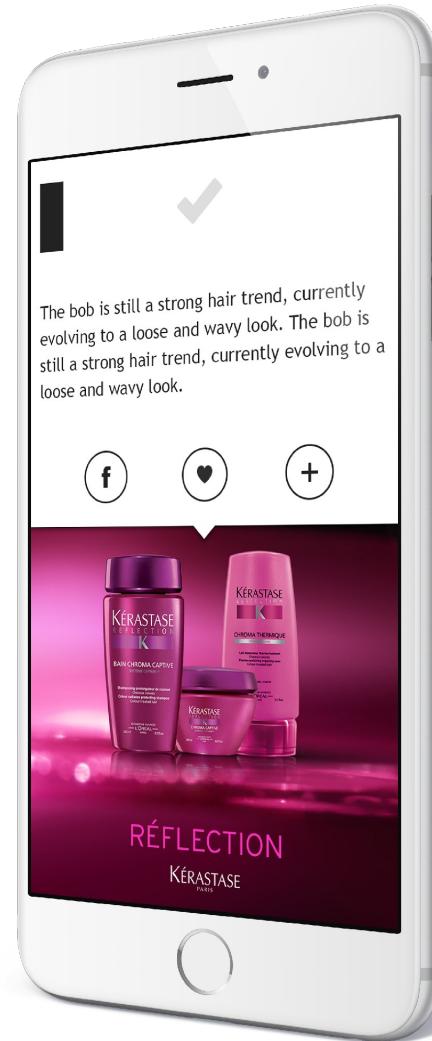
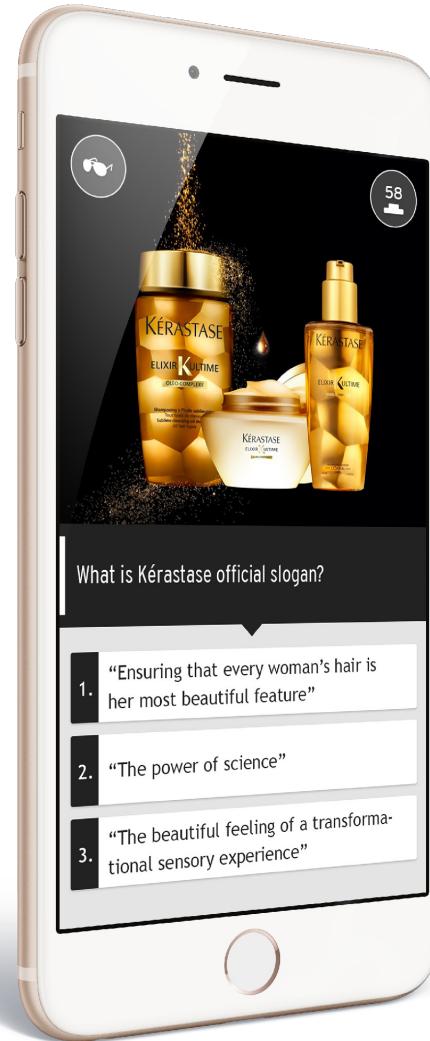
Mobile game for daily training



**EDUCATE THEM EVERYDAY
WITH FUN, SUCCESS & KNOWLEDGE**

Quiz Game

Play contents
& learn messages

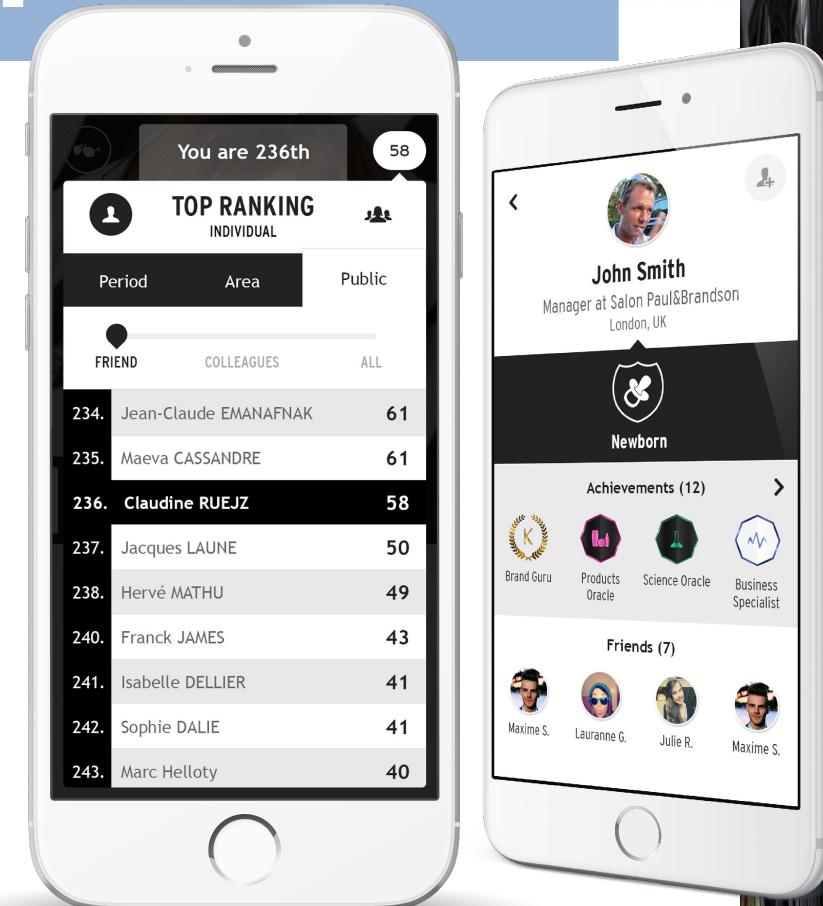


3 minutes
Every day

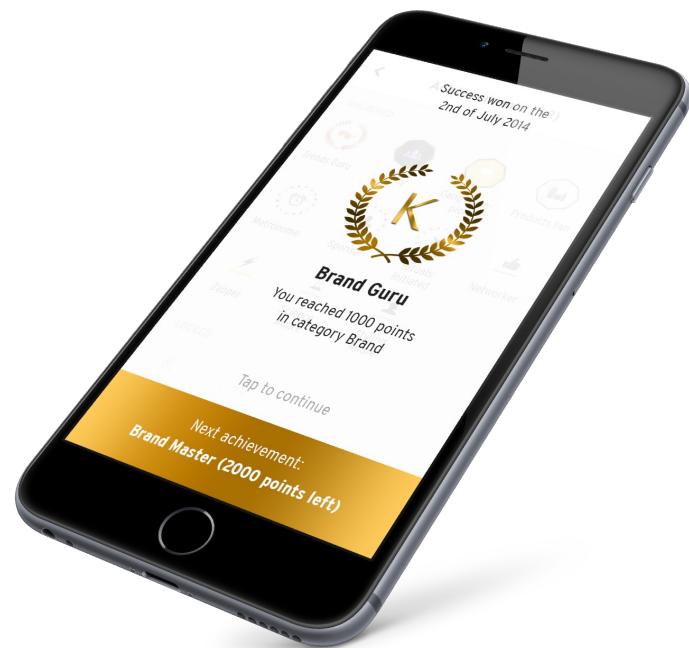
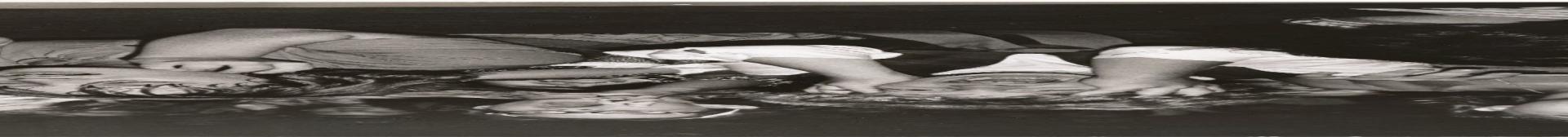
Daily short experience
Regular drill



Social competition

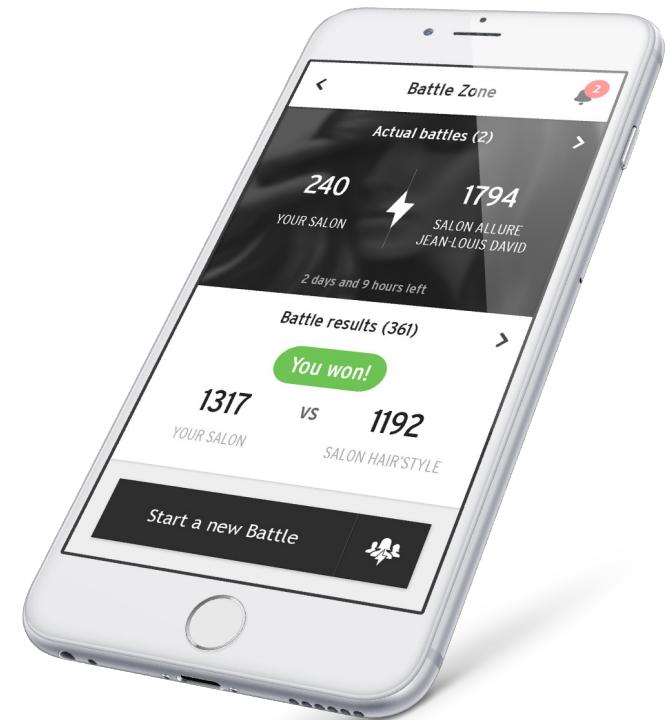


Fanaticize
your



Teams Battle

Inter-team competition
Spirit building





Context and issues

Platform general overview

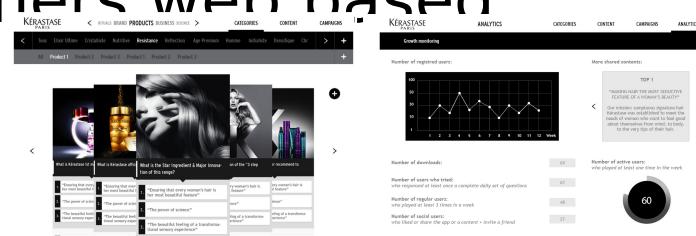
Ⓐ Game : Users front-office

- Ⓐ Cross-platform mobile app
 - Smartphones, tablets, web
 - HTML5/CSS3, JS, Cordova



Ⓐ Contents management : Customers web based back-office

- Content creation, scheduling & bro
- Analytics



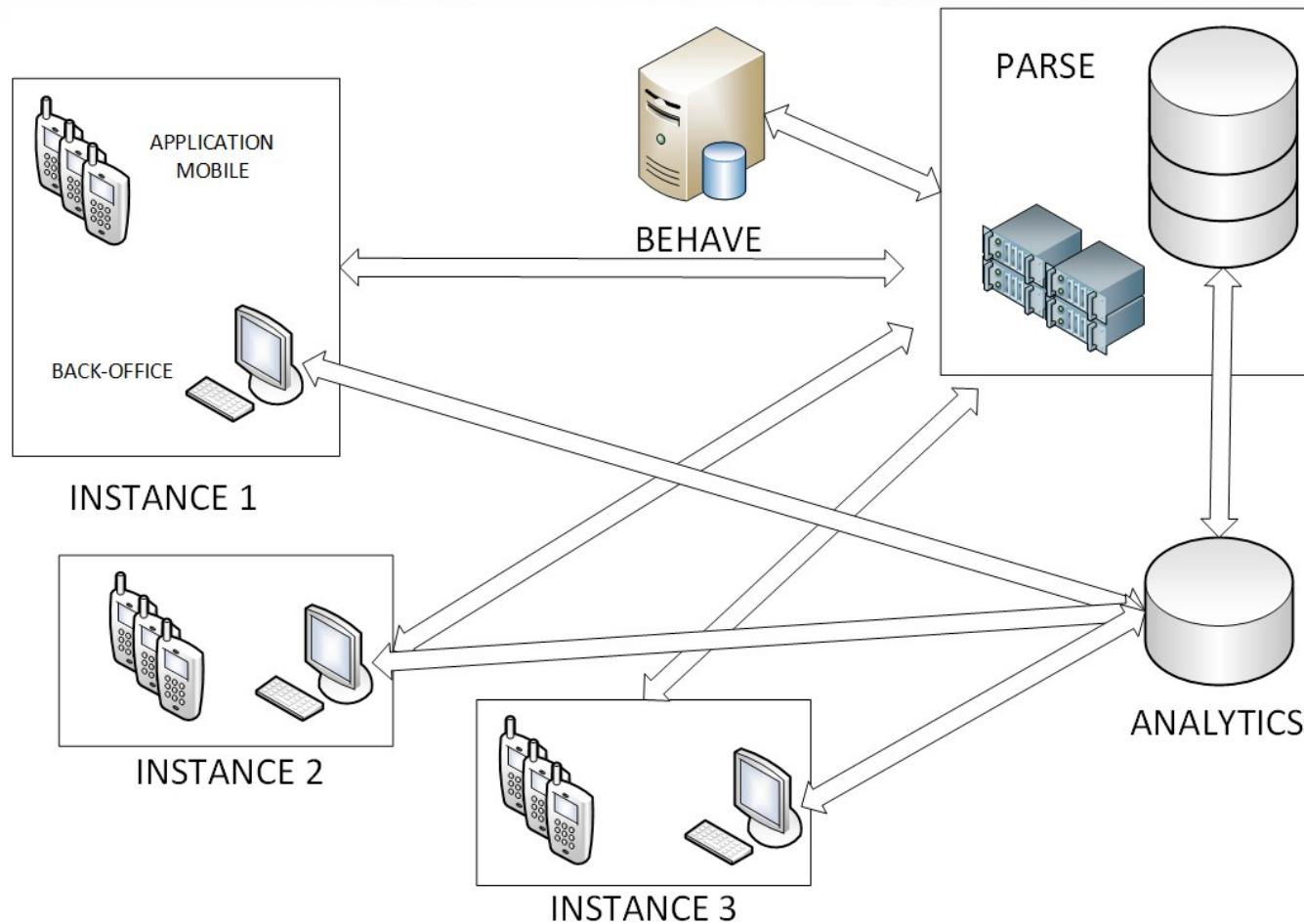
Ⓐ Multi-instance architecture

- Ⓐ 1 core system

- Ⓐ Multiple customers apps + back-office (customer



Architecture



Issues

⚠ Animations

- ⚠ How to animate panel transitions?
- ⚠ What is the performance breakpoint?

⚠ Angular JS

- ⚠ ng-animate is not enough
- ⚠ Angular is not enough



JS frameworks benchmark

JS frameworks benchmark

Angular.js:

v1.2.23: 27 ops/s

⊕+ : Very popular MVC framework

Developed at Google

Extend HTML with logic

Less code to write

⊖- : Strong opinionated about everything

Documentation and source code are insanely complex

Two ways binding everywhere

Not play well with other libraries

JS frameworks benchmark

Ⓐ Backbone.js: v1.1.2: 675

ops/s

Ⓐ+ : Very popular MVC framework

Ⓐ- : Too many choices to do one thing

No DOM manipulation handling

Build on many dependencies

Ⓐ Ember: v1.6.1: 40

ops/s

Ⓐ+ : Templating with HandleBars

Ⓐ- : Poor performances

JS frameworks benchmark

① Knockout: v3.2.0: 22

ops/s

②+ : Simple and easy to learn

②- : No url routing

Limited community skills

① Vue.js: v0.10.5: 596

ops/s

②+ : Fast minimal angular-like

②- : Fast minimal angular-like

JS frameworks benchmark

⚠️ React: v0.11.2: 26 ops/s

⚠️+ : Use a virtual DOM for best perfs

⚠️- : Only view handling

⚠️ Mithril: v0.1.21: 3501
ops/s

⚠️+ : Virtual DOM, real MVC

⚠️- : Let a lot of freedom to the developer
No animating routing service



Chosen solution

Mithril

- Λ Only 5kB gzipped, no dependencies
- Λ Small API (only 16 functions), small learning curve
- Λ Real MVC architecture, not an hybrid try
- Λ Fast virtual DOM diffing
- Λ Intelligent auto-redrawing system
- Λ Available and very active maintainer
- Λ No HTML !



Results

Results

- Ⓐ Almost native like performances for some animations
 - Ⓐ Real modularity and flexibility
 - Ⓐ Enhance code maintainability and portability
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-
- Ⓐ Be careful with the automatic redrawing system

Dare. Go ahead.

SPARTED

PLAY HARD. LEARN EASY.

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