MEDIA ECONOMY REPORT

DID VIDEO KILL THE RADIO STAR? THE POWER OF AUDIO IN TODAY'S FRAGMENTED MARKETPLACE

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Vol. 12



RUDIO

IN

THE BATTLE OF THE EAR

The times they are a changin', and they're changing at warp speed. Media options are practically endless for consumers. Data-informed execution has seeped into every crack and crevice of our media existence. We're running a race, in even the most traditional media types, toward a world of advanced automation and improved technology. We're all held responsible for ROI and driving positive business results, on top of the omnipresent goals of efficiency and accountability. And there you have it: the state of the State, where both challenges and opportunities abound.

As our media landscape continues its exciting and evolutionary march forward into a "mobile first" world, audio has managed to hold its own. While that may not sound all that impressive, it wasn't long ago that many in the industry predicted radio would follow the precipitous path of print. As a matter of fact, time and time again the death of radio has been portended, yet not realized. We have to give credit to the radio industry for seeing the newspaper writing on the wall. While it's still early days on the evolutionary path, linear radio has navigated it reasonably well to this point. Radio is still the highest reach medium and AM/FM accounts for more than half time spent listening to audio.



However, the battle of the ear is far from over for local radio. There is no doubt that we'll see increased competition in the audio space from streaming, podcasts, and satellite. It's a turf war both in the car and at home.

Regardless of how the audio battle shakes out, in this day of "earbuds in and eyes glued," it's important to remember that half of that equation is auditory. Sound plays a critical role in nearly every successful communication plan. Throughout this report, you'll see how evenly both the benefits and challenges of audio are matched.

The dial is changing now. Linear radio groups must continue to push for local relevance while stepping up their game in the innovation revolution. In the words of Eckhart Tolle: "Evolve or die."

Kathy Doyle

EVP, Local Investment, MAGNA

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SUPPLY

While digital has provided alternative sources of audio content-just as it has for video-radio has managed to stave off the heavy losses television has suffered in recent years.

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Despite relative audience strength, radio ad revenues have been squeezed by a lack of demand, and growth in digital has yet to offset those losses.

Chapter 3 **36**

New ways of accessing audio content and emerging voice interfaces are poised to change consumer habits in the near future.

age 03

TIMELINE OF AUDIO DEVELOPMENT • 2000 In October 2000, software developer Dave Winer 1996 • develops a method of 1933 • Mercedes-Benz is the first automobile brand including audio files in RSS While Warren G Harding became the first to offer a computer-based voice feeds, a pre-cursor to President to use the radio in 1922. recognition system in a car in 1996. podcasting. Franklin D Roosevelt becomes the true master of the platform, starting in 1933. · 1937 1979 • FM Radio is patented in 1933. FM overtakes AM as the Four years later, the first FM station opens. 1922 • predominant radio

1933

FM is considered to have a

1940

1937

1938

• 1938

The War of the Worlds first airs in

it caused its listeners.

1938, becoming famous for the panic

1933

superior sound quality to AM.

The first paid radio ad airs in 1922. It's believed to have been sold by AT&T to real estate company Queensboro Corp.

-20th •

The first radio station opens in the

United States in 1920.

1920 •

The (AM) radio is invented around

the turn of the 20th century.

1920

20th

1922

Pandora becomes a public company in 2011, the same year Spotify enters the US market.

Siri is introduced as a feature on the iPhone 4S on October 4, 2011.

2008

Clear Channel is taken private in 2008. Six years later, it is rebranded as iHeartMedia, and is the largest station owner in the US.

2011

2000

2001

1994 •

1994.

Radio surpasses

1987

1994

1996

2001 •

Satellite radio is

merge in 2008.

first launched in 2001.

The two main companies are XM

and Sirius, which eventually

\$10bn in ad sales in

1980

1983

1983

1987 •

Radio surpasses \$5bn

in ad sales in 1983.

Digital Cable Radio, which would

in several cable markets in 1987.

eventually become Music Choice, is tested

1979

format by the end of the

1970

1960

1970 •

National Public Radio,

or NPR, is founded in 1970.

1970s.

· 2014

2011

2014

2008

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Aedia Ecol

2020

Chapter

SUPPLY

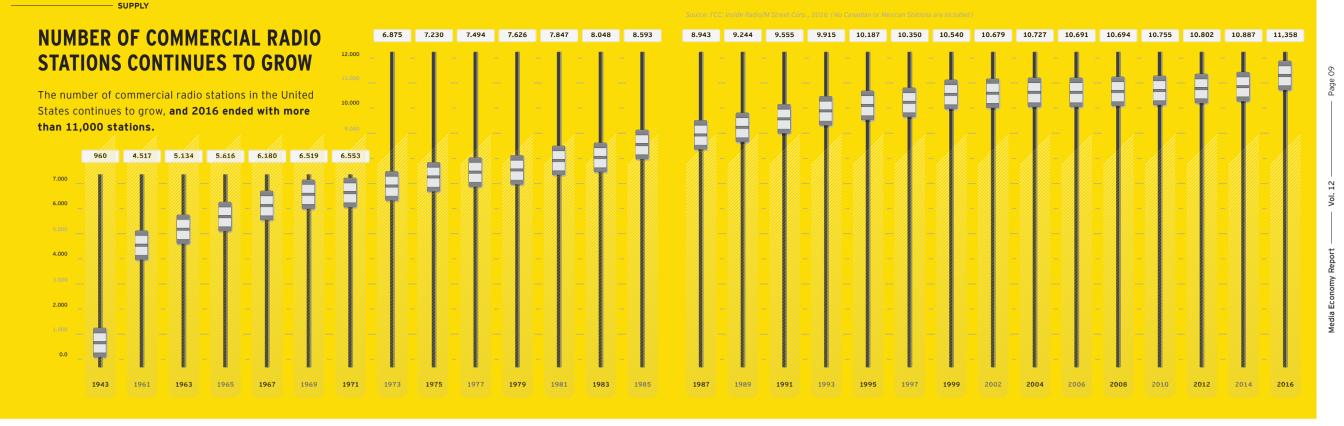
Chapter 1

SUPPLY

The radio business has faced a similar challenge to television in the form of competition from more personalized, on demand digital experiences. Though from an audience perspective, traditional AM/FM radio has been more successful in staving off declines.

However, with the growing competition from streaming audio, podcasts, and even satellite radio, one begins to wonder how long that can last.

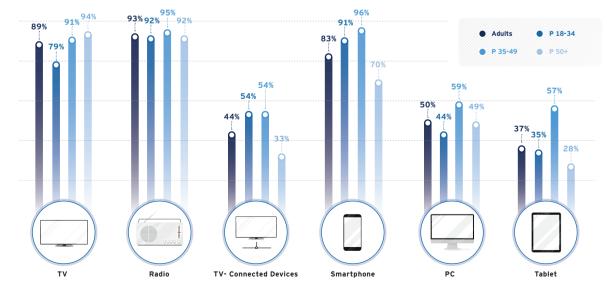
- 1. The fact that Americans spend more time in the car than in other countries has been a key factor in radio maintaining a high weekly reach.
- 2. Compared to linear television, the reach of and time spent with radio have declined at a much slower rate.
- 3. In spite of its monthly subscription fees, integration in more vehicles has allowed Sirius XM to maintain steady growth of its consumer base, and its entry into the smart speaker market represents a potential new source of audience.
- 4. Streaming audio-driven by key players like Spotify and Pandora-are competitive with broadcast radio but are still primarily consumed outside the car.
- Marketers have begun to take note of a diverse, affluent, and growing podcast audience, and measurement breakthroughs will likely spur more investment moving forward.



AM/FM RADIO MAINTAINS ITS REACH AS LINEAR TV LOSES A STEP

Despite the growth of streaming audio (and smartphones in general), broadcast radio has maintained **a weekly reach of 90+ percent** among adult audiences.

For some demographics, that places it ahead of linear television, which is still often the go-to reach medium for advertisers.



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RADIO VS. TELEVISION WEEKLY REACH



.....

WEEKLY TIME SPENT DECLINING, BUT RELATIVELY SLOWLY

Time spent with traditional radio has been falling for some years, even though the reach has remained strong. Still, compared to live television, **the pace of decline is far slower.**

In terms of the consumers' overall media time, radio's share* is third behind live TV and mobile (albeit a distant third).



COMMUTE TIME: THE KEY TO RADIO'S CONTINUED HIGH REACH

In the U.S., the sheer number of square miles leads to low average population density, despite the large population. Because of this, and an inconsistent public transportation system, **people need to drive more in the U.S. than in other countries around the world.**

It takes the average person approximately **twenty five minutes to** commute to work in the United States, longer than in the 1980s or 1990s, but more or less steady since the early 2000s.

2013 0

2010 O

2006 0

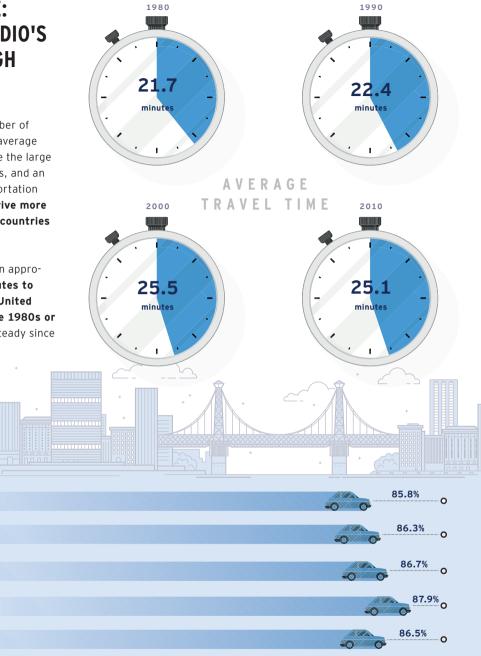
2000 0

1990 O

1980 O

1970 O

1960 0



•**O** O

COMMUTING BY AUTOMOBILE

(% OF WORKERS, 16+)

12

/ol.

Media

84.1%

-0-0

77.7%

0

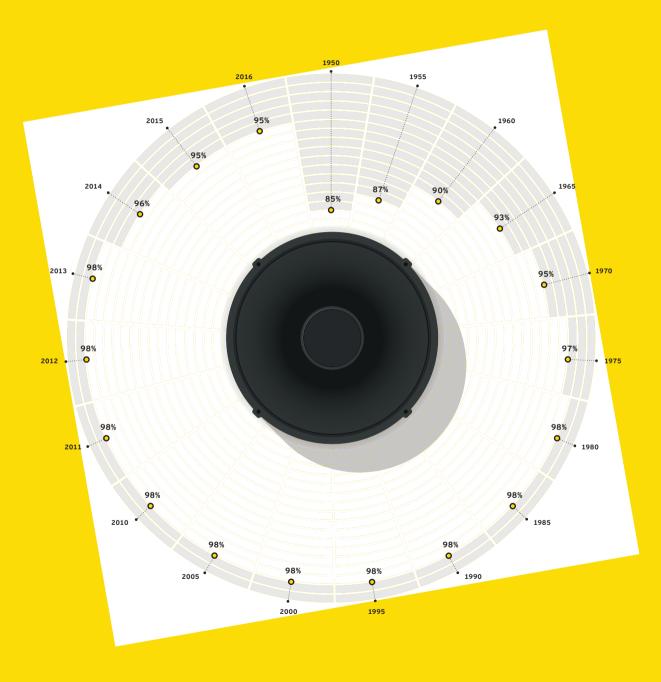
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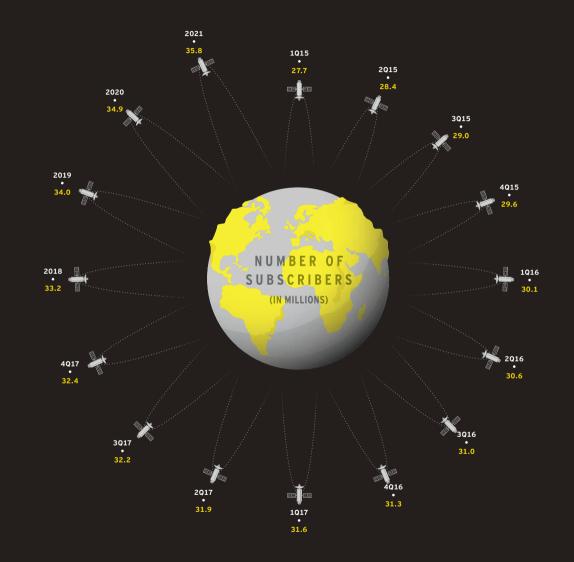
RADIOS STILL A STAPLE IN THE HOME

While the majority of radio listening occurs outside the home, the reach of AM/FM radios in US households remains high, according to the consumer electronics trade organization the Consumer Technology Association.



SATELLITE RADIO'S SLOW BUT STEADY GROWTH

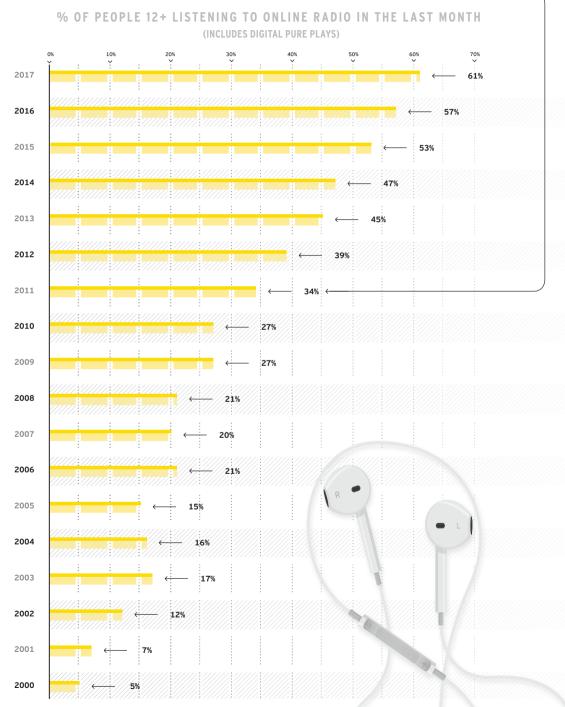
Despite being a subscription product, Sirius XM has managed continued growth, fueled mainly by increased availability in new car models. More recently though, the service became available through Amazon's Echo Smart Speaker-an effort by the company to diversify beyond its vehicle-driven business. **Monthly cost:** Satellite radio comes in the form of a monthly subscription, with the basic package of music only channels starting at around \$11, up to the All Access package at around \$20. The latter offers sports, news and talk (such as Howard Stern). Note that the music channels are ad free in every package (therefore the <u>\$11 base</u>



package of music channels is completely ad free and only subscribers of premium packages will hear commercials). This is an inhibitor of growth, as only premium (i.e. more expensive) packages are ad supported. **Distance:** Unlike AM/FM radio, you don't have to worry about losing your signal with satellite radio. Because of this, advertising on satellite radio is actually sold on a national basis, as opposed to locally. This is a driver of growth, especially for people who drive long distances.

NEARLY TWO THIRDS OF AMERICANS NOW LISTEN TO STREAMING AUDIO

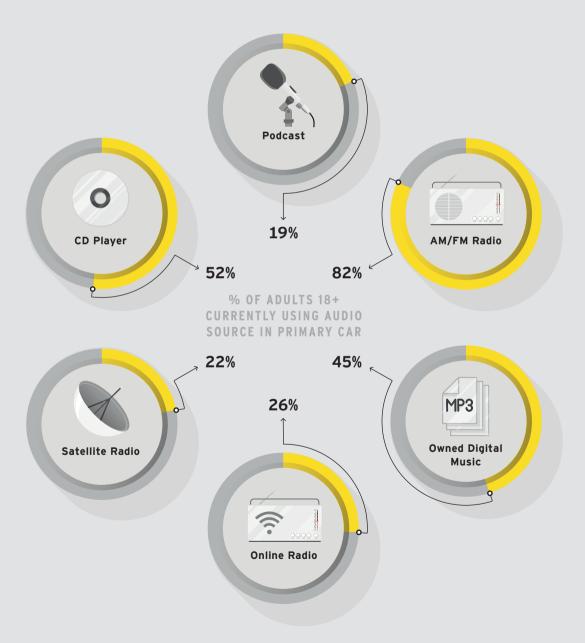
There was a spike in online radio listening in 2011. That was the year that Spotify entered the US and Pandora became a public company. -



THOUGH THE CAR IS NOT THE PRIMARY LISTENING LOCATION

Only about a guarter of adult drivers report listening to streaming radio in their cars, while the vast majority still listen to AM/FM radio.

This speaks to traditional radio's continued strong reach, though improved connectivity and infotainment systems in cars could potentially shift this dynamic in the future.



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Report

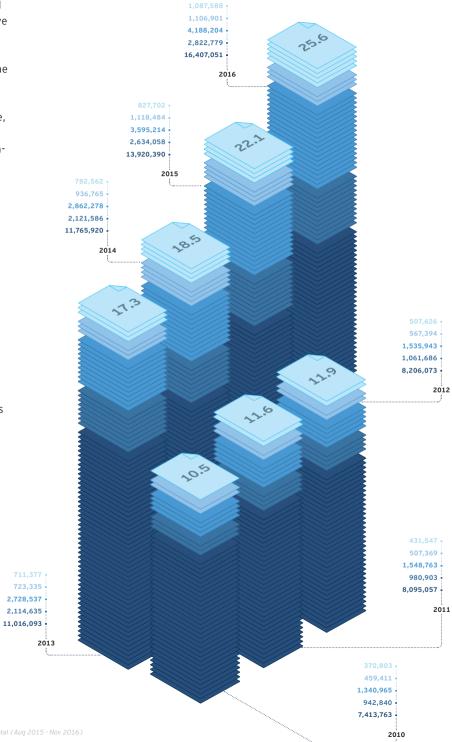
Media Ecor

AFTER YEARS OF AUDIENCE GROWTH, PODCASTS STARTING TO GAIN MOMENTUM WITH MARKETERS

Podcasts have been around for quite some time but have managed to fly somewhat under the radar for major advertisers. Traditionally the domain of small businesses looking to gain a foothold, podcasting's young, diverse, and affluent audience is starting to garner the attention of larger marketers.

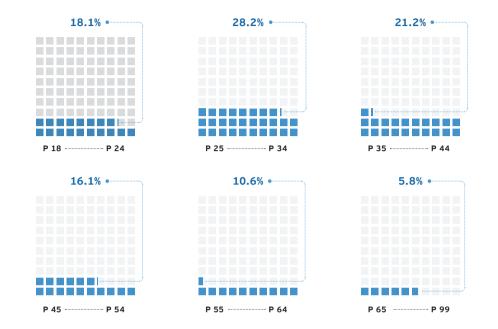


nally been a hurdle for the medium, but the upcoming release of podcast analytics from Apple-which controls the bulk of the market-and Nielsen's plans to extend its streaming audio measurement to podcasts should help break down those barriers.



PODCAST LISTENERS, AGE BREAKDOWN

ource: Scarborought USA+ Release 2 2016, P 18+ // Ways used internet/ pps in past 30 days on any device:Podcast (watch, listen or download).



age

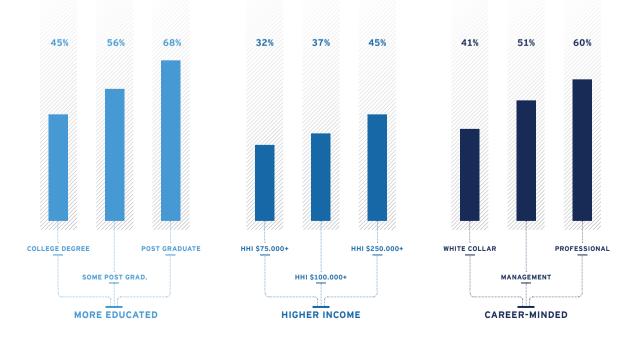
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Report

Chapter

PODCAST LISTENERS, % MORE LIKELY (ADULTS 18+)

Source: Scarborought USA+ Release 2 2016, P 18+ // Ways used internet/apps in past 30 days on any device:Podcast (watch, listen or download).



LOCATION, METHOD, AND FREQUENCY OF LISTENING TO PODCASTS

People who listen to podcasts tend to listen to them frequently. For example, people who listen to podcasts on a weekly basis, listen to five on average.

Most listeners prefer the comfort of home for their podcast consumption, while slightly less than half report listening in their vehicle. 65% of people who listen to podcasts now do so on a smartphone or tablet.

TO IN LAST WEEK

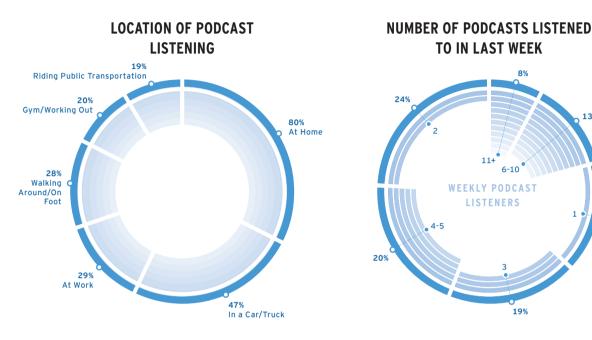
11-6-10

WEEKLY PODCAST

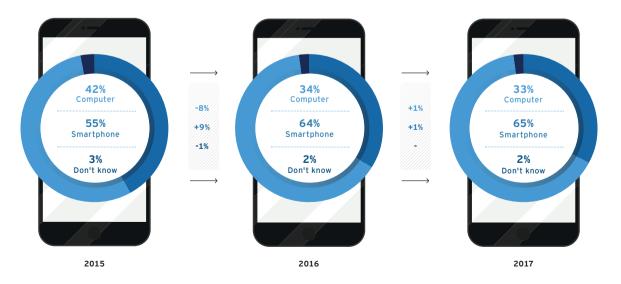
LISTENERS

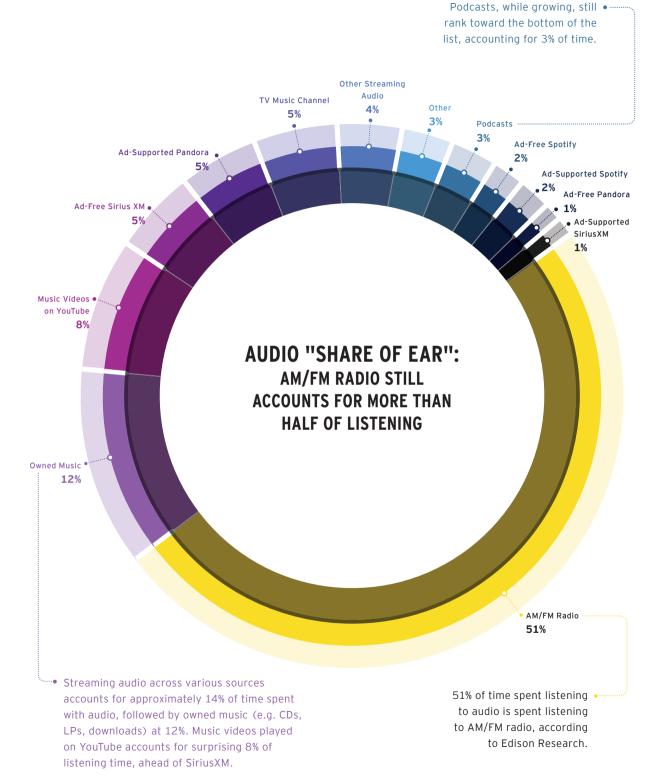
19%

16%



DEVICE MOST OFTEN USED TO LISTEN TO PODCASTS





Chapter

SUPPL

MEDIA OWNER PERSPECTIVE





David Cohen President, North America MAGNA **Bob Pittman** Chairman and CEO iHeart Media

One thing we know is that people learn about most new products, services, or ideas in conversation, not a picture. Radio delivers it all.

8

DC — Consumer media habits have changed so much in the past decade – how does radio fit in to this new world?

BP — I think radio is probably the only medium left that has mass market reach, and it has that reach because radio is fundamentally different than all other media. Radio is about companionship, whether it's an all-news, all-talk, or music radio station, the consumer is listening to it because the person on the other side sounds like their friend, and it's the reliable, steady friend that they've come to know. The influence that person has and that radio station has is enormous. As a matter of fact, if you look at the Nielsen data you'll find the vast majority of listeners have one favorite radio station, just like they have one really good friend. In an era of fragmentation caused by social media, where consumers can get into very small tribes, radio is the place where we all come together live at the same moment to have an unscripted conversation. That's why radio is a perfect platform for brands to be part of the

conversation, and increasingly, that conversation us happening in more places and on more devices. From in-car and at work to in-home on Amazon Echo or Google Home.

One thing we know is that people learn about most new products, services, or ideas in conversation, not a picture. Radio delivers it all.

DC — What do you feel are the most poorly understood or under-leveraged aspects of radio?

BP — First, the reach of radio. There are still people who don't realize that radio has the largest reach of any medium. Second, people don't understand that radio is like word of mouth. It's the most effective mass reach influencer medium there is. Ryan Seacrest or Steve Harvey talking about a product in a very personal way is the same as a best friend telling you about a product, and often has that same kind of impact. And that impact is reflected in the tremendous influence radio can have directly

on sales and also on building brands. We have case study after case study proving these points.

I also think marketers are waking up to the creative possibilities with audio marketing because of the recent popularity of podcasts. But, while podcast listening is growing, it is still a niche business compared to the massive scale of broadcast radio. That's why we spend a lot of time helping clients and agencies learn how to create great audio. The good news is production costs are so much lower than video, clients can easily test and learn what works for their brands.

DC — How do you view podcasting in the context of the larger audio space?

BP — Podcasting is a way to effectively reach a very small but influential audience. And with us, we're able to solve the low-reach problem of podcasting by doing podcasting-to-broadcasting, where we – as the number two podcast publisher in the U.S. and the number one commercial radio podcast publisher in the U.S. – are able to run the podcast in our iHear-tRadio app, get to the highly passionate influencers, and then take excerpts from the podcast and run them on broadcast. This provides great reach and lets the mass audience at least get the headlines of the podcast. Then brands can get the power of podcast integrations in our app, but scale the content and message to millions more listeners on-air.

DC — What are you hearing from advertisers looking to get the most out of their audio campaigns? Are there any best practices you typically recommend?

BP — There are several ways to use radio and the advertiser needs to know which one to use. One, we can deliver time-based messages, so if someone is trying to sell breakfast or lunch or a movie on Friday night, we can put massive reach and even frequency into that moment of decision - thereby directly impacting the purchase decision when it matters most. Two, we can affect consideration set. Most products suffer not from a lack of awareness and not from product perceptions, but because they're not in the consideration set at the moment the consumer is making a decision. Through the mass reach we have, and the ability to use short-form spots, we're able to tell people "try this tonight," and see the increase in sales that night and beyond. Immediacy matters.

Third, we can be influencers. We can sound like a best friend recommending a product and explaining why the consumer would like it. Fourth, we can create a conversation about things the advertiser is doing, whether it's a new TV campaign or a new product or a new feature – we can instantly inject it into the conversation so consumers pay more attention to TV and digital messages.

DC — From a technology perspective, what developments do you view as particularly exciting or game-changing when it comes to audio?

BP — Although over 90 percent of listening to audio is over traditional broadcast radio, the other platforms are expanding the reach and opportunity of radio. As explained earlier, Amazon Echo has become the new clock radio. Receiving our radio stations on the iHeartRadio app on a smartphone allows the consumer to listen to the radio when they get out of their car and before they get to their radio in the workplace. Or, when teenagers are playing Xbox, to have their favorite radio stations there as well. Over the past ten years, our radio stations have gone from being available on one device - the radio-to being available on over 2,000 devices on 200 platforms. This means more listening, which is very good for audio. Plus our radio stations have huge social followings and we can bridge all media - from TV to social to search - through those conversations on-air and on social. Radio can break down the silos. Simply put, and admittedly biased, the best way to reach consumers with audio on any platform is with iHeartMedia.

Chapter 2

DEMAND

Relative audience strength aside, a lack of demand and constriction among key verticals has negatively impacted radio ad revenues. Unlike print, where digital sales now account for one third of total spend, spend in the digital space still accounts for a relatively small market share.



- For AM/FM radio, key industry verticals are suffering. Retail and automotive make up one third of advertising sales, and both currently face headwinds.
- 2. Between local businesses expanding and a more favorable view of direct digital media as a replacement, local radio has been hit harder than national.
- 3. The top advertising categories for streaming audio are technology and telecommunications; neither of which are in the top five for traditional radio.
- 4. Pure player growth has slowed considerably. Positive momentum from Spotify is not enough to offset a considerable slowdown for Pandora.
- 5. Overall, advertising revenue gains from pure players are not enough to offset declines in terrestrial radio, and we expect single-digit declines over the next several years.

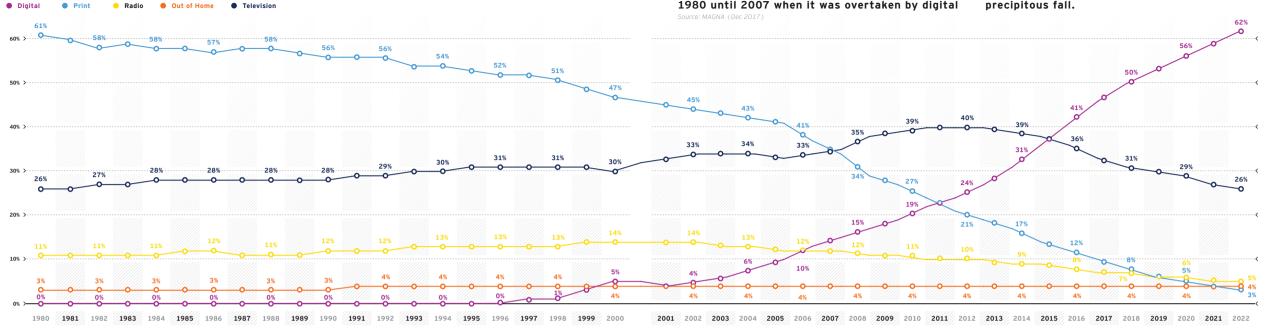
Digital

RADIO'S LONG TERM MARKET SHARE

Radio

Radio had the third highest share of media ad sales from the time MAGNA started monitoring them in 1980 until 2007 when it was overtaken by digital

media. Interestingly, it will have the third highest market share again in 2021 as print completes its precipitous fall.



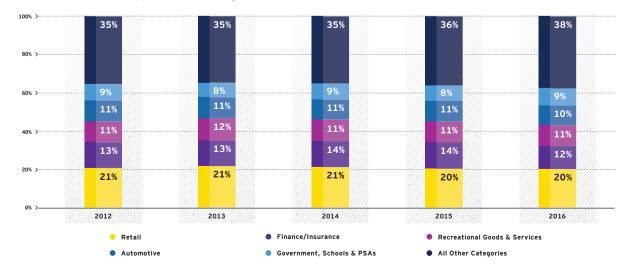
THE TOP FIVE INDUSTRIES ACCOUNT FOR TWO THIRDS **OF RADIO AD SPEND, BUT KEY VERTICALS ARE STRUGGLING**

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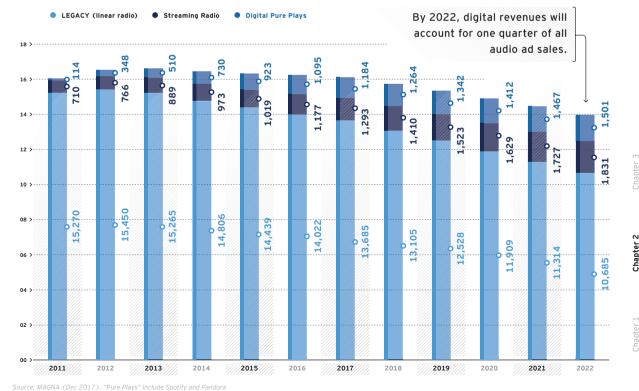
Television

Retail and automotive combined to account for one third of all radio ad spend. These are two industries that are also currently facing headwinds. Automotive car sales are expected to decline in 2017 for the first time since the recession. Meanwhile, Amazon has disrupted an

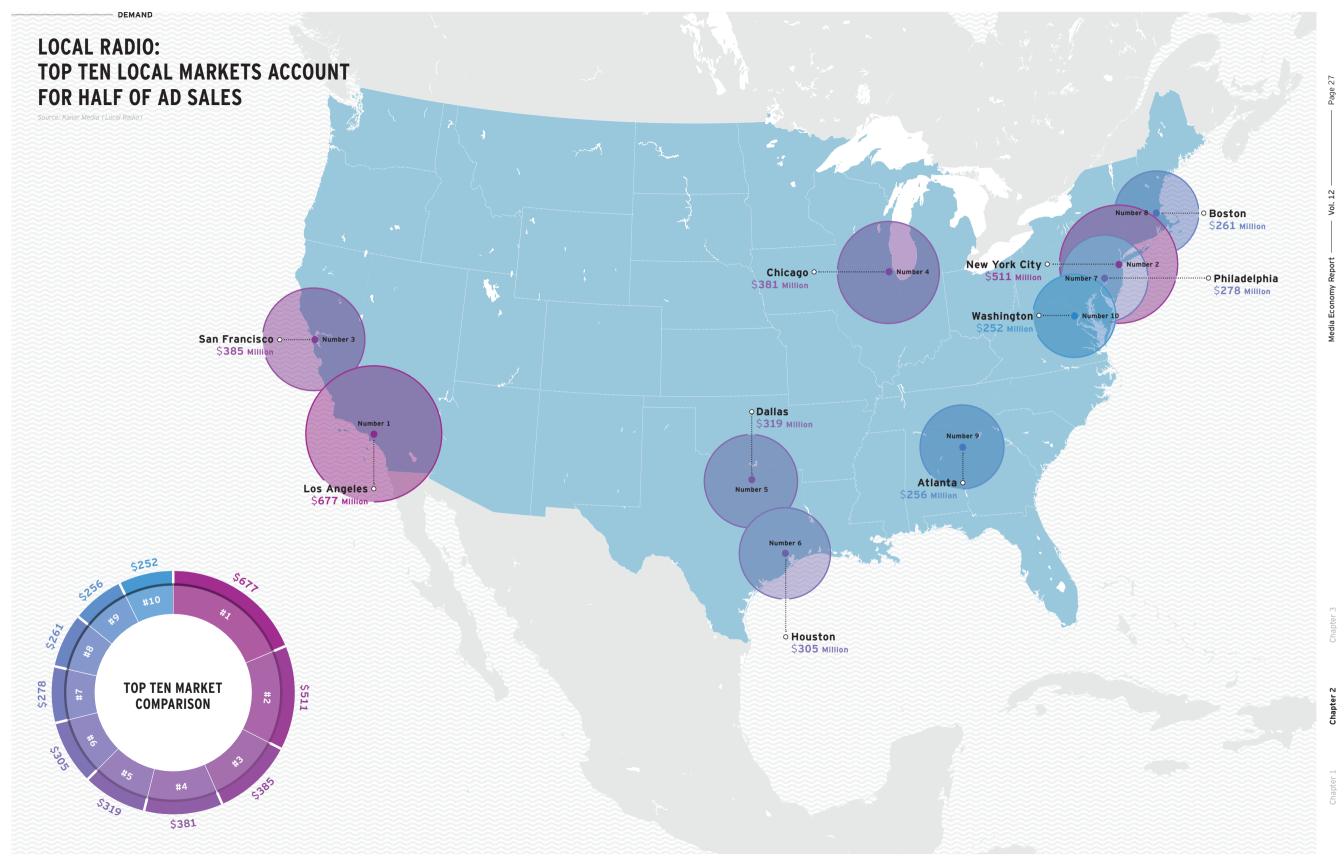
entire industry. Department store sales have decreased every month for the past two years, according to the US Census Bureau. The result is lower demand from key industry groups as advertising budgets are slashed to cut costs in the face of these headwinds.



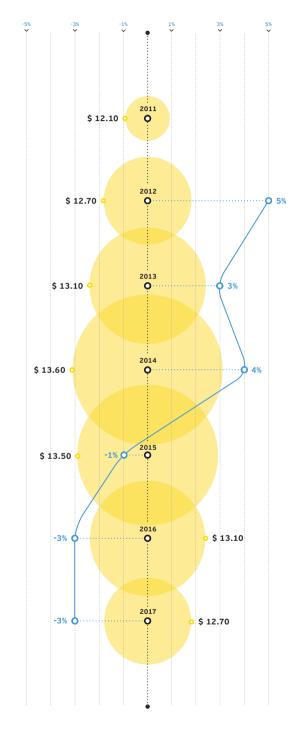
AUDIO AD REVENUE BREAKDOWN



Source: Kantar Media (Local + Network Radio)



LOCAL CPMS ARE DECREASING



INDUSTRY CONCERNS: WHAT THE NETWORKS ARE SAYING

CUMULUS:

"Over the last two years,we have focused on implementing a business turnaround to reverse the Company's multi-year ratings, revenue, and EBITDA declines..."

"However, as we have noted consistently, the debt overhang left by previous years of underperformance remains a significant financial challenge that we must overcome for our operational turnaround to proceed."

IHEARTMEDIA:

"But the one comment I would make on the margins, what I did say in the beginning of the year as we did expect the advertising environment to pick up, we expected more robust environment that has still not happened and still continues to be our more sluggish than we would like."

"As we said earlier this year, we had anticipated a more robust advertising market in 2017 and made investments in future growth in line with how we thought the ad market and our revenue would be growing. Given the slower-than-expected advertising market, we've been actively managing our cost base this year."

URBAN ONE:

"Several key accounts have reached from the third quarter of 2016 did not return in the third quarter of 2017, mainly due to the elimination of multi-cultural budgets by some key advertisers or a dollars exit in network radio. These factors contributed to weak demand in the network advertising market and some further downward pressure on already lower unit rates."

ENTERCOM (FOLLOWING ITS MERGER WITH CBS RADIO):

"We now have the scale and capabilities to drive meaningful growth and to compete more effectively with other media for a larger share of advertising dollars. We also look forward to helping to elevate the Radio industry, which remains massively undervalued by advertisers despite having emerged as America's number one reach medium, delivering outstanding ROI to customers."

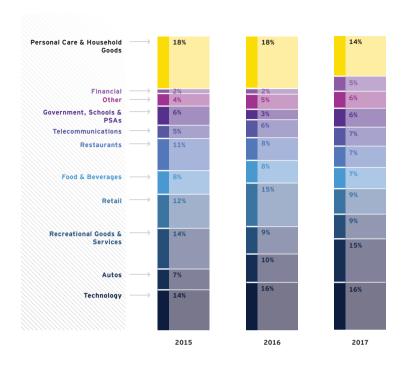
STREAMING AUDIO INDUSTRY MIX: DIFFERS FROM TERRESTRIAL IN KEY WAYS

The industry mix for streaming players (Pandora, Spotify, iHeart digital) differs from terrestrial AM/FM in key ways:

Technology and telecommunications are two of the three biggest spending industries in the streaming audio mix, but neither appear in the top five industries in traditional AM/FM radio.

The streaming audio industry mix is a bit more fragmented than the terrestrial one. While the top five industries make up two thirds of the terrestrial mix, they make up only a little more than half of the streaming mix.

Retail has made a big push into streaming audio in the last two years, doubling their share of the mix. However, it hasn't come at the expense of terrestrial radio, as their share has remained consistent throughout the years.



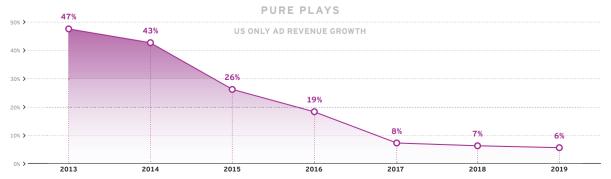
ource: Comscore, MAGNA

STALLING AD GROWTH LEADS TO FORECAST REDUCTION FOR DIGITAL PURE PLAYS

1 — FORECAST Pure play ad revenue growth has slowed significantly. Here are the reasons why:

Pandora's 3Q17 ad revenue growth was only +0.7%, and **led us to again reduce our estimate for FY2017 pure play growth to +7%.** Ad revenue growth for the company has failed to crack +5% in 2017. With the release of Pandora Premium, the \$9.99/mo ad free service in 1Q17, Pandora saw a meaningful shift in its subscriber base to the ad free platform. This is part of a larger and more fundamental shift as people move from an ad supported to subscription based, ad free model (see #4).

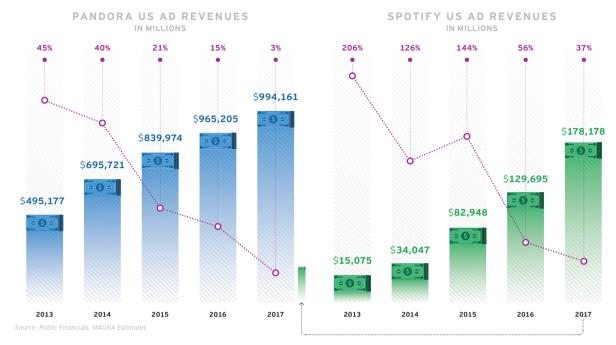
Growth in ad revenue at Spotify is not enough to offset the slowdown from Pandora (see #2). Both Pandora's monthly active users and listener hours have either failed to grow, or are now actively declining (see #3).



Source: Public Financials, Dec 2017 MAGNA Forecast

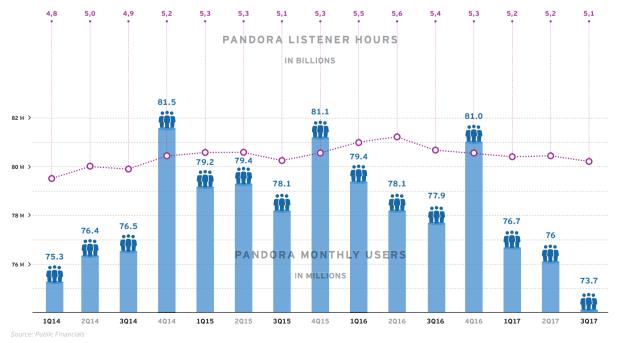
$2 \longrightarrow INDIVIDUAL PURE PLAYS$

While Spotify's ad revenues in the US are growing much faster than Pandora's, they still make up just a fraction of the amount spent by advertisers on streaming services in total. The weighted average growth rate for 2017 is therefore +7%.



$\mathbf{3} \longrightarrow \mathsf{MONTHLY} \mathsf{ACTIVE} \mathsf{USERS} \mathsf{AND} \mathsf{HOURS} \mathsf{LISTENED}$

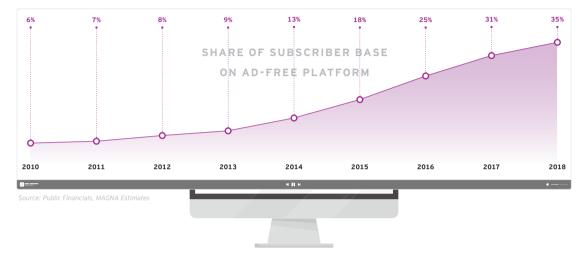
Both the number of monthly active users, and the hours listened has either stalled or decreased at Pandora.



4 A \longrightarrow SUBSCRIBER SHIFT FROM AD BASED TO SUBSCRIPTION BASED MODEL

Nearly one third of all Spotify and Pandora listeners are currently subscribed to a premium ad-free tier of service. Approximately 41% of the Spotify user base was on the ad free Spotify Premium platform in 2017. This is contrasted against Pandora, where only 7% of users were subscribed to the ad-free Pandora Plus or Pandora Premium. The release of the \$9.99/month Pandora Premium in 1Q17 (a platform more similar to Spotify Premium than Pandora Plus) gave a boost to ad-free platform subscribers for the year.

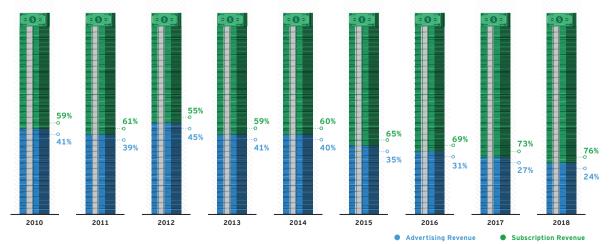
Because of the stark contrast in user base, Spotify generates much less of its revenue from advertising, and much more from subscriptions.



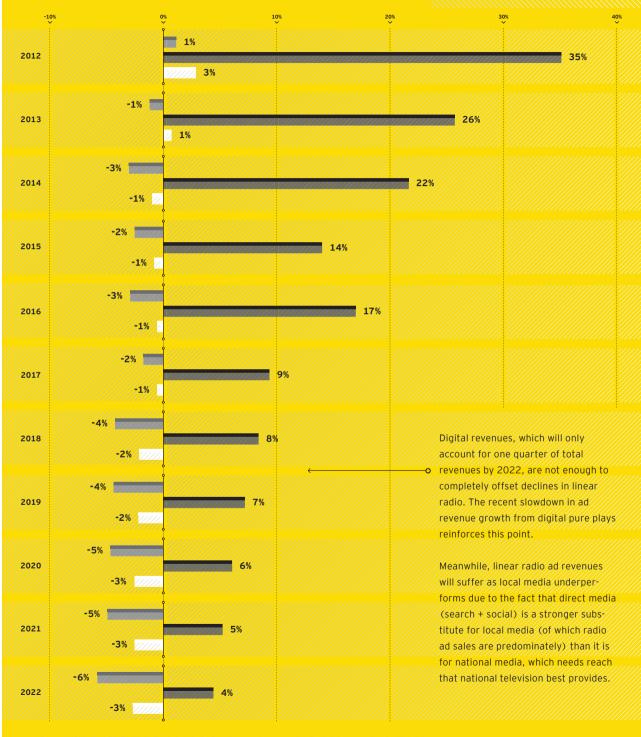
4 B \longrightarrow leads to revenue shift from advertising to subscription

The share of total pure play revenue derived from advertising will decline substantially from 2012, when advertising accounted for 45% of total revenues, to 2018 when it accounts for only one quarter of the total. In 2017 Spotify generated only 10% of its revenues from advertising, a share that hasn't changed meaningfully in years. Conversely, almost three-fourths of Pandora's revenue still comes from advertising.





LONG TERM AUDIO FORECAST: CONTINUED SINGLE-DIGIT DECLINES



Legacy AudioDigital

Total Audio (Legacy + Digital)

DRIVERS

DEMAND

- 1 → National radio reaches more adults 18+ than national television, 91% to 86%, respectively. Cord cutting is a serious concern in television, and has escalated since 2016.
- 2 → Programmatic radio will bring individual consumer targeting, immediate call to action and no format limitation on creative.
- 3 → Geography: The United States covers the 3rd most number of square miles of any country in the world. Because of this, people drive more than in other countries.
- $4 \rightarrow$ People spend an average of 25 minutes commuting to work each morning.
- 5 → Radio has a local feel a sense of community. People tune in to listen to their local DJs.
 Public service announcements alert listeners if there are any local problems.
- 6 → Elections not only drive ad sales from political groups to local radio, they also drive local businesses who've found no free air time in local TV.

Thesis: Low demand from key verticals, combined with a relatively high supply of listeners, is keeping pricing, and ultimately ad sales, down.

INHIBITORS

- $1 \rightarrow$ Key industry verticals, specifically retail and automotive, are facing headwinds that are causing **the industries to cut costs**, including advertising expenditures.
- 2 → Reach is declining as growth in listeners is not as fast as population growth. Reach is also lower amongst young people than older. While radio reaches 93.6% of adults 35-49 and 50-64, it's much lower amongst P12-17, at 87.8%.
- 3 → Growth of digital pure plays, specifically Pandora, has slowed. Profitability has slowed at the music streaming provider, prompting an almost \$500m investment from SiriusXM, the equivalent of a 16% share of the company.
- $4 \rightarrow$ CPMs are decreasing, given a relatively high supply and low demand.
- $5 \rightarrow$ Regulations, such as mandatory disclosures at the end of commercials, inhibit growth in key verticals, specifically automotive.
- 6 → There will always be a level of "wasted" spend with broadcast, as the targetability is inferior to other modes of advertising such as local cable television and household addressability.

Chapter 3

NEW VALUE DRIVERS

While music and talk programming are essential pieces of the audio world, technology is expanding its applications to new areas and making the human voice an even more powerful tool.

- 1. While still in the early days, programmatic transactions for audio have the potential to bring enhanced targeting and workflow automation to both the broadcast and streaming sides of the business.
- 2. Similar to Music Choice in MVPD households, consumers with connected televisions have taken to streaming music via the set, whether it's Spotify, Pandora, or music videos on YouTube.
- 3. To date, AM/FM radio has maintained dominance as the preferred audio source in vehicles, but as more connected cars hit the roadways and streaming becomes a more frictionless experience, consumers' behavior will likely shift.
- 4. Smart speakers, such as Amazon's Echo, can quickly become the entertainment hub in a home and offer a number of new opportunities for advertisers.
- Driven by virtual assistants like Siri and smart speakers, voice search is becoming an increasingly common phenomenon, with some sources predicting half of internet searches will be conducted that way by 2020.

PROGRAMMATIC AUDIO

The benefits of audience targeting and programmatic transaction efficiencies hold just as true for audio as they do for other media formats. These include enhanced targeting, superior measurement, increased control, reduced waste, and reduced overhead. The current audio programmatic landscape introduces the complexity of the linear workstream automation approach vs. true digital pure player individual impression insertion. The digital approach doesn't strictly have a more expansive list of benefits, however, as it misses out on a transparent view into inventory pricing and live avails, as well as some of the scale and simplicity found in the first tier of audio programmatic. In return, digital has more granular targeting, measurement, and attribution potential. Below are the key benefits and headwinds of programmatic audio compared to traditional audio.

AUDIO PICKING UP STEAM ON CONNECTED TVS

Many viewers turn on TV occasionally just to provide a background noise to accompany other activities, such as doing chores or checking emails. So it is no surprise that some connected TV owners would take advantage of streaming capabilities of their TV to stream music in their living room, especially when the best stereo sound system in the house is already hooked up to the TV.

According to the 2017 Share Of Ear report by Edison Research, TV music streaming commands 5% of the time that U.S. consumers spent listening to audio daily. Of course, audio consumption on connected TV is nowhere near being big enough to challenge the predominantly visual content consumption, and likely never will be. However, it is becoming a potential audio channel for marketers in an increasingly fragmented and multi-faceted media landscape.

YouTube stands out as a brand-friendly platform for reaching connected TV viewers via audio content. YouTube viewers are now consuming 100 million hours of its content per day on connected TVs. Considering that YouTube accounts for 25% of all music streamed worldwide, and that 11% of YouTube views are generated by music-related content, it is safe to say that many YouTube users are streaming music on their connected TVs too.

\rightarrow Linear

- Buyer control, transparent view into inventory pricing and live avails.
- Workflow automation, reduced transaction costs.
- Broad audience targeting.
- Shortened lead times and rapid confirmation.
- Streamlined creative management.

\rightarrow Digital

- Individual consumer targeting.
- Immediate call to action.
- No format limitation on creative.
- Fully viewable; both streaming audio inventory and in-app companion ads only appear when interacting with the app.
- Auction-based pricing model and efficiency.

HEADWINDS

- Most brands don't prioritize audio as a way to drive main campaign goals.
- Lack of industry education around programmatic audio.
- Radio is viewed as a cheap reach vehicle; little appetite for sophistication.
- Additional resource costs in the form of data, and investment in expertise and tech.
- Programmatic business is largely PMP and therefore competition with direct sales rather than monetizing unsold inventory.
- Non-standardized inventory.
- Difficulty measuring engagement, attribution.
- Disconnect in perception of premium between buyers and sellers.
- Consumer privacy concerns.





CONNECTED CARS MAY STEER IN-CAR AUDIO CONSUMPTION TOWARD STREAMING

As more and more vehicles become connected to the internet, car owners now increasingly have access to a variety of options for audio content.

By 2020, there will be a quarter billion connected vehicles on the road, enabling new in-vehicle services and media platforms. But with the average age of an in-use vehicle in the U.S. now hitting 11.6 years, the decade-long upgrading cycle means that the shift of in-car audio consumption from radio to streaming will be a slow and gradual process. In addition, a 2016 study from Nielsen notes that two-thirds of U.S. car owners are interested in built-in content channels, while only a third prefer "brought-in" content via smartphones and dongles. its simplicity, local relevancy, and the

mature economics of the radio eco-

system. However, as more and more

media consumption will gradually

connected cars get on the road, in-car

start to reflect changing media habits

outside the car. Over time, in-vehicle

media consumption may even expand

from primarily audio to include other

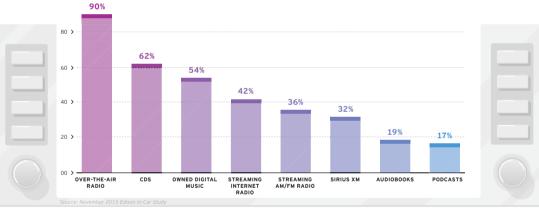
forms of media content such as social

and video, further upending radio's

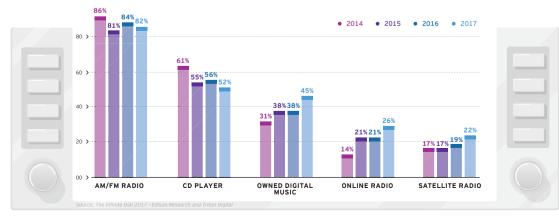
dominance in cars.

This means that in the short term, radio will remain dominant as the default in-car audio consumption due to

WHILE COMMUTING, DO YOU EVER LISTEN TO ...?



PERCENT SAYING YES

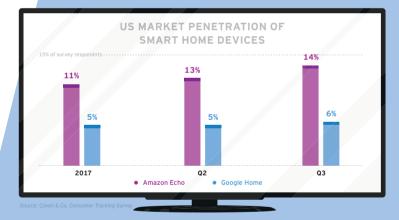


PERCENT CURRENTLY USING AUDIO SOURCE IN PRIMARY CAR

SMART SPEAKER ADOPTION CREATES NEW CHANNEL FOR AUDIO ADS

Over the past year, voice-activated smart speakers such as Amazon Echo, Google Home, and Apple's HomePod started to gain traction and get into more and more U.S. households. 4.2 million smart speakers were shipped globally in Q2 2017, which represents a stunning 843% year-over-year rise over Q2 2016. As the first mover in this space, Amazon Echo is enjoying a head start and makes up about 76% of the U.S. smart speaker market as of Sep. 2017. Google Home trails behind at about 24%.

As mainstream adoption of smart speakers picks up, they are also starting to shift part of home media consumption from screen-based devices-such as mobile, desktop, and TV-to voice-only experiences delivered via the virtual assistants that reside in the smart speakers. This opens up a new potential ad channel for advertisers to reach consumers at home.



At the moment, none of the voice-activated smart speakers natively support audio ads. Google briefly tested sponsored messages for Disney's live-action remake of Beauty and the Beast earlier this year, and in April, Burger King created a series of ads that intentionally triggers Google Home to dispense more information about its burgers. However, both Echo and third-party voice experiences such as news briefings, free-tier music streaming, and podcasts are allowed to carry their ad loads to help publishers and services monetize via smart speaker.

As more and more at-home digital interactions become powered by smart speakers, future ads on these voice-activated speakers could include sponsored spots, product placements, and even paid search results. Audio advertisers should closely monitor development in this space in order to seize emerging opportunities.

VOICE SEARCH

In the past two years or so, the consumer tech industry has been laying the groundwork for voice search. Voice assistants on mobile such as Apple's Siri or Google Assistant (formerly known as Google Now) have always supported voice search since the day they launched over half a decade ago. User adoption has been steadily growing, and as of January 2017, about half of online consumers are using voice search on a daily basis. Gartner estimates that 30% of web browsing sessions will be done without a screen by 2020, whereas comScore predicts 50% of all web searches will be voice searches by that year.

But the latest development in voice search is quickly upending the existing status quo. The surging popularity of Amazon Echo smart speaker is effectively unbundling voice search from mobile and integrating search into connected home devices. As a result, Alexa is quickly emerging as a worthy challenger to the incumbent Google when it comes to search – at least as voice-initiated queries are concerned. Alexa makes up for the shortcomings of running on Microsoft's Bing search engine by pulling information from third-party Alexa features, and for shopping-related queries, from Amazon's own site.

For advertisers, the rise of voice search brings a fundamental challenge to search marketing - how do you surface your product when there is no visual component? This is where the audio players may come in and apply their experience of how to best engage the audience aurally. As voice search start to take off, audio consumption will become more intuitive and frictionless, and brands will need to optimize their websites to ensure the correct information gets pulled in by voice search engines and presented to consumers.



STA<mark>RTUPS TO</mark> WA<mark>TCH OUT FOR</mark>

PAN DPLY

What it does - Panoply is a advertising network and production studio for podcasts. Experience - They offer "live read" ads by hosts, allowing for a brand's message to

be natively integrated with the content. Panoply has a number of premium podcasts that brands can choose from for the optimal contextual alignment. They also offer production services to create custom podcasts for brands and advertisers.

Platform - Mobile

Web - panoply.fm

acast.

What it does - Acast is a hosting, distribution, and monetization platform for podcasts.

Experience - Acast focuses on helping content creators monetize audio content by allowing sponsored spots, product placements or live read by hosts. Additionally, their platform tackles the issue of shareability and discoverability by curating episodes by topic and implementing easy-to-use search functions within their app.

Platform - Mobile

Web - acast.com

Pulse Labs

What it does - Pulse Labs offers a panel of testers for voice skills.

Experience - Pulse Labs provides a panel of users based on a specific target market for testing Alexa skills. Developers can gain valuable insights and analytics around usage of their skills, which can then be leveraged to improve the voice experiences before they go live.

Platform - Amazon Alexa

Web - pulselabs.ai

____spokenlayer

What it does - SpokenLayer powers content, voices, and distribution for the audio ecosystem. Experience - They work with publishers to create spoken versions of their content for various

audio platforms. Brands are able to work with SpokenLayer to insert themselves into these audio content pieces or even leverage SpokenLayer as part of a larger audio strategy.

Platform - Mobile, Voice Assistants, Smart Speakers

Web - Spokenlayer.com



TECH PERSPECTIVE



It's still early for this technology - there's been a lot of promise, but few can really deliver on this vision,

RY—How have you tried to differentiate Google Assistant from competitive products?

GH — It's still early for this technology - there's been a lot of promise, but few can really deliver on this vision. Google has a unique blend of expertise in natural language understanding, deep learning, computer vision, and understanding user context, so we think we can make good headway. We can understand intent behind words to handle follow-up questions and complex, multi-step tasks. Our goal is continue to deliver an Assistant that's really useful to people. RY— Google has an ad-supported business model. Is there a plan to introduce new ad products to Google Assistant?

GH — First and foremost, our goal is to provide users with the best possible experience with the Google Assistant. We are looking at ways to create a business model that will build on the services and information that we already offer within the Assistant while not negatively impacting the user experience. We don't have any plans to share today. RY—You had a bit of a back-and-forth with Burger King when the controversial "OK Google" ad first dropped. Do you think we'll see more ads like that as smart speaker adoption picks up? Is there an opportunity there?

GH — Burger King created that commercial on their own. Google was not involved at all. Our main goal is that the Assistant on Google Home helps when you want it to, and not when you don't.

RY—Are you planning to expand Google Assistant into other areas like enterprise and gaming?

GH — While we don't have plans to share today, the Google Assistant is already available across a number of surfaces, including: Android phones, iPhone, voice activated speakers like Google Home, Google Allo, Headphones, Android Wear, and Android TV.



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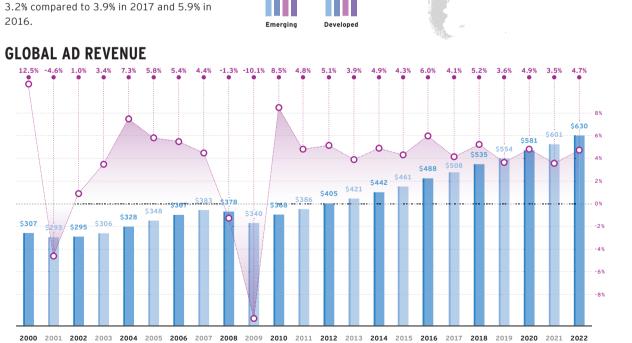
Design by Bureau Oberhaeuser @oberhaeuserinfo contact@oberhaeuser.info

THE GLOBAL ADVERTISING **MARKET 2016-19**

MAGNA predicts media owners' net advertising revenue will grow by 5.2% to \$535 billion in 2018, accelerating from 2017 (+4.1%). The higher growth is due to the impact of cyclical drivers in 2018 (FIFA Football World Cup, Winter Olympics, US Mid-Term elections). Neutralizing the five billion dollars of incremental ad spend generated by those cyclical events, the 2018 growth would be 4.1%, compared to 5.1% in 2017, thus a slight slowdown.

After growing by 17% in 2017, digital and mobile advertising sales will grow by 13% in 2018 to reach \$237 billion, or 44% of global advertising revenue. They will keep growing to account for 50% of total advertising sales by 2020. Meanwhile offline ad sales (linear television, print, broadcast radio, out-of-home) will decrease by 0.5% to \$298 billion. Linear television will benefit from cyclical events to grow ad sales by 2.5% in 2018 (2017: -2%).

In the US, advertising sales will grow by 5.0% in 2018 to reach \$195 billion. Neutralizing the incremental ad sales generated by even-year events (+\$3.7bn), 2018 growth will only be 3.2% compared to 3.9% in 2017 and 5.9% in



BY REGION

• 8.5%

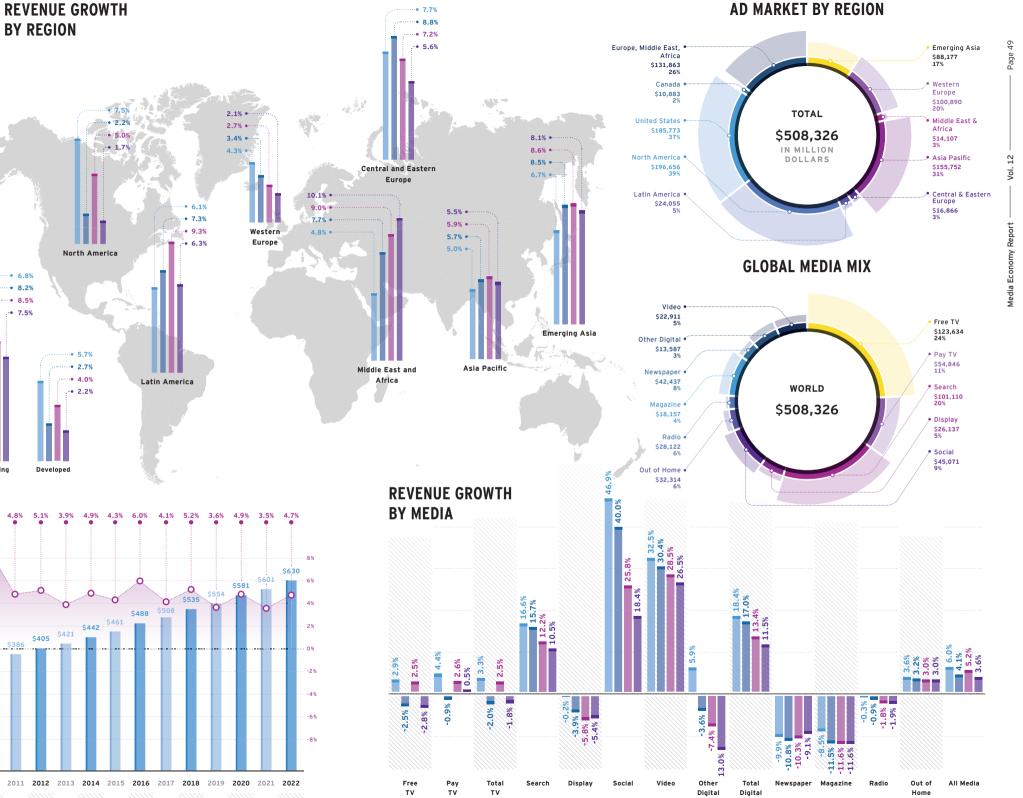
.... 7.5%

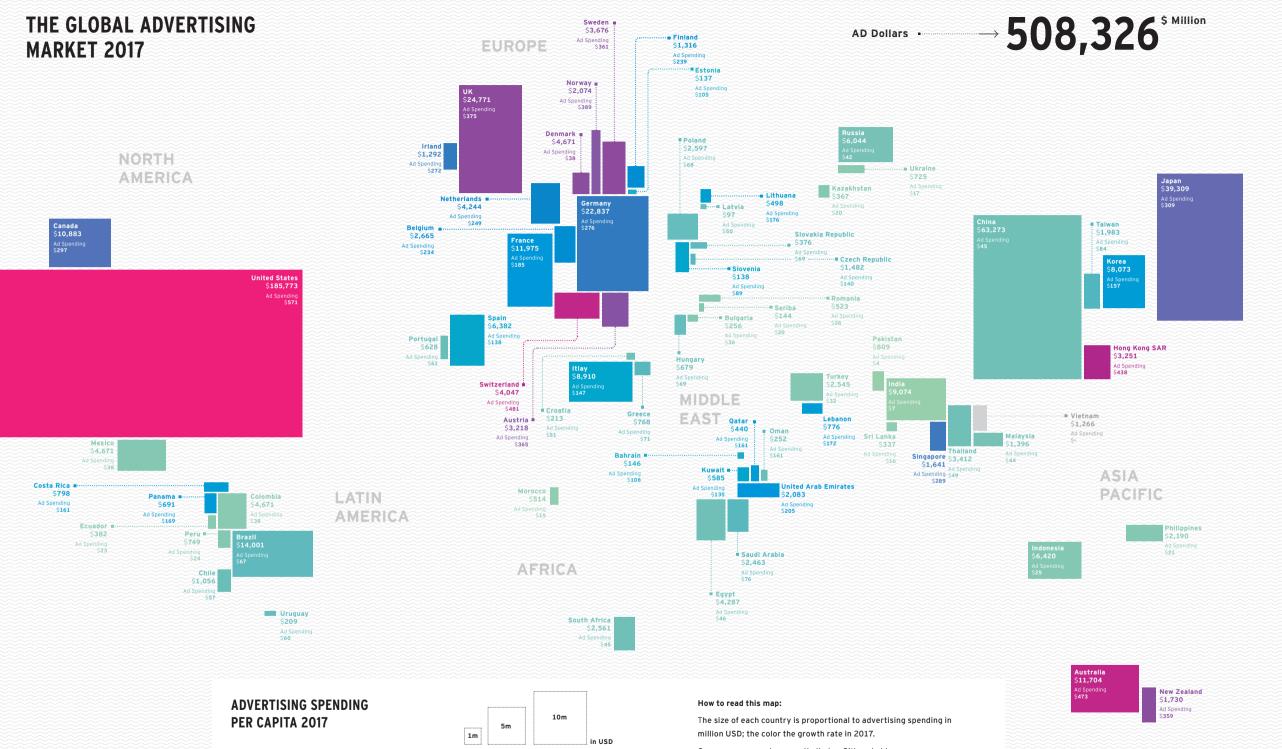
• 5.7%

• 2.7%

• 4.0%

.... 2.2%





AVERAGE AD SPENDING \$0 \$100 \$200 \$300 \$400 \$500 \$600

Green means very low growth (below 2%); pale blue means moderate growth (3-4%). Purple and pink denote markets growing above 10% in 2017 (Hong Kong, Australia, Switzerland, Sweden, etc.). Page 51

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Media Economy Report

ABOUT MAGNA

MAGNA is the centralized IPG Mediabrands resource that develops intelligence, investment and innovation strategies for agency teams and clients. We utilize our insights, forecasts and strategic relationships to provide clients with a competitive marketplace advantage.

MAGNA harnesses the aggregate power of all IPG media investments to create leverage in the market, negotiate preferred pricing and secure premium inventory to drive maximum value for our clients. The MAGNA Investment and Innovation teams architect go-to-market investment strategies across all channels including linear television, print, digital and programmatic on behalf of IPG clients. The team focuses on the use of emerging media opportunities, as well as data and technology-enabled solutions to drive optimal client performance and business results.

MAGNA Intelligence has set the industry standard for more than 60 years by predicting the future of media value. The MAGNA Intelligence team produces more than 40 annual reports on audience trends, media spend and market demand as well as ad effectiveness. To access full reports and databases or to learn more about our subscription-based research services, contact forecasting@magnaglobal.com.

ABOUT IPG MEDIABRANDS

IPG Mediabrands was founded by Interpublic Group (NYSE: IPG) in 2007 to manage all of its global media related assets. Today, we manage over \$37 billion in marketing investment on behalf of our clients, employing over 8,500 marketing communication specialists in more than 130 countries.

IPG Mediabrands is a new world agency group designed with dynamic marketing at its core. Our speed, agility and data smarts ensure we continue to create growth for many of the world's biggest brands. IPG Mediabrands' network of agencies includes UM, Initiative, BPN and Orion Holdings as well specialty business units including Magna Global, Cadreon, Ansible, Society, Reprise, Rapport and the IPG Media Lab.

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