

Universal Smartphone Radio Project

Presentation to EBU Digital Radio Summit

February 2015



BBC



EBU



The Universal Smartphone Radio Project

- Brilliant experience of **radio** on smartphones
- **Globally applicable & open** standards
- Common **user experience** guidelines
- Common **broadcaster standards**
- **Consistent APIs** for radio apps

“Making broadcast radio like an app”

BBC



 commercial radio
australia

 emmis / interactive

 iBIQUITY
DIGITAL

EBU



ARD

 **NAB**
NATIONAL ASSOCIATION OF BROADCASTERS

Project Partners

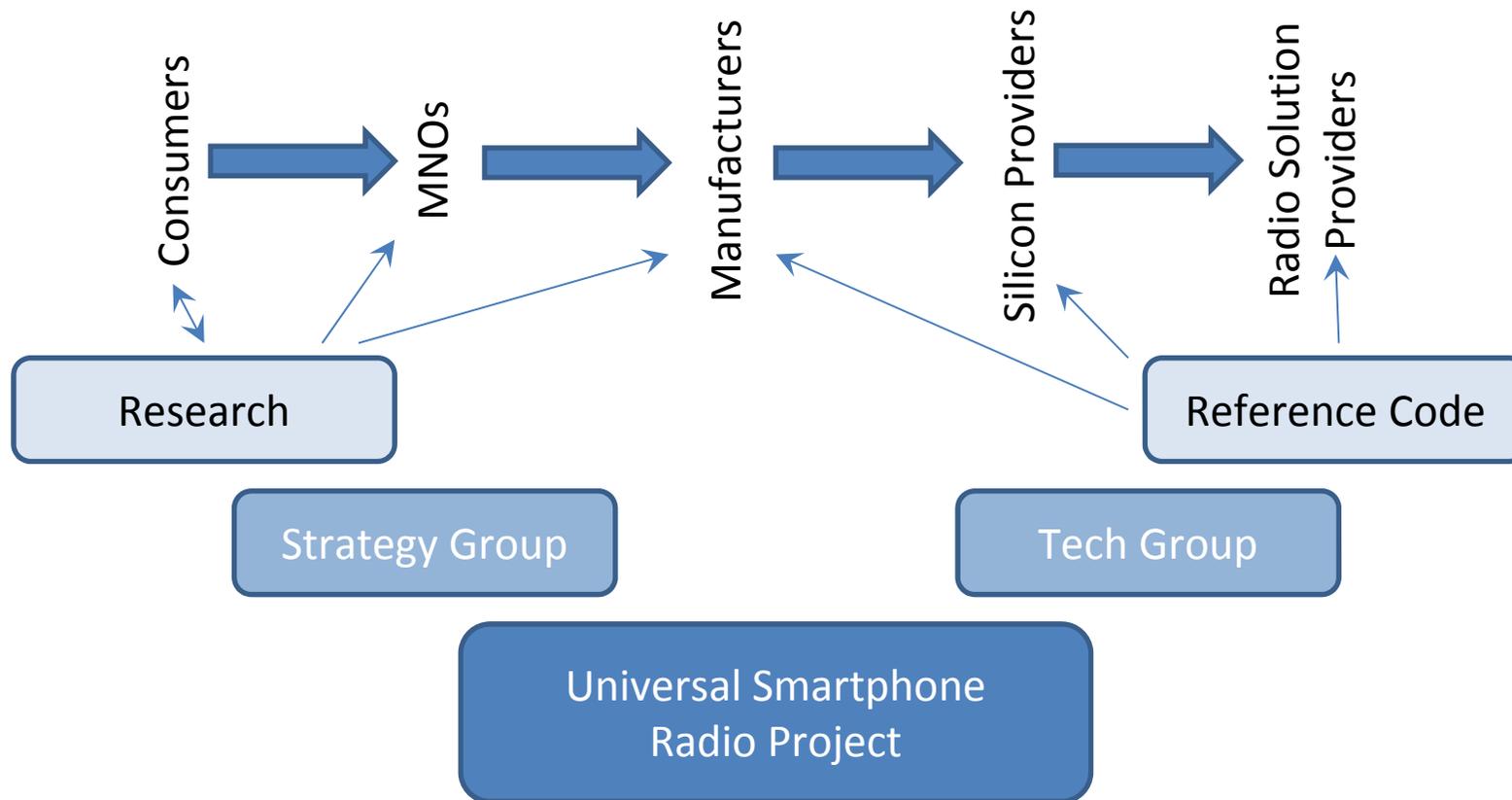
- Leading broadcasters from **Europe, the USA** and **Asia Pacific**
- A **globally supported** project delivering a **globally applicable open** standard
- Supported by **standards bodies**
 - WorldDMB, RadioDNS, ETSI etc.

The logo for the British Broadcasting Corporation (BBC), consisting of the letters 'BBC' in a bold, black, sans-serif font.The logo for Global Radio, featuring a stylized red 'G' with a white dot in the center, above the word 'global' in a lowercase, sans-serif font, with 'RADIO' in a smaller font below it.The logo for Commercial Radio Australia, featuring a stylized blue and white wave icon to the left of the text 'commercial radio' in a lowercase, sans-serif font, with 'australia' in a smaller font below it.The logo for Emmis Interactive, featuring a stylized grey 'E' and 'I' icon to the left of the text 'emmis / interactive' in a lowercase, sans-serif font.The logo for iBiquity Digital, featuring a stylized grey 'i' and 'B' icon to the left of the text 'iBIQUITY' in a bold, sans-serif font, with 'DIGITAL' in a smaller font below it.The logo for the European Broadcasting Union (EBU), consisting of the letters 'EBU' in a bold, blue, sans-serif font.The logo for iHeart Media, featuring a stylized red heart icon with a white dot in the center, above the text 'iHeart' in a bold, sans-serif font, with 'MEDIA' in a smaller font below it.The logo for the German public television broadcaster ARD, consisting of the letters 'ARD' in a bold, white, sans-serif font on a dark blue square background.The logo for the National Association of Broadcasters (NAB), featuring a stylized gold and white icon to the left of the text 'NAB' in a bold, sans-serif font, with 'NATIONAL ASSOCIATION OF BROADCASTERS' in a smaller font below it.

Benefits everyone

- **Listeners** – lower data & battery use, reliable
- **MNOs** – lower reliance on quality / capacity / coverage of mobile network
- **Handset Manufacturers** – improved consumer experience
- **Regulatory** - spectrum efficiency

Technology + Consumer Demand



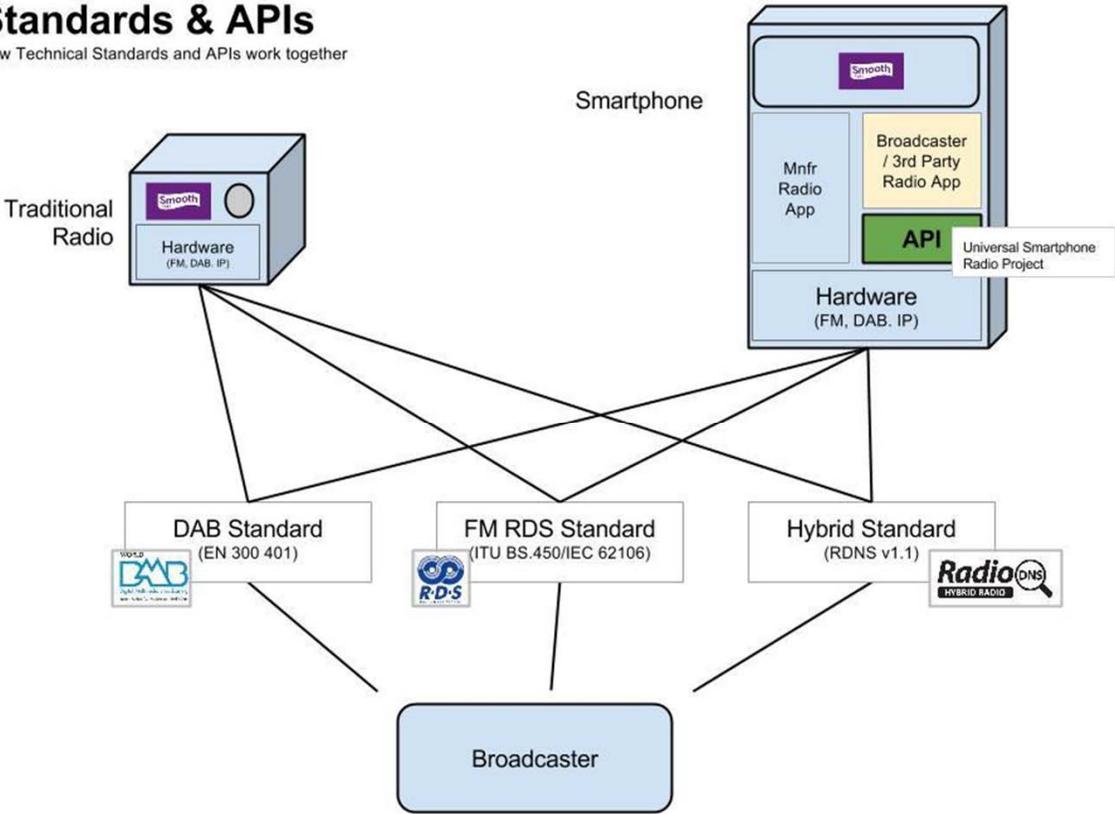
Technology Development

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Technical Integration

Standards & APIs

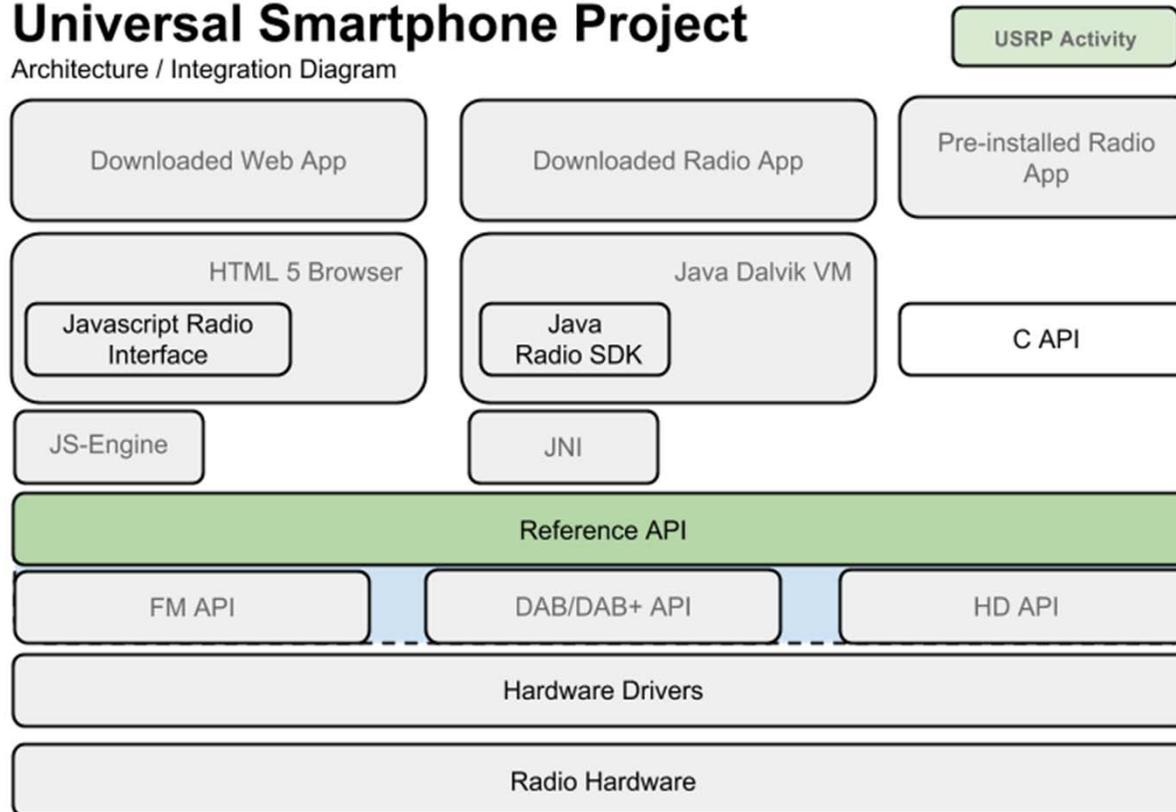
How Technical Standards and APIs work together



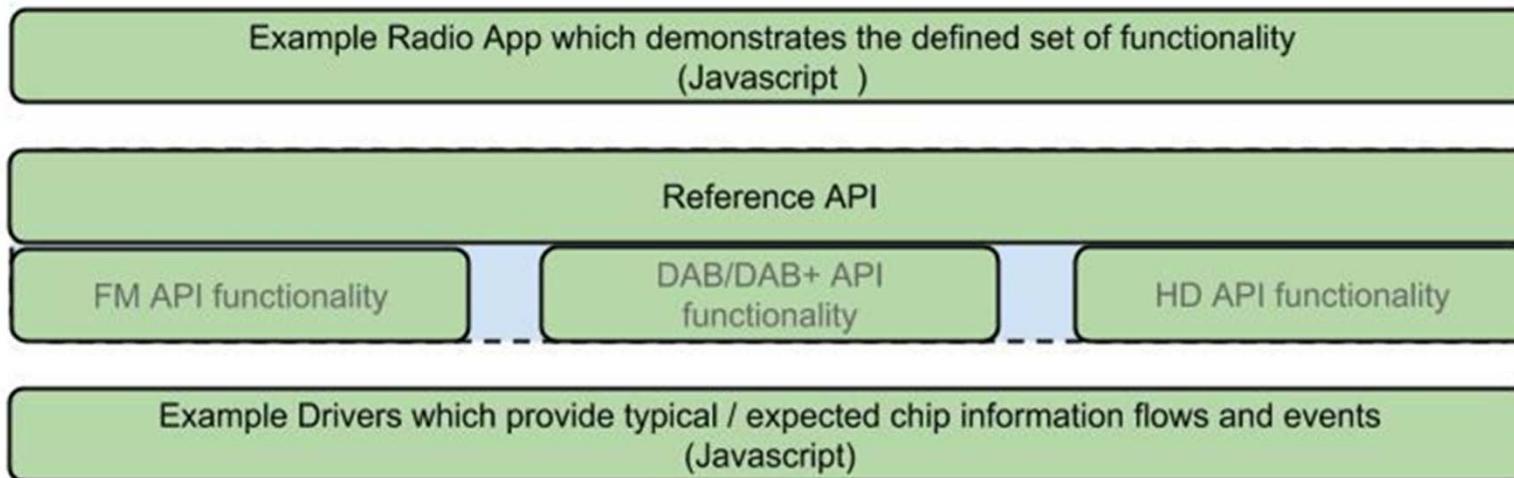
Technical Integration

Universal Smartphone Project

Architecture / Integration Diagram



Technical Integration

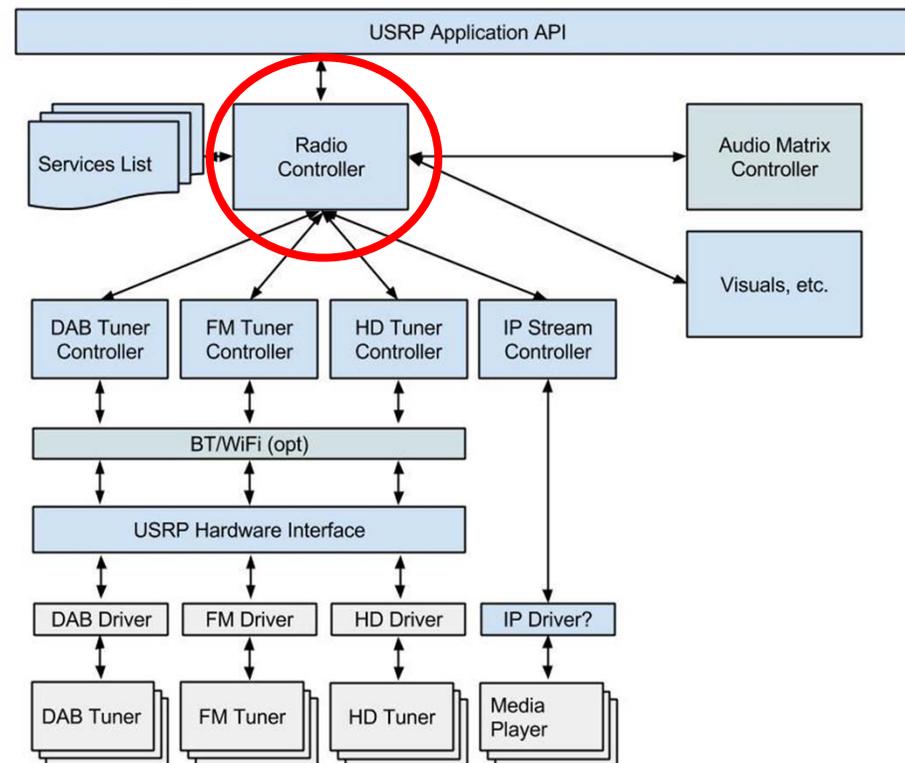


The Javascript will be demonstrated through execution within a browser.

Code Camp

- Intensive programming sessions
- Producing reference code to define API behaviour

USRP Code Camp - Architecture Overview



Progress @ February 2015

- **Reference code is 80%-90% complete**
 - ‘Slimline’ version for FM-only devices
- **Offering to silicon manufacturers to review/comment**
- **No significant technical obstacles to implementation identified**
- **Awaiting customer orders**

Strategy Team

February 2015

Strategic Questions

Manufacturers have been interested but want two questions answered:

Will consumers really want to buy a smartphone with hybrid radio in it?

Will radio stations really use hybrid radio functionality in smartphones?

BBC Mobile Radio Research Report

September 2014

10/09/14

Ipsos MediaCT



Ipsos

Research sought to understand audience benefits of listening on a mobile phone and investigate potential appeal of Hybrid Radio

- 1** Investigate motivations for radio listening and how mobile listening behaviours and need states differ from those via other devices
- 2** Understand awareness of radio listening capabilities amongst smartphone users and the user experience of radio listening on a mobile
- 3** Identify barriers to listening to audio and radio on mobiles
- 4** Test the concept of Hybrid radio, understand the level of appeal and whether it can overcome current barriers to radio listening on smartphones

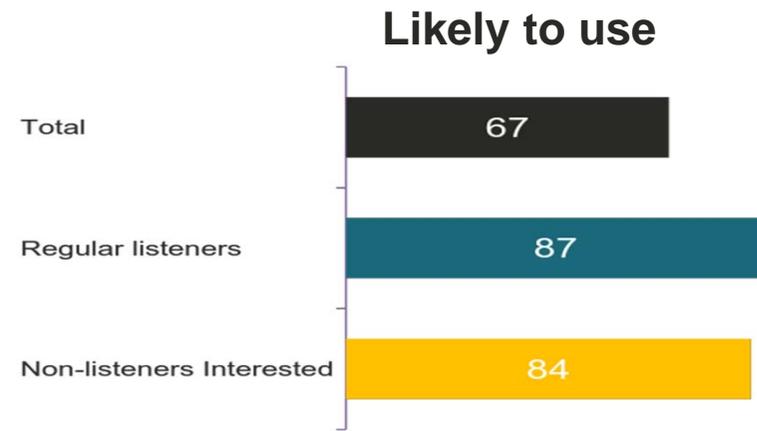
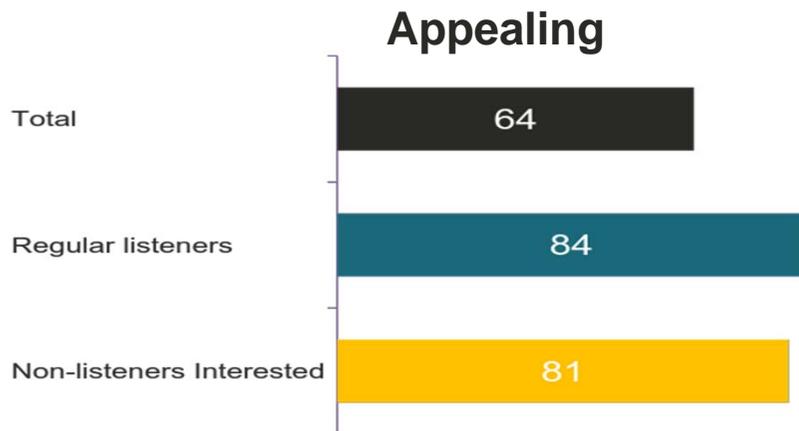
Hybrid Radio was very well received overall, especially by the younger and more tech savvy users



Base : All survey respondents : UK 16-64 Internet users, smartphone owners, weekly radio listeners (1,009)

It appeals most to those with a strong relationship with radio: current regular mobile listeners and potential new listeners

- Over 8 in 10 regular mobile listeners and those interested in listening to radio on their mobile claim they would be **likely to use Hybrid Radio if it was pre-installed on their phone**. More say they would try it than find it appealing, highlighting that **people are willing to give radio a go if it's there on their phone**.
- Appeal is highest amongst daily listeners, the young and early adopters, higher monthly spenders, and those for whom the benefits would be greatest: **those who listen on the move or at work**



Q18: How appealing to you is this new Hybrid radio technology that would come preinstalled on some new types of smartphones, and which allows you to listen to the radio on your mobile phone?

Q21: How likely would you be to use this Hybrid Radio technology to listen to the radio, if it was pre-installed on your smartphone?

Base : All survey respondents : UK 16-64 Internet users, smartphone owners, weekly radio listeners (1,009)

Hybrid Radio has also the potential to increase general radio listening among all listeners

38% would listen to more radio if it was pre-installed on their phone

This rises to **51%** among young women aged 16-24



Base : All survey respondents : UK 16-64 Internet users, smartphone owners, weekly radio listeners (1,009)

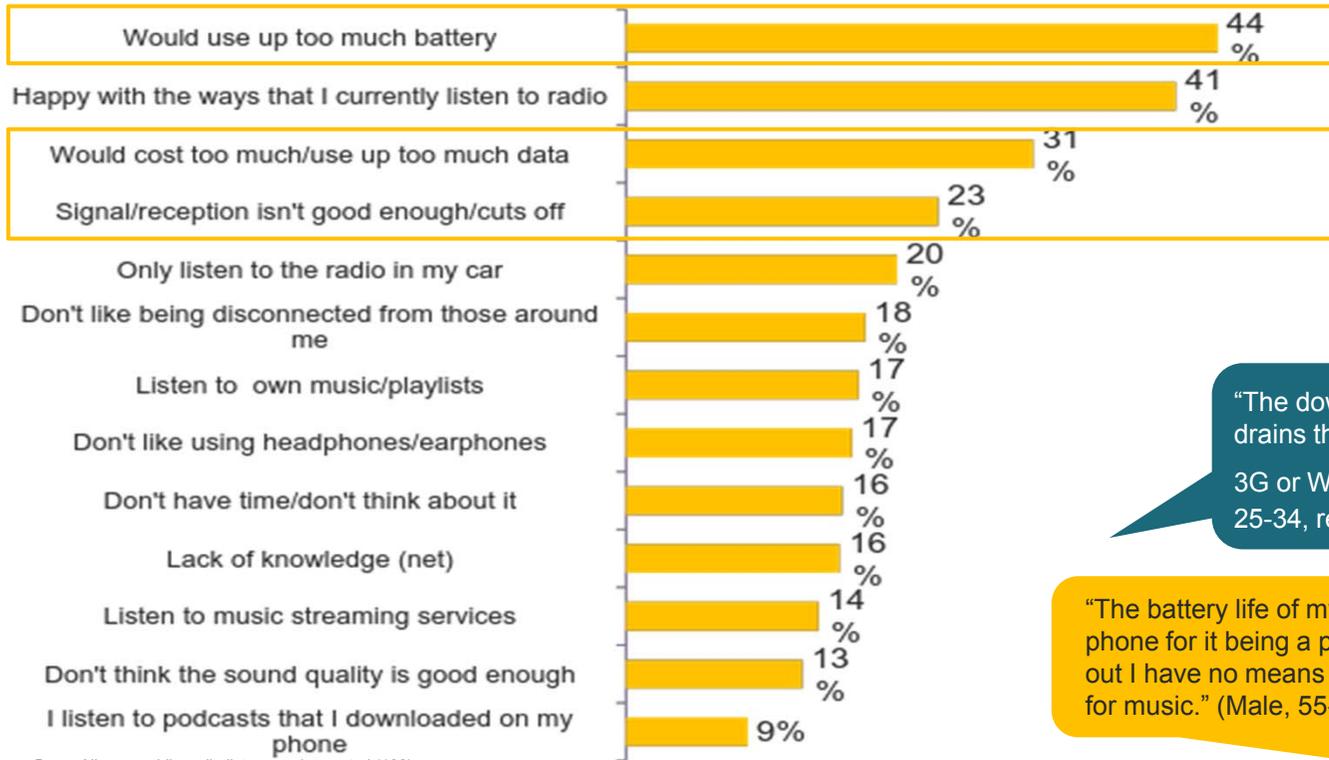
Ipsos MediaCT



Ipsos

For these potential new listeners, cost, battery and signal issues are currently the key barriers for them

Top 3 barriers for non-listeners- interested



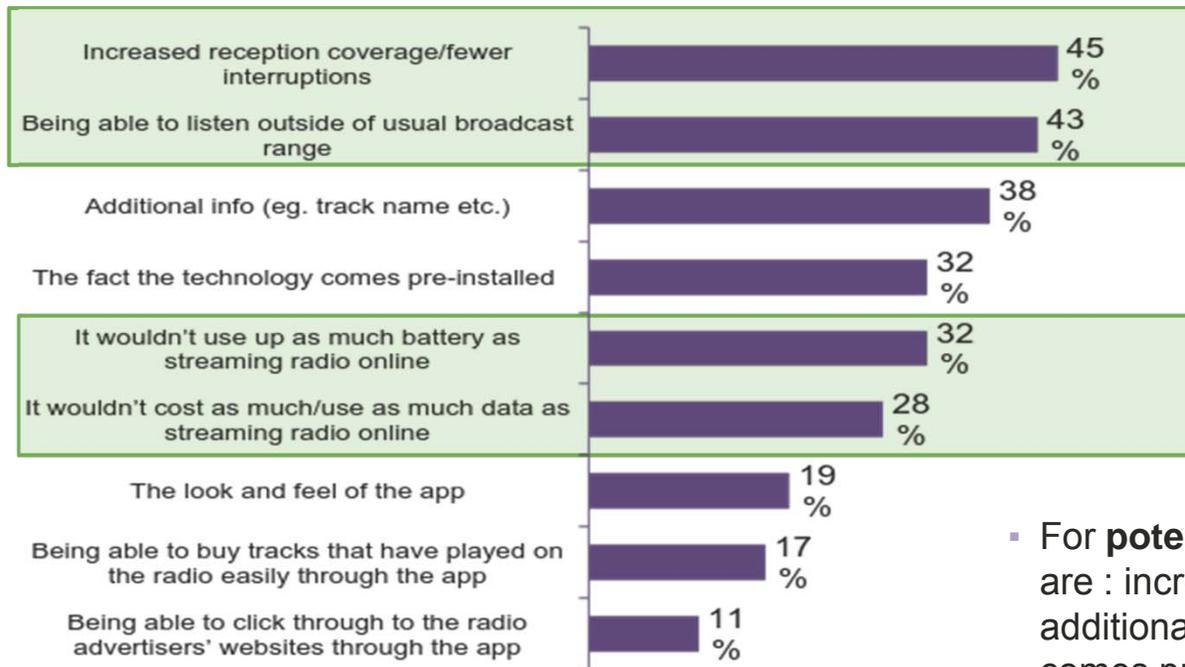
“The downside of radio on my phone is that it drains the battery and also when I have poor 3G or Wi-Fi signal it doesn't work.” (Female, 25-34, regular listener)

“The battery life of my phone scares me and if I need the phone for it being a phone, then I listen to music and it cuts out I have no means of charging it so I would use the iPod for music.” (Male, 55-64, non-listener)

Base: All non-mobile radio listeners - interested (182)

6 in 10 cite better reception coverage as the top benefit of Hybrid Radio, ahead of battery and data/cost savings

Perceived benefits



} 60%

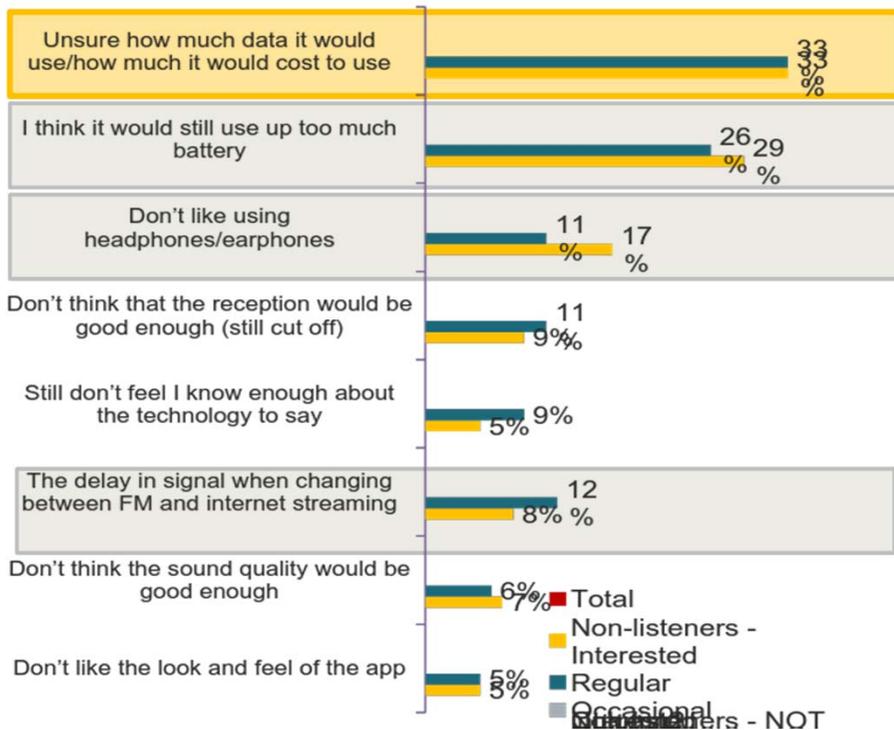


"it looks like it simplifies the issues of listening to radio via phones and retaining a good signal strength." (Male, 35-44, occasional listener)

- For **potential new listeners**, the **top 3 benefits** are : increased reception coverage (47%), additional information (37%) and the fact it comes pre-installed (37%).

Q19: What, if any of the following, do you think would be the benefits for you personally of Hybrid radio?
 Base : All survey respondents : UK 16-64 Internet users, smartphone owners, weekly radio listeners (1,009)

However, whilst it does overcome some of the barriers, some further clarification on data use and cost is still needed for both regular and potential new listeners



"I wouldn't want to risk using up my data on my phone." (Female, 19-24, non-listener)

"...if it lived up to things and didn't cost a lot or use up the battery quickly." (Female, 45-54, non-listener)

Some of the perceived drawbacks are not unique to Hybrid Radio and will be more difficult to overcome

"I don't like listening to music on my mobile as I don't like putting earphones in." (Male, 55-64, non-listener)



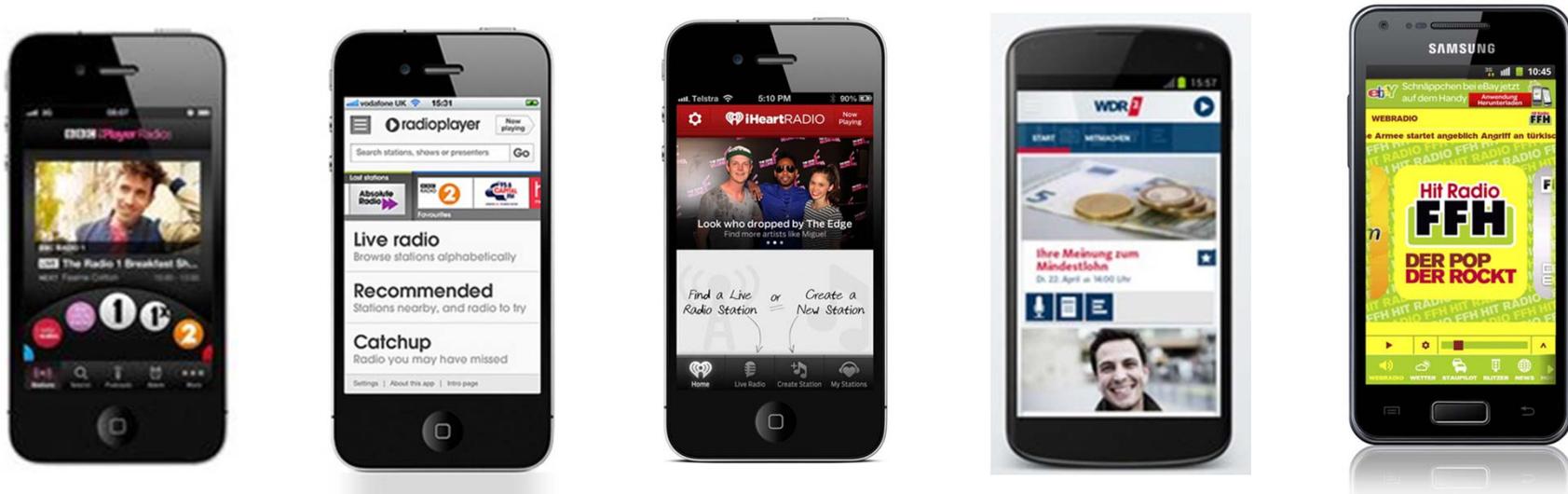
Q20: What, if anything, don't you like about it? Any issues?

Base : All survey respondents : UK 16-64 Internet users, smartphone owners, weekly radio listeners (1,009)

Participating Stations

February 2015

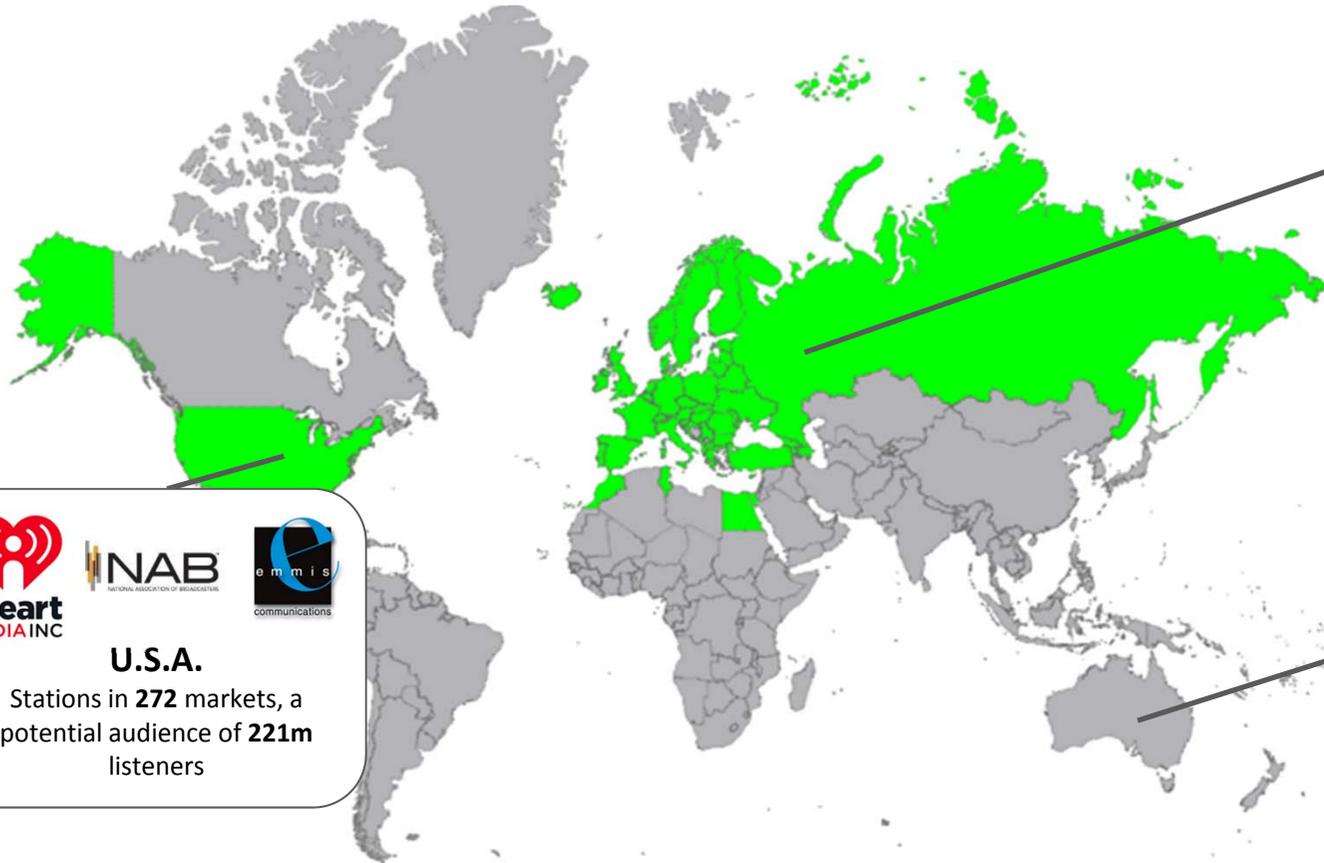
Broadcaster Apps using USRP API



The **biggest** broadcasters have the **biggest** radio apps

Adapted to use the **USRP API** instead of **stream**

Project Collaborators / Associates





U.S.A.
Stations in **272** markets, a potential audience of **221m** listeners



Europe
3,300 stations in 39 countries, representing >65% of all radio listening.



Australia
Supporting the integration of DAB Digital Radio
260 stations representing >70% of all radio listening

Summary

Technology phase almost complete 

Any manufacturer can implement it 

Any broadcaster can use the API 

Consumer research is demonstrates demand 

Broadcasters will **adapt their apps** to use broadcast 

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