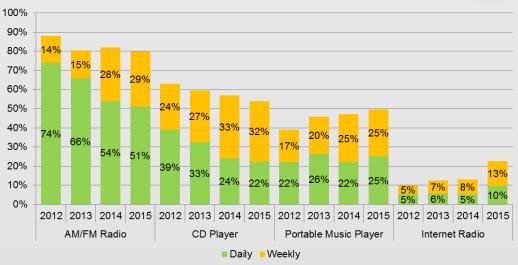
INFOTAINMENT USAGE AND INTEREST (EUROPE)

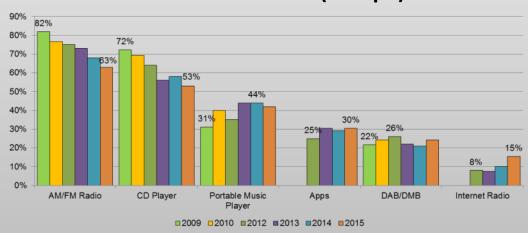


- Daily relevance of terrestrial radio is in decline.
 Consumer interest in having the feature in their next vehicle is declining as well.
- However, it still remains the most used and most requested source of infotainment.
- Interest in having CD player continues to fall in favor of iPod/smartphone music and internet radio.
- Access to smartphone apps and internet radio through vehicle HMI becoming increasingly important.

Consumer Usage (Europe)



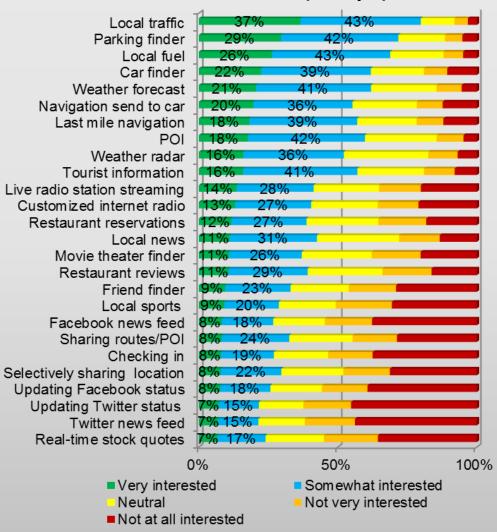
Consumer Interest (Europe)



CONNECTED SERVICES (EUROPE)



Consumer Interest (Europe)



- Consumers most interested in connected services that are directly relevant to the driving task.
- Increasing interest in streaming music options.
- Lack of interest in social networking, including location-based social networking features.
- Lack of willingness to pay for any type of connected service, as they already access those services through their smartphones.

Source: Strategy Analytics Automotive Consumer Insights

UX BENCHMARKS



UX of in-vehicle radio impacted by usability issues due to increasing complexity of infotainment systems.

- Increase in features makes it difficult to discover and switch between different features.
- Touchscreens have altered the display of presets, resulting in increased difficulty in consumers setting a preset.
- Presets also impacted negatively by increased number of available presets.

Voice interfaces <u>can</u> positively impact radio, but too often are fragile and fail.

• The same vehicle can have wildly difference UX for voice within the same task.













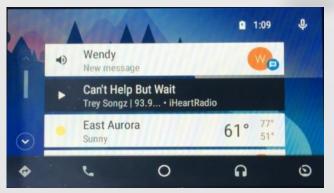
Tuning the Radio

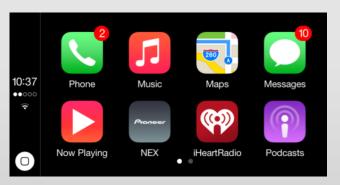
Lack of Example Command

ANDROID AUTO, APPLE CARPLAY, AND BAIDU CARLIFE



- Systems provide much of what consumers want and need for infotainment connectivity.
- Integration issues can cause confusion and frustration.
 - Mirroring solutions (with the exception of MirrorLink) work well in isolation, but integration with native systems cause problems.
 - Integration issues include difficulty in accessing embedded features such as radio.
 - Duplication of phone, media, and navigation features creates confusion and unmet expectations as to which system is being used.
- Consumers need time to understand what systems can and cannot do (e.g. which apps are supported).
- Serious threat to OEM embedded navigation options.
- For tasks that can be accomplished through both mirrored solutions and native system, consumers overwhelmingly prefer mirrored solutions.







COMPELLING IN-VEHICLE AUDIO EXPERIENCE



- Consumers want options, but they need to "just work," particularly for radio.
- Displaying additional info such as album information, album art, and additional station info more compelling, but needs to be balanced with concerns about distraction and screen overload.
- Infotainment systems need to seamlessly integrate a consumer's digital life into the car... and broadcasters need to make bigger dent into their lives outside the car.
- Remove duplication of features when Android Auto/CarPlay are active.
- Audio quality from streaming sources can be improved. Tier 1's are making improvements, but opportunity for DAB to provide better audio experience across more vehicles.





Vauxhall MOKKA X - OnStar Wi-fi Hotspot.mp4





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