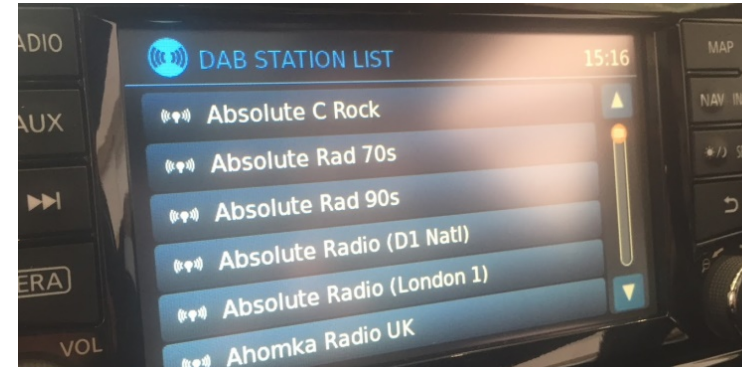


A photograph of the interior of an Audi car, showing the steering wheel with the Audi logo, the instrument cluster, and the infotainment system. The text is overlaid on the image.

# In-car user experience guidelines

Laurence Harrison, Chairman, World DAB Automotive Group

World DAB General Assembly, Paris, November 2017





KENWOOD



SONY



**World DAB Automotive UX Group**  
*Building a great in-car digital radio UX*



COMMERCIAL RADIO AUSTRALIA

arqiva



HYUNDAI



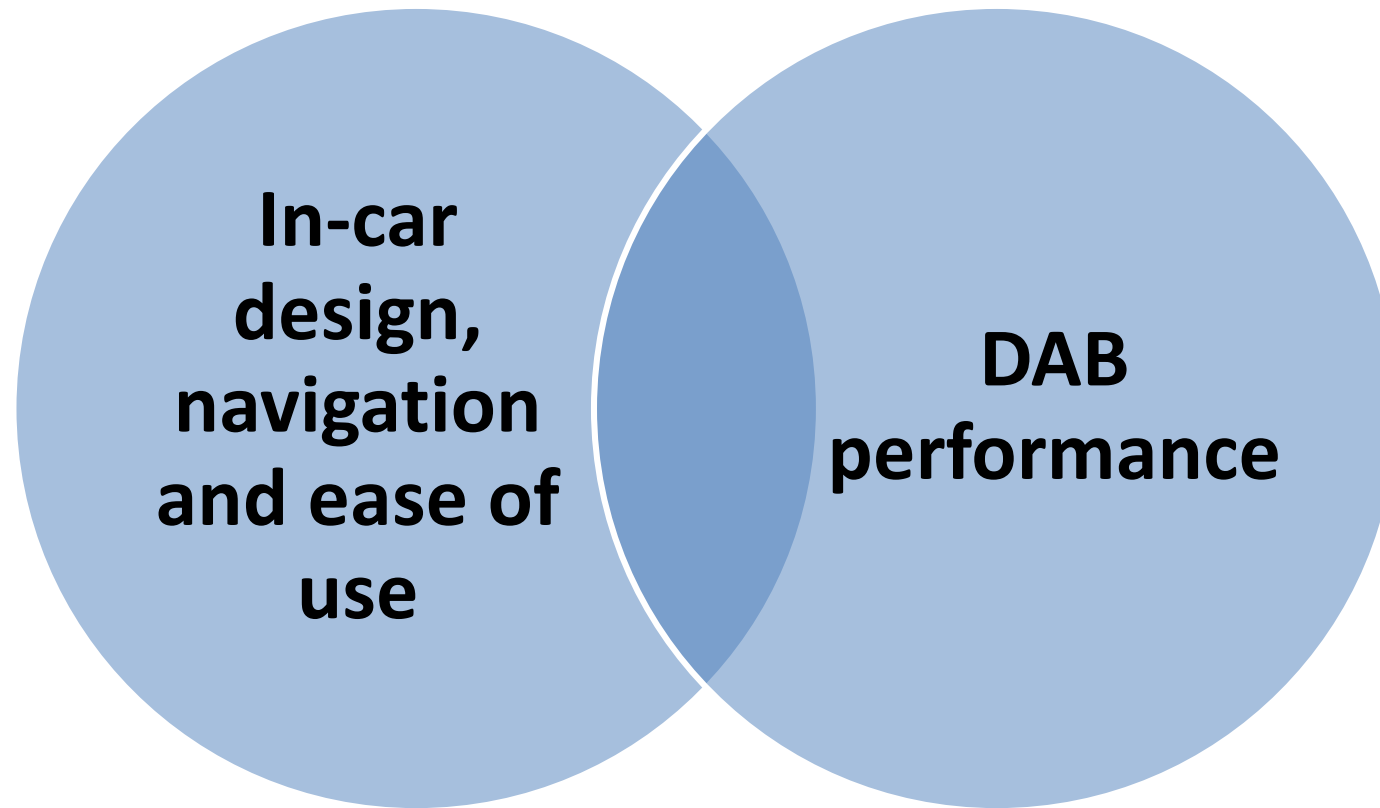
MOBIS

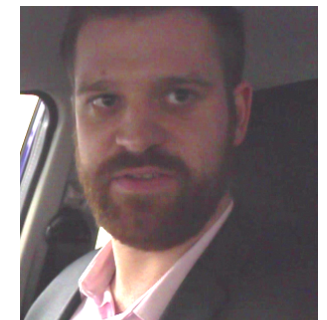
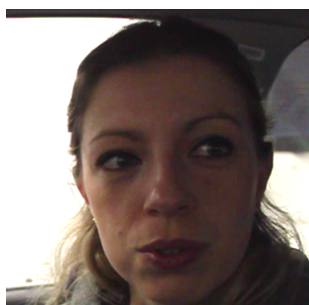
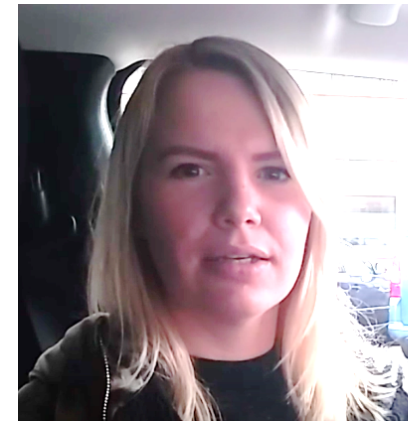


JAGUAR



# In-car DAB digital radio user experience







# UX Design Guidelines

---

They are for broadcasters & car manufacturers

Description, best UX cases, links to tech specs

Builds on use cases identified in UX research

# In-car user experience research

## Objective

- Inform digital radio UX design and guidelines

## Markets



## Consumers

- 40 people / 16 male / 24 female
- Mix of ownership of cars with DAB / DAB at home

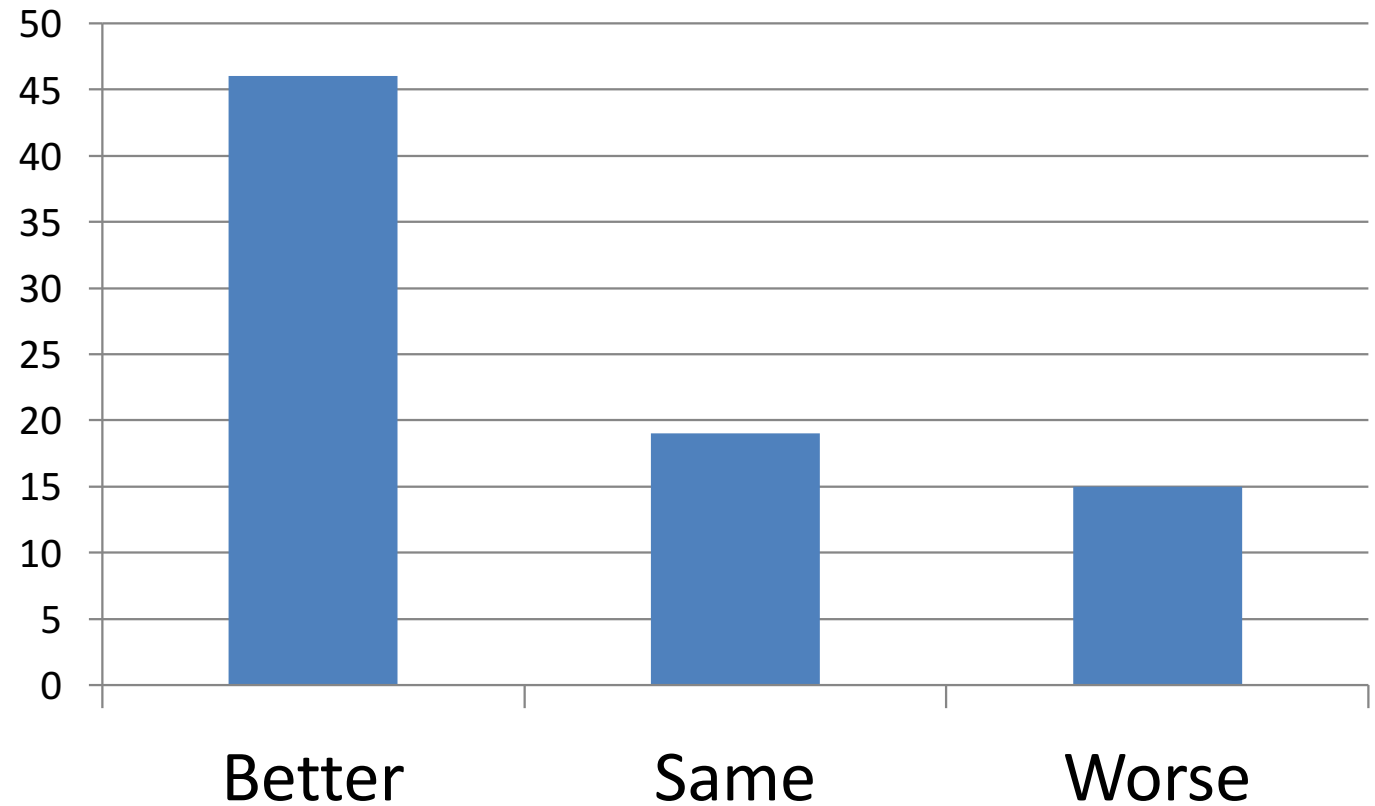
## Cars

- 8 different brands and models
- Always one volume-seller and one high-end



# Overall the DAB UX is better than FM

*How does it compare to using FM Radio?*



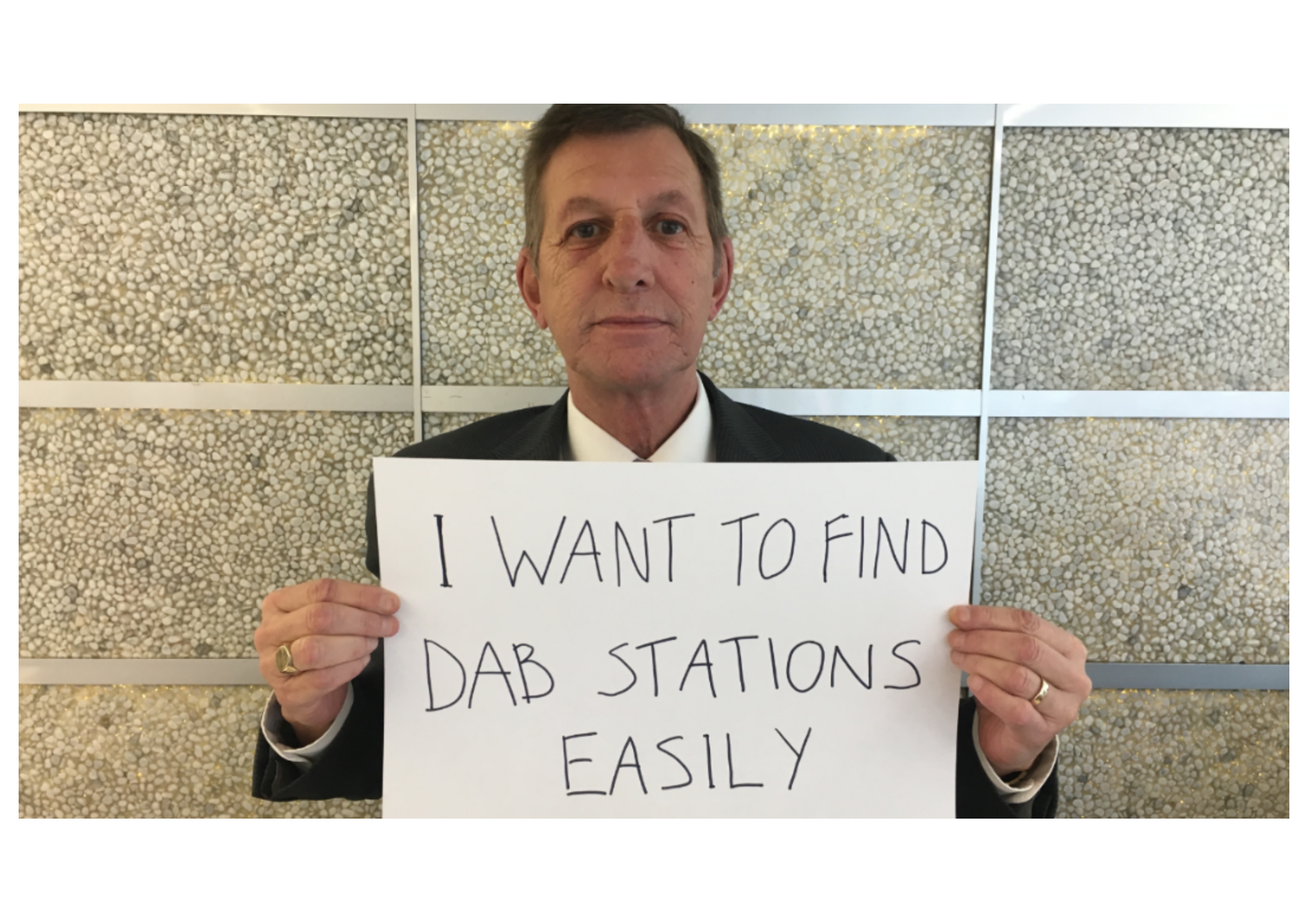
# Headlines

- 1. A RADIO button is essential**
- 2. An A-Z station list is the best search UX**
- 3. Pre-sets should be easy to set/explained**
- 4. Terminology must be easier to understand**
- 5. People want data, but only if they understand what it is**
- 6. Drivers expect a great, simple UX**



# **WorldDAB Automotive – DAB Digital Radio In Car User Experience Design Guidelines**

*V1.6 WorldDAB AUXG*

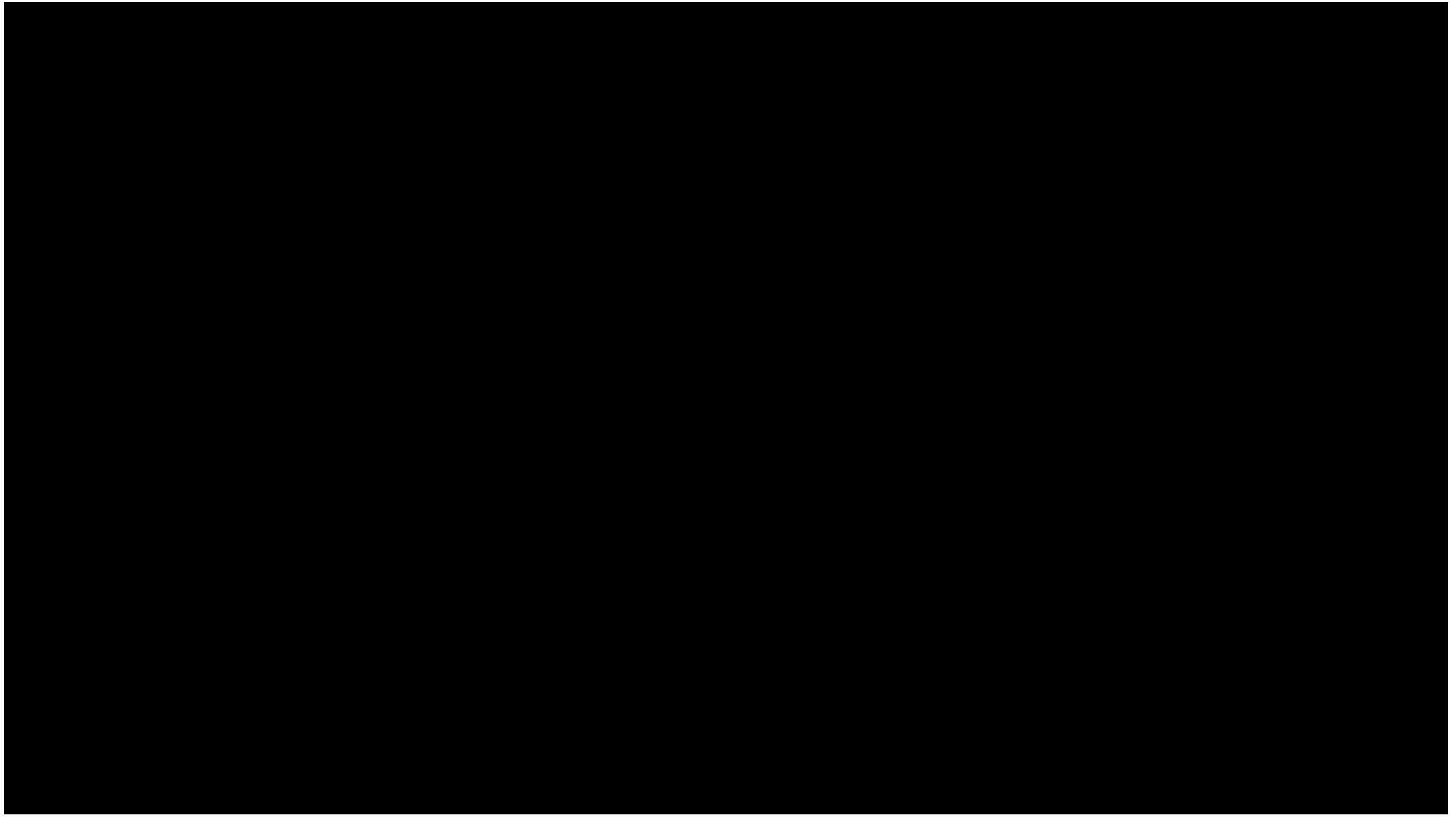
A middle-aged man with short brown hair, wearing a dark suit jacket, white shirt, and tie, is holding a white sign with both hands. He is looking directly at the camera with a neutral expression. The sign has the text "I WANT TO FIND DAB STATIONS EASILY" written in black, hand-drawn capital letters. He is wearing a gold ring on the ring finger of both hands. The background consists of a wall with a grid of square panels, each containing a dense pattern of small, light-colored pebbles or stones. The lighting is even, and the overall scene appears to be indoors.

I WANT TO FIND  
DAB STATIONS  
EASILY

# I want to find DAB stations easily

## Description:

- Consumers want to easily and quickly tune to the DAB station they want to listen to
- WorldDAB user experience research has shown that an A-Z station list of available DAB stations provides the best experience for tuning to stations.
- Searching by multiplex can be difficult, confusing, and in some cases impossible



# I want to find DAB stations easily

## Design guidelines:

Best case – A-Z unified station list:

- Present an integrated A-Z list of all available broadcast stations (FM, DAB)

Next best case – A-Z DAB station list

- Present an A-Z list of all available DAB broadcast stations

## Hardware requirements:

- Delivering a dynamic, accurate A-Z station list requires dual DAB tuners

# A-Z station list - Visual design guidelines

Optional: Pre-sets accessed from A-Z station list

A-Z station list of available stations. Dynamic updates made upon starting the car and then as new stations become available and existing stations are lost

Preset 1

Preset 2

Preset 3

Preset 4

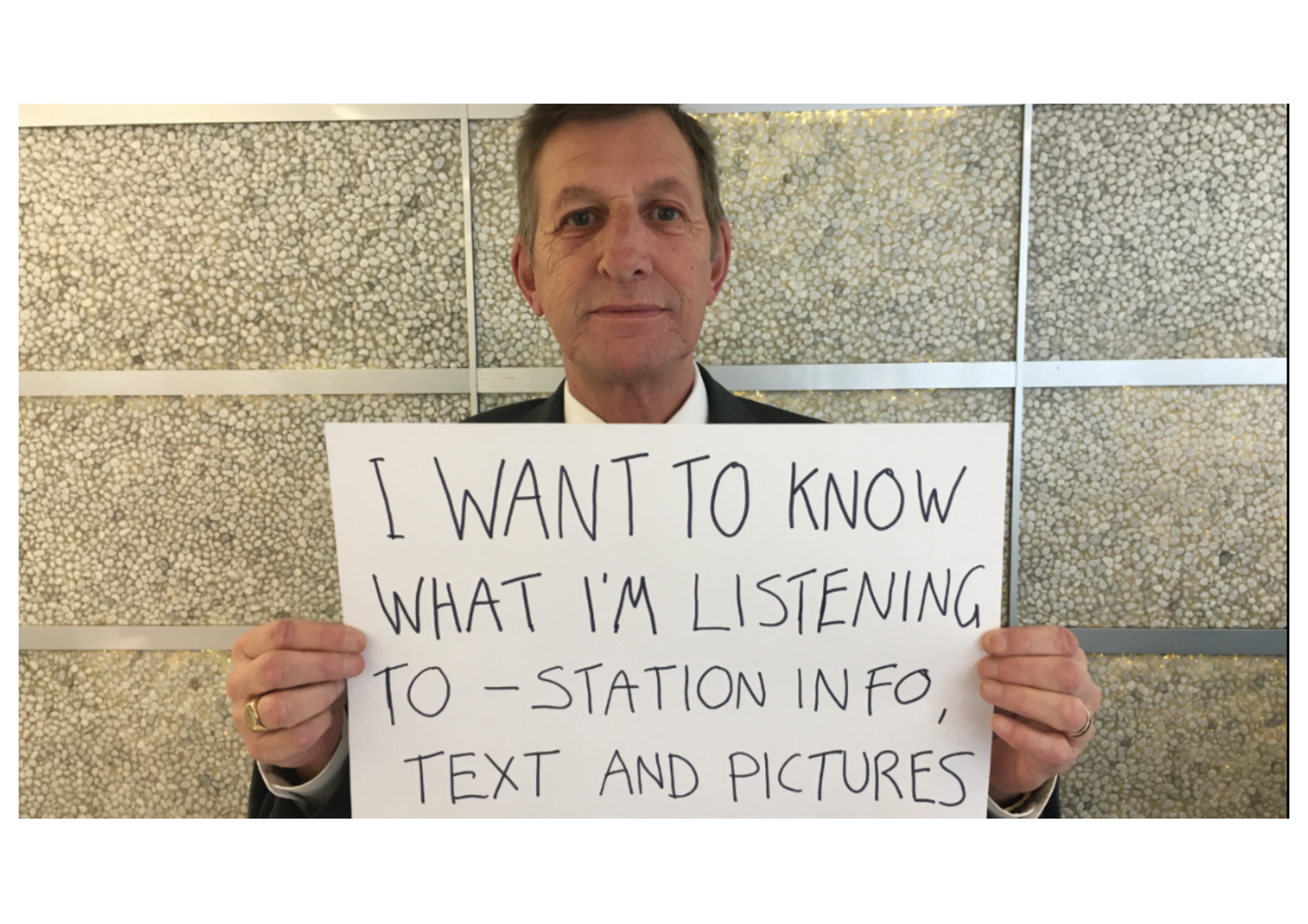
Preset 5

Station Label min 16 Chars  
Station Label min 16 Chars  
Station Label min 16 Chars  
Station Label min 16 Chars  
Station Label min 16 Chars  
Station Label min 16 Chars  
Station Label min 16 Chars

Assumes touch-screen scrolling is available. Physical scrolling wheel/button also available for search

Assume that "Back" button is available on the dashboard, steering wheel or central stack. If not then required on-screen.



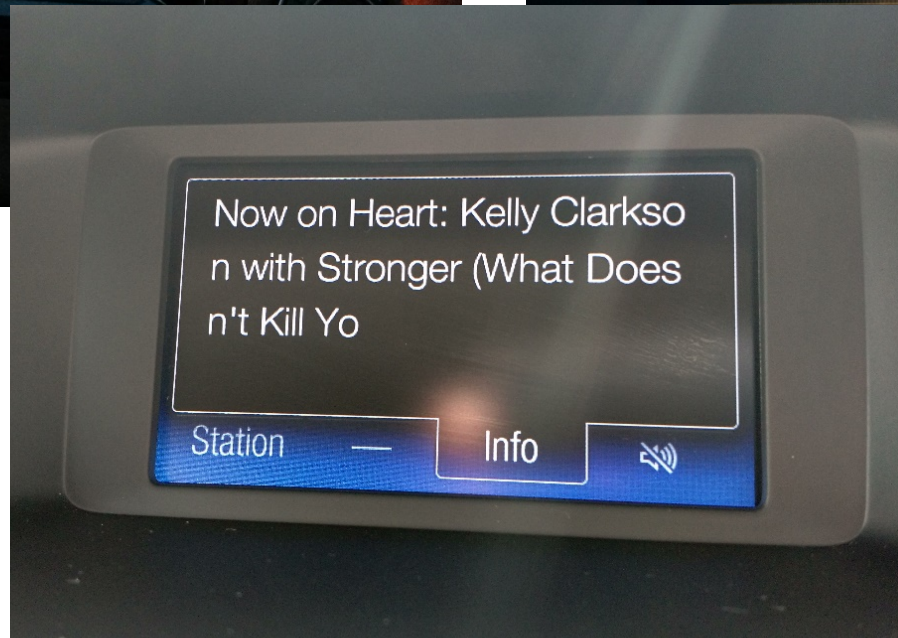
A middle-aged man with short brown hair, wearing a dark suit jacket, white shirt, and tie, is holding a white sign with both hands. He is looking directly at the camera with a neutral expression. The background consists of a wall with a repeating pattern of small, light-colored pebbles or stones, separated by thin metal strips. The sign he is holding has handwritten text in black ink.

I WANT TO KNOW  
WHAT I'M LISTENING  
TO - STATION INFO,  
TEXT AND PICTURES

# “I want to know what I’m listening to”

## Description:

- . Listeners want to know they’re listening to
- . Broadcasters are providing this information – both as text and as images
- . That information is sometimes badly presented or very hard to find, which is frustrating for listeners and broadcasters



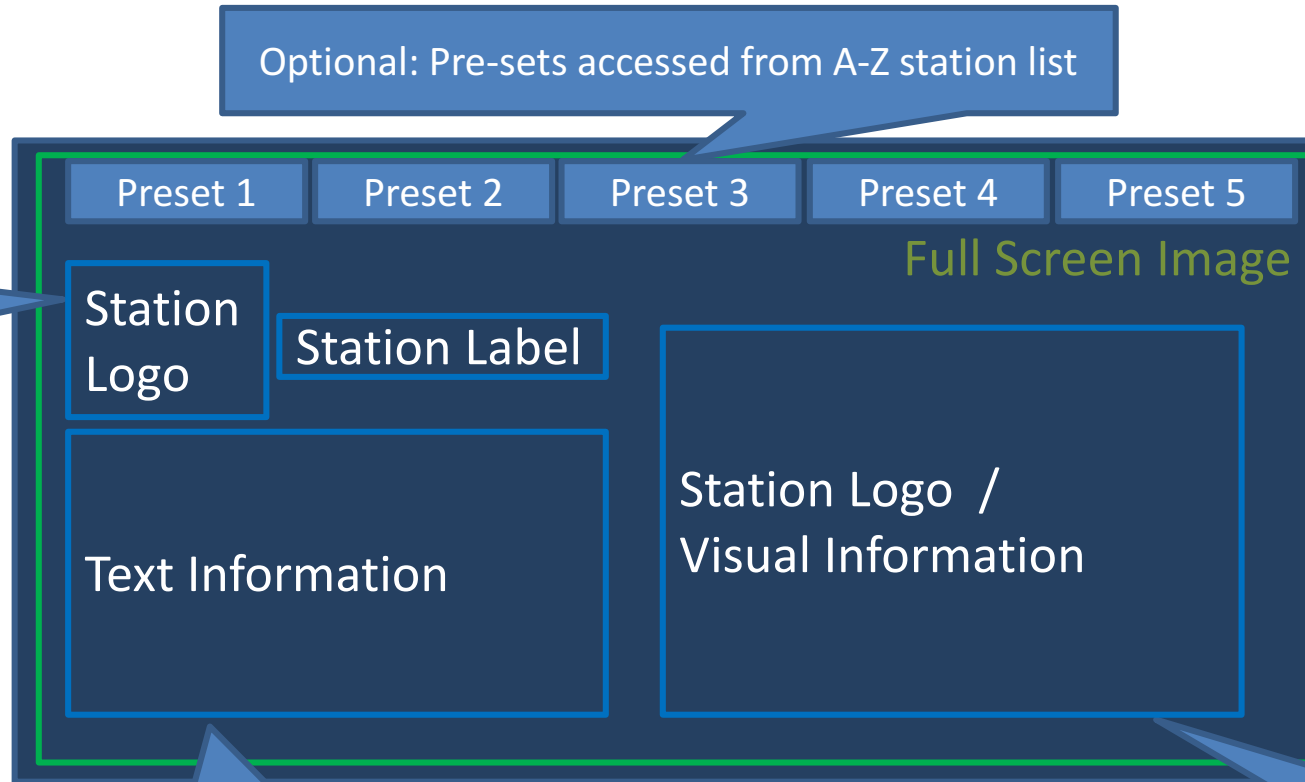
# “I want to know what I’m listening to”

## Guidelines:

- Single-line text display – provide a button which shows the latest text message, scrolling if necessary to fit onto the screen
- Multi-line text display – always show the latest text message without the driver having to press any buttons
- Colour screen display – always show the latest text message. Show the station logo until the first visual is received, then show it automatically.
- Connected car – Request images at native screen resolution, for best quality

# Station Info - Visual design guidelines

Optional: Pre-sets accessed from A-Z station list



Station Identification

Station  
Logo

Station Label

Text Information

Station Logo /  
Visual Information

Full Screen Image

Touch to  
expand to full  
screen

Connected car  
: request new  
image at new  
resolution if  
required

Text information display,  
automatically updating

Image  
display or  
preview  
space

# Use cases – I want.....

1. to find DAB radio easily in the car media system

2. to find DAB stations easily

3. the list of stations to be up to date

4. to be able to easily set a station as a pre-set

5. my radio to find the best signal for the station

6. to know what I'm listening to – station info, text and pictures

7. to understand all labels, terms, icons in the radio

8. my DAB radio to be set up for me

**WorldDAB A**  
**Digital**  
**Phase One**  
**User**  
**Design Guidelines**

*1.6 WorldDAB AUXG*

# Next steps

- 1. By end Nov 2017 - Finalise Draft 1 Guidelines**
- 2. By end of 2017 - Finalise Guidelines**
- 3. Q1 2018 - Communicate Guidelines to industry**
- 4. Q1 2018 – Start work on terminology and Phase 2**





# makekenhappy



**Thank you**

**Laurence Harrison, Chairman, World DAB Automotive Group**

**World DAB General Assembly, Paris, November 2017**