

How I learned testing from mobile browsers

Ioana Chiorean

Who is ~~Loana~~ Ioana Chiorean?

I am a PM (former QA TL) & CL @ Cognizant Softvision

Mozillian for more than 9 years now

I volunteer - Mozilla & EU Code Week.

I am a committee mb @ EuroSTAR Conf.

Twitter @ioana_cis

#lifeofamozillian



Agenda

1

why even?

2

how many apps
are too many?

3

One single R
reuse

4

never stop
learning

5

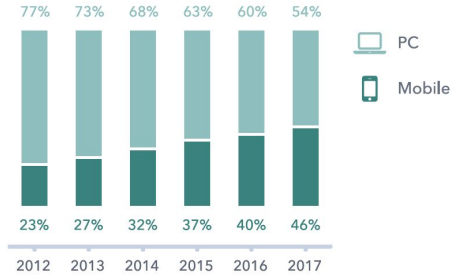
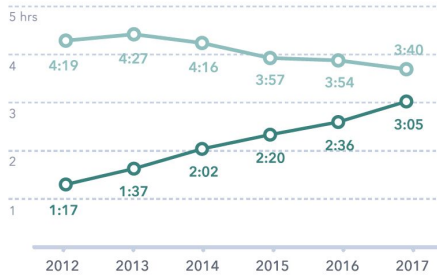
the future
is bright

Why even:

Alo? Internet here.

TIME SPENT ONLINE | PCS VS MOBILES

Average daily hours and minutes spent online via



MOBILE INTERNET TRAFFIC AS SHARE OF TOTAL GLOBAL ONLINE TRAFFIC

47.96%

MOBILE SHARE OF TOTAL DIGITAL MINUTES IN THE UNITED STATES IN 2017

65%

APP SHARE OF TOTAL MOBILE MINUTES IN THE UNITED STATES IN 2017

87%

These stories are what power us.





New Markets (what does that even mean?)

1. Geographically
2. Oldies but newly online
3. Babies
4. Everybody!



Do you have 4 minutes to talk about

Firefox for Android History Lesson

Welcome to Fennec



mozilla



Welcome to
Fennec



drag this way
for your tabs

drag this way
for controls



- ~ 2009
- XUL -> Java Native UI
- WebView - GeckoView
 - Bulky
 - Hungry
 - Large
- Hard to maintain
- Arhaic process
- All the addons in the world

Quiz time:

**How many apps are
too many?**



Firefox Browser fas
Mozilla



Firefox for Android
Mozilla



Firefox Preview
Mozilla



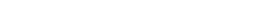
Firefox Lockwise
Mozilla



Firefox Nightly for D
Mozilla



Firefox Send
Mozilla



Firefox Screenshot
Mozilla



Mozilla Stumbler
Mozilla



Firefox Reality Brow
Mozilla



Notes by Firefox: A
Mozilla



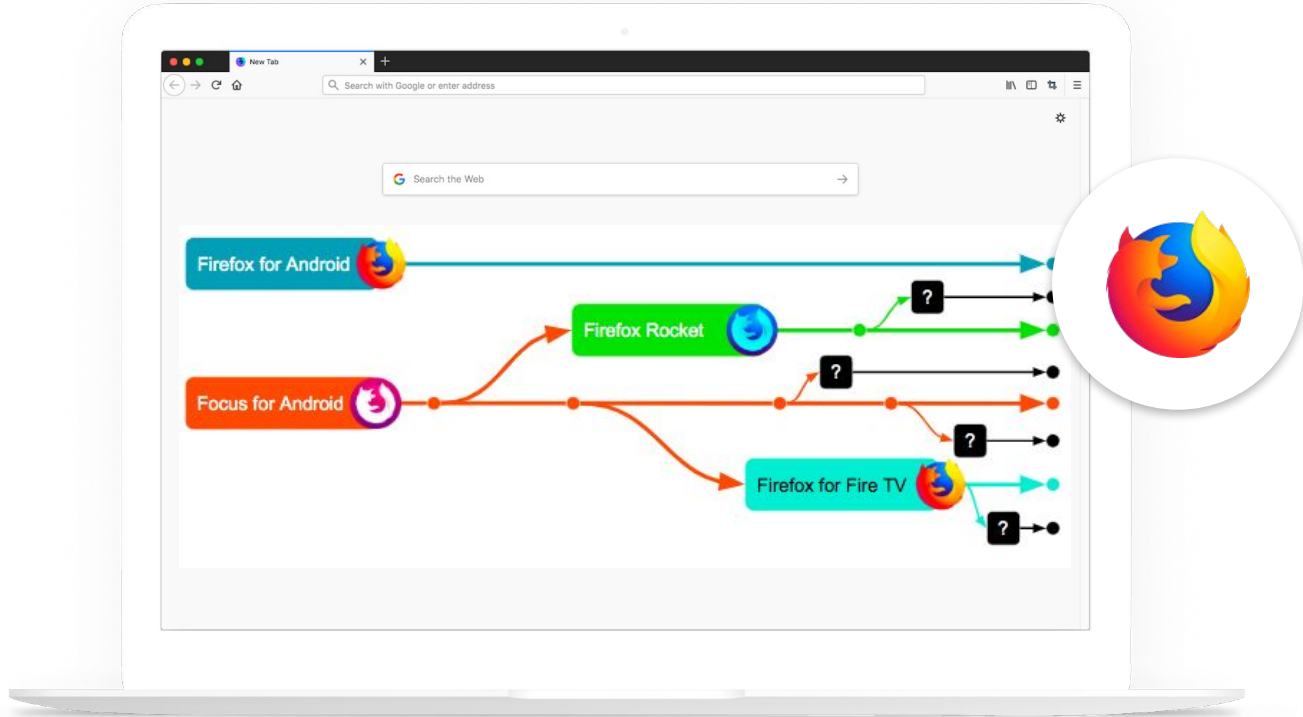
Reference Browser
Mozilla



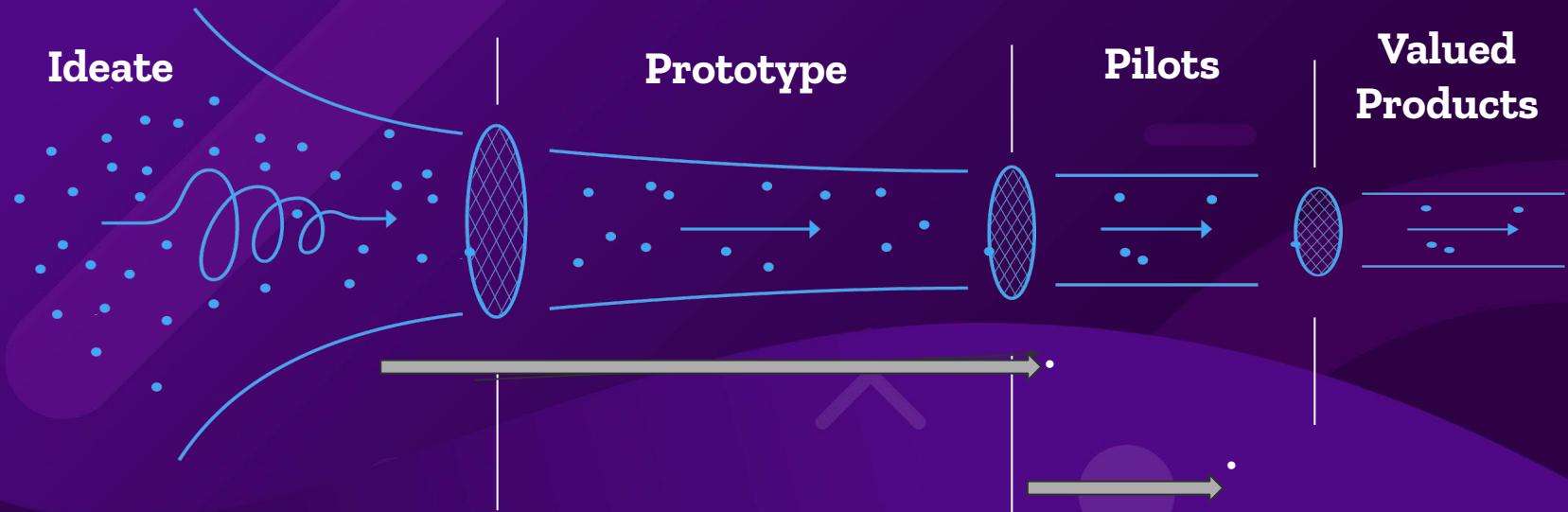
Zero Waste approach in tech

5 Rs

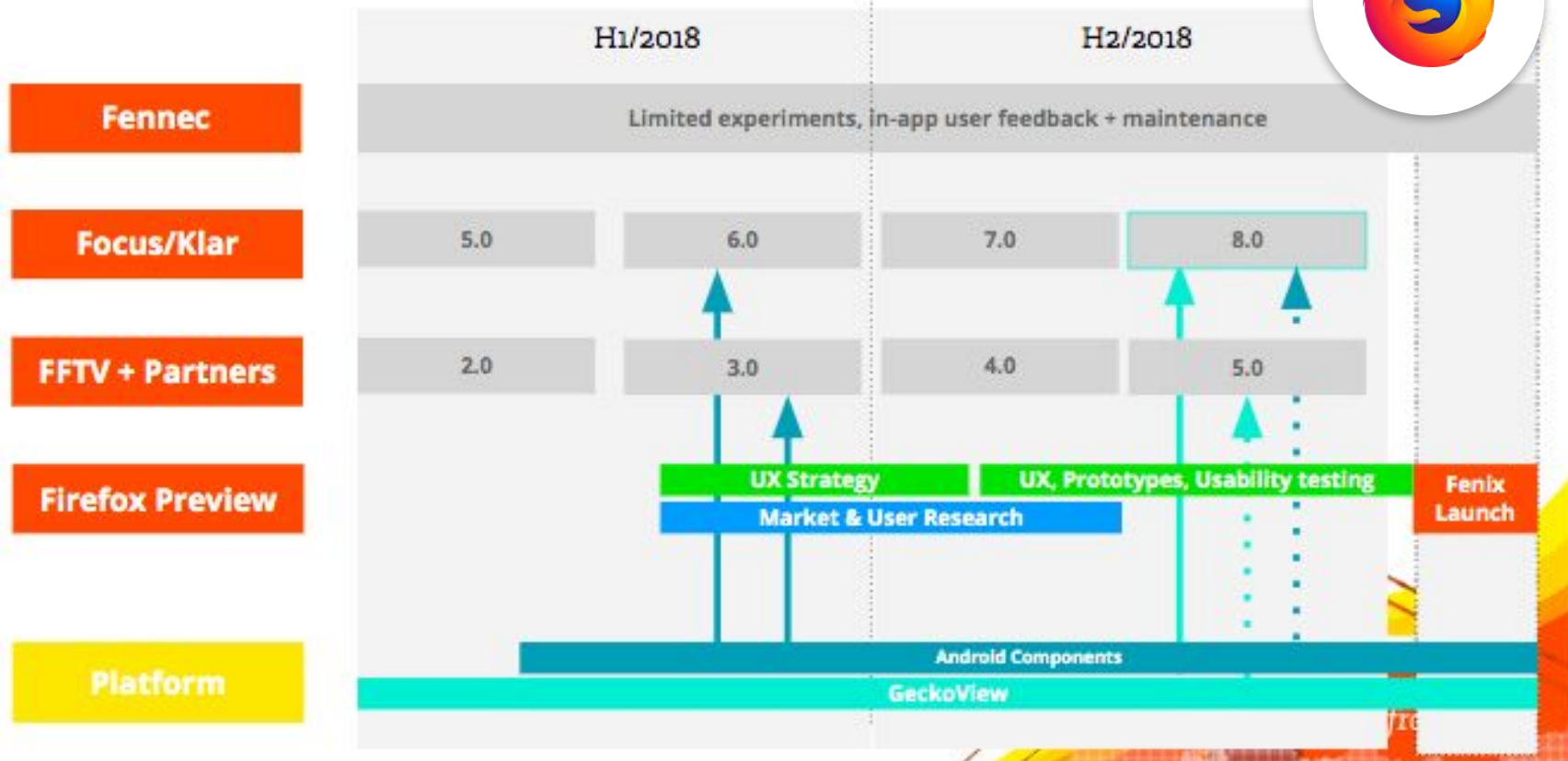
- 
- 1. Refuse**
 - 2. Reduce**
 - 3. Reuse**
 - 4. Repurpose/ Rot**
 - 5. Recycle**



Product Innovation Pipeline & Early Product Development



2018 Android Product Team



Projects that use Android Components

Focus

- Telemetry
- Crash Reporting
- Browser Session
- Domain Suggestions
- Search
- Auto-complete
- Error Pages
- Colors
- A/B Testing

Firefox for TV

- Telemetry
- Browser Session/Engine
- Toolbar

Firefox for TV

- Telemetry
- Browser Engine
- Fonts / Icons

Firefox for Echo Show

- Telemetry
- Toolbar
- Domain Suggestions
- Fonts / Icons

Lockbox

- Telemetry
- Crash Reporting
- Firefox Accounts
- Logins Storage & Sync
- Data Protection

Reference Browser

- Telemetry
- Crash Reporting
- Gecko Engine
- Search
- Toolbar / Awesomebar
- Firefox Accounts
- History Storage & Sync

Fenix

Will use All The Things

Look Under Your Chair! Components!

Supporting Services

- Telemetry
- Glean (Telemetry v2)
- Crash Reporting
- A/B Testing

Generic UI

- Photon Colors, Icons, Fonts
- Progress Indicators
- Autocomplete Field
- More expected for Fenix

Firefox Services Ecosystem

- Firefox Accounts
- Sync (History, Bookmarks, Tabs)
- Send Tab

GeckoView Support

- Downloads
- Intent Processing (Sharing)
- Chrome Custom Tabs
- Context Menus (long presses in web content)
- Prompts (Alerts, dialogs, pickers)
- Find in Page

Browser Core

- Engines (System WebView, GeckoView, ServoView)
- Tab Management
- Tab Counter
- Permissions
- Tracking Protection
- Error Pages
- Toolbar / Menus
- Awesomebar
- Tabstray
- Search
- Storage
- Domain Suggestions

Don't stop me now, I'm having a good time

Never stop learning..

Software testing is an investigation conducted to provide stakeholders with information about the quality of the software product or service under test.

Jack of all trades, master of ALL!*

* not a bug, it is a feature

Advocate of user - UX

Software Engineer - coding

Explorer - Creative work

Scientist - Heuristics / Measurements

Writer / Documentarist

What skills do you need for this role?

- Attention to details
- Analytical thinking
- Independence
- Proactivity
- Ownership
- Logical thinking
- Creative
- Continuous learning
- Efficient communication
- & so many other...



Analyzing users stories and/use cases/requirements for validity and feasibility

Collaborate closely with other team members and departments

Execute all levels of testing (System, Integration, and Regression)

Design and develop automation scripts when needed

Detect and track software defects and inconsistencies

Provide timely solutions

Apply quality engineering principals throughout the Agile product lifecycle

Provide support and documentation



Fennec

Aka Firefox for Android



- ~ 2009
- XUL -> Java Native UI
- WebView - GeckoView

- Bulky
- Hungry
- Large

- Hard to maintain
- Arhaic process
- All the addons in the world

Testing Fennec

Aka Firefox for Android

- **Load**
 - **Compatibility**
 - **Reliability**
 - **Smoke / Beta / Acceptance**
 - **Integration**
 - **System**
 - **Regression**
 - **Automation**
-
- **450 BFTs**
 - **~55 Smoke**

Fennec iOS

Yeah Aka Firefox for iOS

- ~ 2015
- Webkit
- New tools

Testing Fennec iOS

Yeah Aka Firefox for iOS

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Firefox TV

Aka Firefox for Fire TV

- **fireman**
- **new perspective in as client/PMO**
- **Partnerships**

Testing Firefox TV

Aka Firefox for Fire TV

- fireman
- new perspective in as client/PMO

- WebCompatibility
- Audio/ Video encryptions
- Hardware / 4K
- Writing with a remote?

Focus



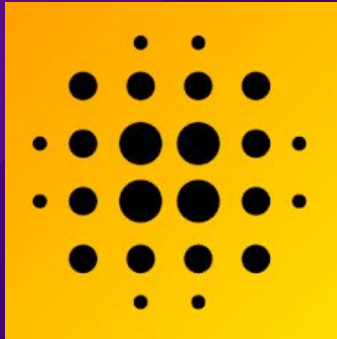
- **The guard**
- **Fast**
- **Safe**
- **Simple**

Testing Focus

- **The guard**
- **Fast**
- **Safe**
- **Simple**

- **Non functional testing focus**
- **Security - PB, ETP, DNS over HTTPS**
- **Load**
- **Reliability**
- **Smoke**
- **No tests reused**

Reference Browser



- **The player**
- **Kitchen experiments**
- **A-C**
- **Not sociable but smart**

Testing Reference Browser

- **The player**
- **Kitchen experiments**
- **A-C**
- **Not sociable but smart**

- **No UX testing**
- **Unit Testing**
- **Component Testing**
- **Documentation**

Firefox Lite

- The slim one
- Fast
- Simple
- Funky - aka Screenshoty'



Testing Firefox Lite

- The slim one
 - Fast
 - Simple
 - Funky - aka Screenshoty'
-
- One Localization / Market
 - Performance
 - Low connectivity or none at all

Firefox Preview



- **Has everything new**
- **June 2019**
- **A-C based**

- **XUL -> Java Native UI -> Kotlin**
- **WebView - GeckoView**
- **New process - Github**

-

Testing Firefox Preview

- A/B testing
- UX
- Alpha testing
- WebCompatibility
- Performance
- Install
- Localization
- New testplan, test suites

- Test everything!

One more thing..

Pun intended..



Firefox Accounts

- Growing
 - 2018: 6.6% -> 9% of Firefox users
- FxA users more engaged
 - Sync users visit ~50% more URIs
 - 50% of the days of the month, vs. 33% for non-users
- Desktop -> Mobile
 - 12.5% of users login on mobile within 2 days after creating desktop account



The future is now.

The future is bright.



Recap.. sort of..

Strategies:

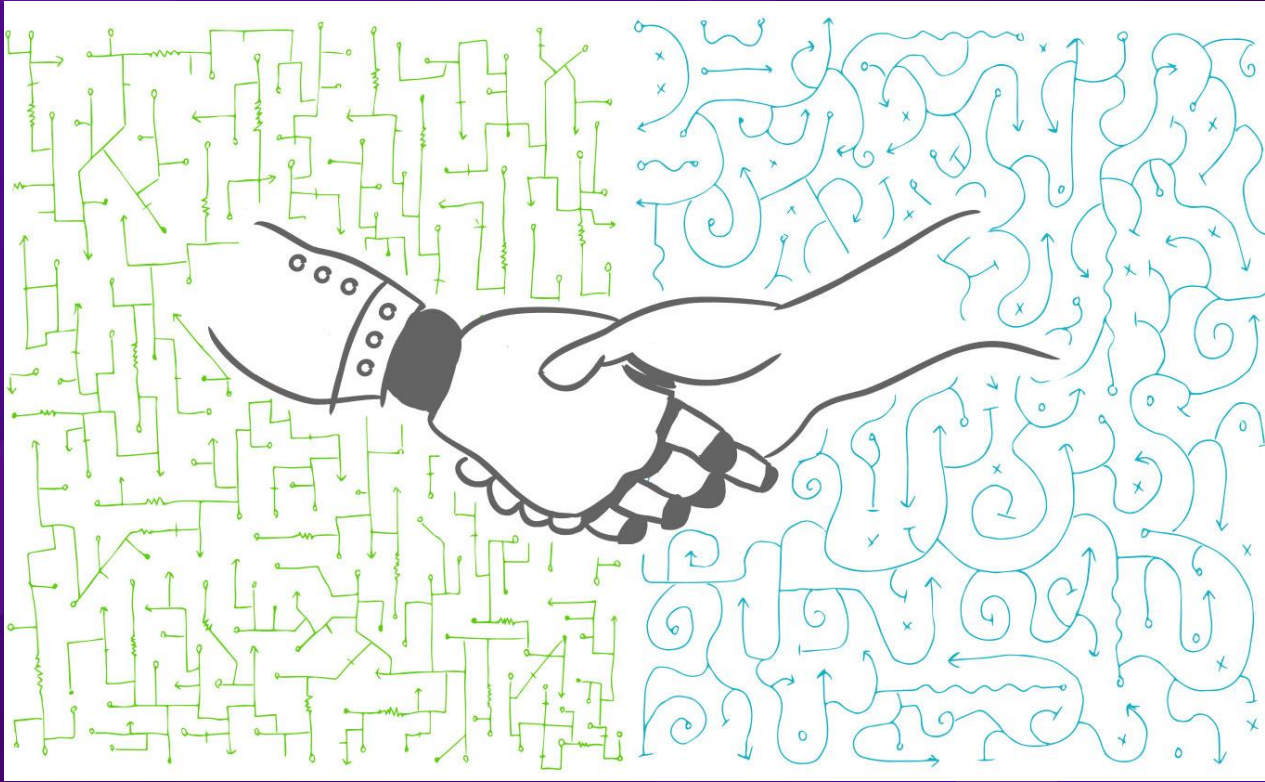
- Timely planning testing
- Automation vs Manual Investment
- Smoke/ Acceptance testing
 - as little as possible for the oldies
 - As much as needed for the newbies
- Specialise
- Be “lazy”
 - Firefox Rocket/Lite - One language vs Fenix/Fennec - multi L10n

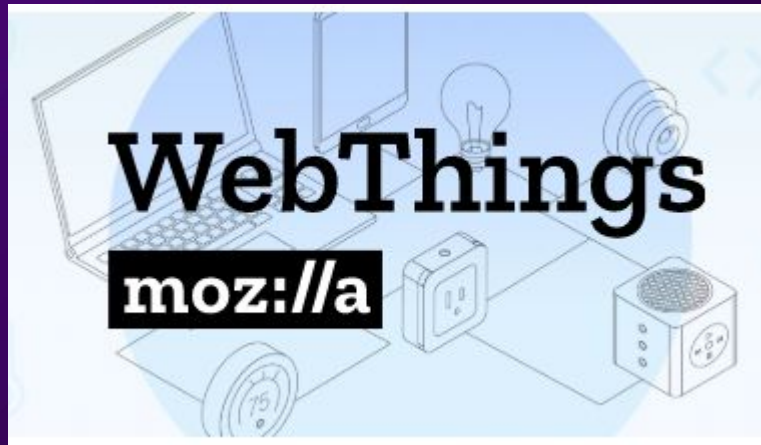
Don't be the sheep!

Be the ~~wolf~~ fox!



[Photo credit.](#)





<http://webcompat.com/>

BUG REPORTING
FOR THE WEB.





@ioana_cis



ioana@mozilla.com

<http://bit.ly/SEETest-MobileTesting>

<https://github.com/mozilla-mobile>

Let's fix the world one
bug at a time!