

The future of media innovation on the edge

Perspectives on edge computing
for broadcasters

Introduction

In just over a decade, edge computing has gone from concept to mainstream in a growing number of industries where the need for greater processing power closer to the point that data is generated or consumed has become increasingly important and, in some cases, a key driver of growth and competitive advantage. That’s especially true among companies in which the accelerating use of the Internet of Things (IoT) and connected products and devices is producing ever-more data far from companies’ central data centers or cloud providers.

But although edge computing is gaining prominence in many industries, it has yet to make serious inroads in broadcasting—a situation that’s expected to change in the next few years. And as broadcasters begin exploring edge computing’s use in and potential impact on their business, they’ll have to answer a number of questions, including the following:

- What does edge mean to media and entertainment companies?
- How do broadcasters plan to use edge technology?
- Is edge seen as a cost savings opportunity, a revenue opportunity, or both?
- What are the main drivers for adopting edge, and what are the possible roadblocks?
- How will broadcasters develop edge capabilities and technologies: internally or working with external third parties?
- What are the applications and use cases for edge technology in the future of broadcast media?
- What edge technologies are in use now and might be in the future?
- Which areas of the business could benefit from edge?
- Who are the main providers or experts within the edge computing value chain?

PILOT, in partnership with Verizon Media, commissioned Kearney to conduct a study designed to help provide some initial answers to these questions. As part of our research, we spoke with a variety of broadcasting executives in TV and digital video as well as in radio and digital audio—and in large and small companies—to get the most diverse range of thoughts on edge. What did these broadcasters tell us?

At a high level, broadcasters say they are generally aware of the concept of edge computing, but awareness hasn’t translated yet into a firm understanding of where they could apply edge and how it could specifically impact their business. That said, participants collectively identified a wide range of potential edge technology use cases that would primarily result in increased revenue, with some cost savings. Furthermore, participants expect edge to have a major impact on broadcast industry innovation as edge becomes widely adopted within the next three to four years.

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What is edge?

Research firm Gartner defines [edge computing](#) as “part of a distributed computing topology where information processing is located close to the edge, where things and people produce or consume that information” rather than done centrally in a location that could be thousands of miles away. Edge computing is useful in situations where response time is crucial—that is, low-latency applications—and can save money by minimizing the amount of data that has to be sent elsewhere for processing.

Edge computing has been around for more than a decade, with the concept initially hatched during a brainstorming session hosted by [Microsoft](#) in 2008. Since then, edge computing has gained considerable momentum, especially in the manufacturing and healthcare industries. Although not yet in widespread use by broadcasters, edge has the potential to become a core element of broadcasters’ technology architectures as they move into more IP-based content delivery and, overall, become more digital.

Most respondents see edge applied to their business as processing that occurs at the tail end of the network prior to the last mile. For example, this could include using content delivery networks (CDNs) to cache video content closer to users to enhance distribution via over-the-top (OTT) platforms or preloading advertising at the edge of the network and targeting it to specific users by geography, household, or other characteristics.

However, some respondents expect device-level edge processing for select broadcaster applications where low latency and speed is paramount. They could see, for instance, using mobile device processors instead of passing data back to the cloud or a data center, storing content and advertising on TVs or even supporting in-car infotainment systems by using edge computing and location-based services.

When applied to broadcasting, edge is defined as data and compute processing at the tail end of a broadcaster’s IP-based networks, including next-generation terrestrial and digital, with processing on the devices themselves for select applications.

What’s driving interest in edge among broadcasters?

Overall, a number of factors are laying the groundwork for broadcasters’ adoption of edge. Arguably one of the biggest is **next-generation broadcasting powered by ATSC 3.0**. ATSC 3.0 hybrid technology, combining over the air (OTA) and Internet, will give broadcasters tools to provide a consumer experience that rivals or exceeds that provided by traditional multichannel video programming distributors (MVPDs), such as cable and satellite operators and online-only video services. This alternative network will use a single slice of spectrum to deliver many times the traditional broadcaster capacity at a fraction of the cost. Furthermore, ATSC 3.0 makes it possible to watch broadcast video on mobile devices and tablets. Edge computing can help broadcasters maximize their use of this important development.

Continued cord-cutting is another driver. For several years, consumers have been gradually reducing their consumption of pay TV via cable and satellite providers in favor of OTT platforms such as Netflix, Amazon Prime, Hulu, and Disney+. These OTT platforms extensively use CDNs, an adjacent edge capability, to distribute video content on their OTT video platforms. Edge computing is a natural complement to this increasingly popular model. Furthermore, as OTA broadcast consumption grows thanks to cord cutting and as ATSC 3.0 deployments become more widespread, edge computing becomes an integral component.

A third factor is the growing adoption of **IoT**. With IoT devices proliferating across industry verticals, we’re also seeing an accompanying rise in the number of smart applications or edge devices that require compute capability to carry out workloads. As more IoT devices are deployed, companies will need sufficient edge compute power and functionality to support these devices. Similarly, as more 5G-enabled devices are deployed and adopted (such as Apple’s new 5G iPhone), more mobile edge computing will be required to reduce latency by bringing compute capabilities into the network, closer to the end user.

A fourth factor is **increased audience interactivity**. The on-demand world, driven by the Internet and mobile devices, has placed a wealth of information and capability at consumers’ fingertips, when they want it. Virtually any product consumers want can be had with just a click or, if they prefer, a spoken command to Alexa. Broadcasting can benefit from enhanced two-way engagement—whether it’s in marketing, shopping, or information and entertainment. Edge capabilities can be a powerful tool for helping broadcasters answer the call for greater interactivity, bringing compute power closer to—and, in some cases, directly in—the audience’s hands.

Finally, the **top- and bottom-line implications** of edge computing are getting broadcasters’ attention. Broadcast edge devices deployed on the network or at the last mile can help broadcasters capture rich engagement and attribution data about viewers or listeners, which in turn they can monetize via, for example, programmatic ad placements. At the same time, edge offers significant cost savings opportunities by enabling broadcasters to reduce some of their traditional operating and data center costs by shifting network computing to the last mile.

What did the industry tell us about edge?

The pool of broadcasters we spoke with had varying levels of experience with the edge concept—and that was by design. Rather than getting an understanding from a relatively homogeneous, narrowly defined group, we sought to get perspectives that reflect the diversity of the broadcast industry. Doing so enabled us to paint a more comprehensive picture of edge across the industry broadly and across different types of companies specifically. From our conversations, five principal insights emerged.

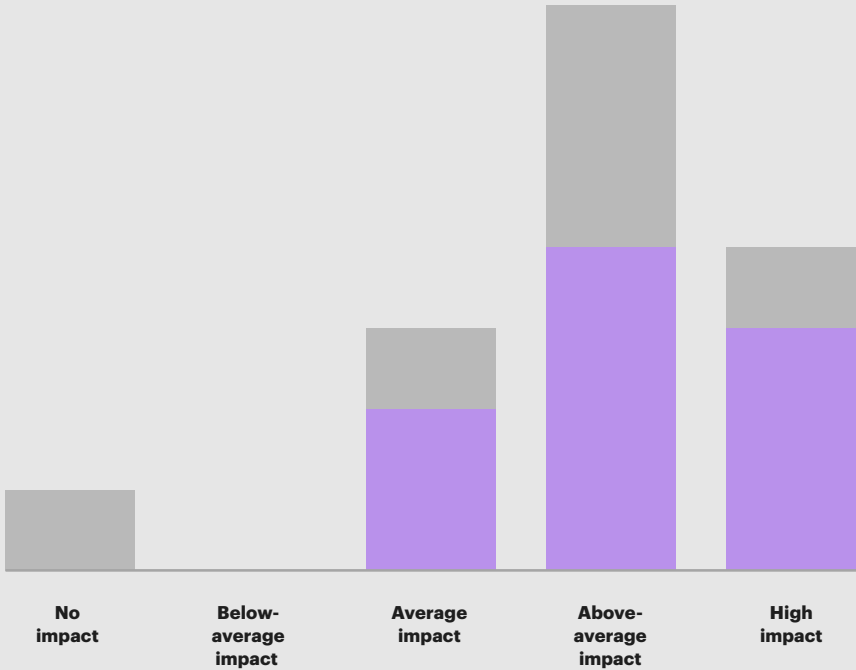
Insight #1: Expectations for edge among broadcasters are high.

Taken as a whole, broadcasters expect edge to drive innovations and use cases across the entire broadcasting ecosystem—from content creation and distribution to audience experience, advertising, and measurement. Respondents believe edge technologies will have an above-average impact on general broadcast industry innovation (see figure 1).

Figure 1
Respondents believe edge technologies will have an above-average impact on general broadcast industry innovation

Degree of impact that edge will have on the broadcast industry

- Radio broadcasters
- TV broadcasters



Note: Sample size is 15.
Source: Kearney analysis

"I expect high impact for the big companies because they have the scale to see savings and they don't need an IT plant in each city they play in," said a respondent from a television broadcaster. "Smaller companies that don't reach that critical mass may not see as high of an impact from edge."

Also anticipating a high impact was a radio broadcast respondent, but only "if broadcasters can achieve improved audience measurement goals by expanding listener panels using edge; otherwise, average impact if enhanced measurement is unattainable."

A third respondent, from a television broadcaster, predicted "potentially above-average impact if broadcasters can capture more value from edge by understanding how to utilize consumers' second screen as an advantage to drive more consumer interactivity."

Content creation

In content creation, participants cited an obvious application of edge to help them provide hyper-local news, accommodate user-generated news and content, and improve newsgathering and production processes. As talent continues to work in remote environments and production equipment such as cameras become more wireless and portable, edge will become instrumental in stitching everything together efficiently.

"From a broadcast perspective, edge technologies create a more agile newsgathering environment because it makes it much easier to set up remote production, there's less of a need to depend on reporters out in the field, and it allows broadcasters to capture more relevant news in real time," noted a television broadcaster.

"There is going to be an interesting opportunity for generating hyper-local viewer-created content," predicted another television broadcaster respondent. "If done correctly, it will serve individuals living in the same community down to the zip code level, by leveraging geotargeted data."

One television broadcaster highlighted an interesting aspect of edge as it relates to globalization, stating "We traverse the Internet to go internationally, but does this become more regionalized when we move to edge? Internationally, content is the same with language differences; does it make sense to do processing locally, and is there a regional element better suited for the edge?"

Targeted content

Supporting advertising sales is one area where broadcasters believe edge will make a huge difference. One of the most important attractions of ATSC 3.0 is advanced geo-tracking, which has the potential to become an important tool to support targeted marketing.

"Our ability to super-serve viewers and advertisers increases once we can provide a better and more targeted end user experience, ultimately increasing the value of our ad impressions," noted a radio broadcaster. A television broadcaster described edge as enabling broadcasters to engage in "the art of storytelling in advertising, by showing ads in a personalized fashion" to viewers.

Broadcasters will also be able to use edge to target content to viewers based on demographics, interests, and other characteristics, which increases the relevance of the content to the consumer. A television broadcaster noted, "If we can target the right content to the right communities based on demographics and interests, then we as broadcasters would be better positioned to serve these communities with more personalized content," ultimately improving broadcasters' ability to better serve advertisers which, in turn, will drive revenue.

Emergency alerting is another area where respondents see a use for edge. "If you think about the edge technologies out there, they allow us to deliver emergency alerts to specific ZIP codes," stated a participant from a television broadcaster. "This is beneficial to serve just the individuals who live in the same community with the vital information that they look for us to provide."

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Content distribution

In content distribution, respondents see edge as helping on a number of fronts. A big one is video and audio delivery and caching—that is, storing content closer to users. For example: “With music stations, especially because everything is pre-programmed, and with 5G making it easier to push content to the device, there is no reason why I can’t take a radio station offline by pushing the next 10 songs with commands on how to stitch them together onto your device and letting the device do the mixing of the songs from one to the other when I know there are no voice tracks in the next upcoming plays to extend that overall radio experience offline,” said a radio broadcaster. Another radio broadcaster cited edge as “potentially being used for assembly of broadcast streams at the perimeter (antenna), to hold the catalog for a week out.”

Edge can also be used to reduce the need to re-encode repeatedly used content. There are opportunities to pre-cache content at the edge for re-listening, especially spoken word or original content.

Particularly promising edge applications are remote monitoring and control of broadcast operations and transmission as well as delivery of software, entertainment, and location-based services to the connected car. The distributed nature of broadcast facilities, which are often in remote locations, and the movement toward more centralized operations that control unattended facilities create opportunities for using edge to monitor facilities access, equipment logs, alarms, generator fuel levels, and other site-specific data. Edge could also facilitate large file delivery such as software updates for connected cars, or the delivery of content and services to in-car entertainment systems that are powered by a hybrid of broadcaster edge services and local compute.

Consumption and experience

Computing at the edge will make it possible for TV broadcasters to transform the audience experience—especially when it comes to gaming, sports betting, and live sports production. With edge, broadcasters can engage and interact with customers in as close to real time as possible, providing the quick response and analytics that are critical to applications in which milliseconds count.

“Broadcasters are interested in improving live sports audience experiences, and edge technologies would provide capabilities to support real-time sensors on the field and different camera angles to create a better viewing experience, without any risk of latency issues,” noted a television broadcaster.

Measurement and engagement

Traditional broadcasters are in the midst of digital disruption, with their focus shifting from longstanding ways to gather audience measurement and business intelligence to using analytics to inform decision-making. Edge computing comes into play here by bringing compute and analytics closer to the last mile to drive faster, predictive, and more targeted and personalized outcomes for viewers and listeners. For example, one radio broadcaster described the potential of “distributed analytics at the edge, where instead of sending data back to the central warehouse, you could have more AI at the edge to analyze the data.”

With edge, broadcasters gain a near-real-time window into viewership or listener metrics and engagement, which one radio broadcaster participant described as “a dream.” The possibility of measuring emotional metrics from audiences came up as a new frontier. For radio companies specifically, edge could also help in the royalties arena by keeping track of the number of song playbacks.

Broadcasters also see edge as a way to potentially reduce costs related to measurement while increasing the audience panel sizes. This move aligns with their intent to generate deeper audience insights that can drive better programming and monetization decisions.

Edge could facilitate the delivery of content and services to in-car entertainment systems that are powered by a hybrid of broadcaster edge services and local compute.

Insight #2: The benefits from these innovations and use cases will be primarily in the form of revenue growth, such as audience experience and advertising, along with some cost savings, including in operations.

According to respondents, edge has the potential to positively influence a number of areas of the business—whether it’s TV or radio, OTA, or digital. Here are a few examples:

Advertising. Ad sales could benefit from better audience information, more targeted campaigns that drive higher costs per thousand impressions (CPMs), and programmatic ad sales. With enhanced targeting and storytelling in advertising, broadcasters can put the right ad in the right place at the right time for each audience member. Smart TVs are one example. “As the edge technologies become more sophisticated, we can get more data back from smart televisions to understand viewer habits and what they are interested in to serve them better via targeted ads or relevant content that is more in line with what they are looking for,” observed a television broadcaster.

Production. With edge, broadcasters could move production and supply chain into the cloud and move sports production applications closer to the action to reduce costs and create more efficient workflows. Edge will also augment and simplify the work that broadcasters do today to enhance live sports and events.

Programming. Edge could enable broadcasters to create more local-targeted or user-targeted programming, resulting in greater personalization and an overall better audience experience.

Broadcast operations. Edge has myriad opportunities to streamline various operations processes to boost efficiency and productivity. Examples include creating a more agile news environment; rotating to smaller broadcasting facilities (less space needed), less equipment on premises, and less-frequent hardware refreshes; delivering content streams using CDNs to drive both OTA and OTT consumption; boosting interactivity by deploying business logic at the edge; and reducing bandwidth and traffic passed back and forth.

Overall, respondents think edge’s benefits will translate primarily into new revenue opportunities and some cost savings—with large broadcasters expected to generate more cost savings from edge technologies than smaller broadcasters, given the differences in scale (see figure 2 on page 7).

“I think we’ll generate more revenue, but I think there will be a smaller amount of operating savings generated, depending on the edge technology,” noted a television broadcaster respondent. Echoed a respondent from another television broadcaster: “I hope we find some cost savings, but it will mostly be about diversifying revenue streams, especially because it will cost a lot of money to invest.”

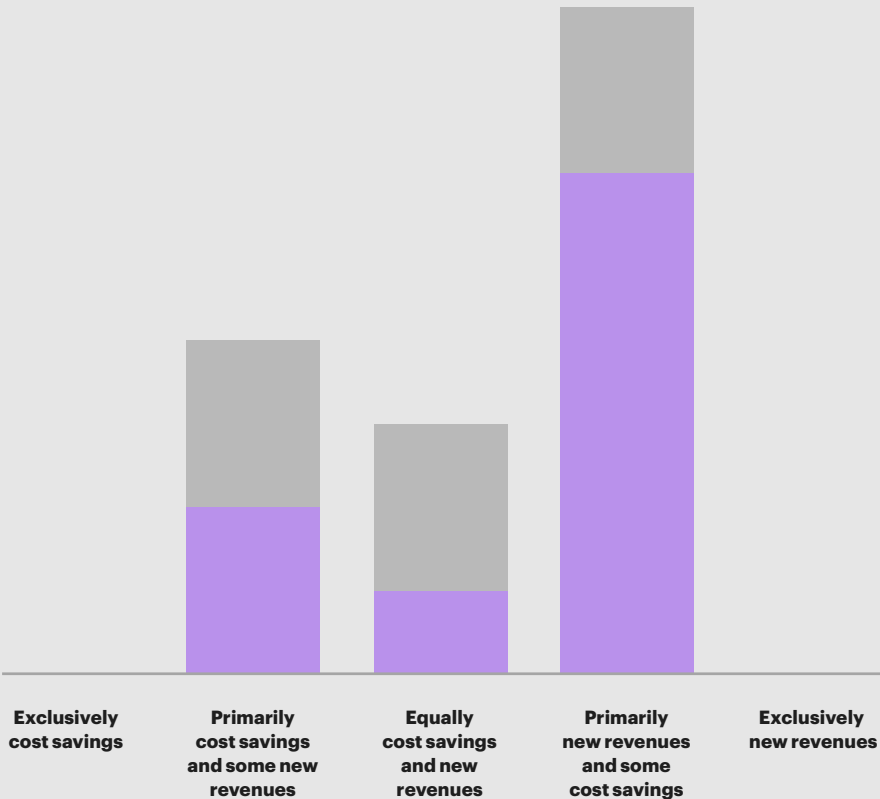
One respondent from a radio broadcaster also thought the edge’s financial impact would be mostly on the revenue side “because if we find something, it would be in the context of user interactivity and being able to drive more activity out of advertising or create more value for listeners.” But savings are possible, and “will happen when you hit critical mass and get the most out of horsepower, storage, and interactions with customers,” noted one television broadcaster.

Respondents think edge’s benefits will translate primarily into new revenue opportunities and some cost savings.

Figure 2
Broadcasters expect edge to create a variety of financial benefits

Edge’s financial impact

- Radio broadcasters
- TV broadcasters



Note: Sample size is 15.
Source: Kearney analysis

Insight #3: Today, the edge is in a very nascent stage in the broadcast industry but is poised for explosive growth in the not-too-distant future.

While many of our research participants are moderately aware of edge, their general impression is the industry is still very early in understanding what the edge is and what companies can and will do with it. But that’s likely to change in the next three to four years as broadcasters expect edge computing to ramp up significantly.

Given the fact that edge is just beginning to garner attention in the broadcast industry, it’s not surprising that awareness of edge is not very high (see figure 3 on page 8). And even in companies where it is high, execution experience is generally lacking. In other words, while broadcasters are in the midst of transformations, including the FCC broadcast repack, digital initiatives, and ATSC 3.0 deployments, edge has taken a back seat to other technologies where the use of and value to broadcasters’ business are well-understood.

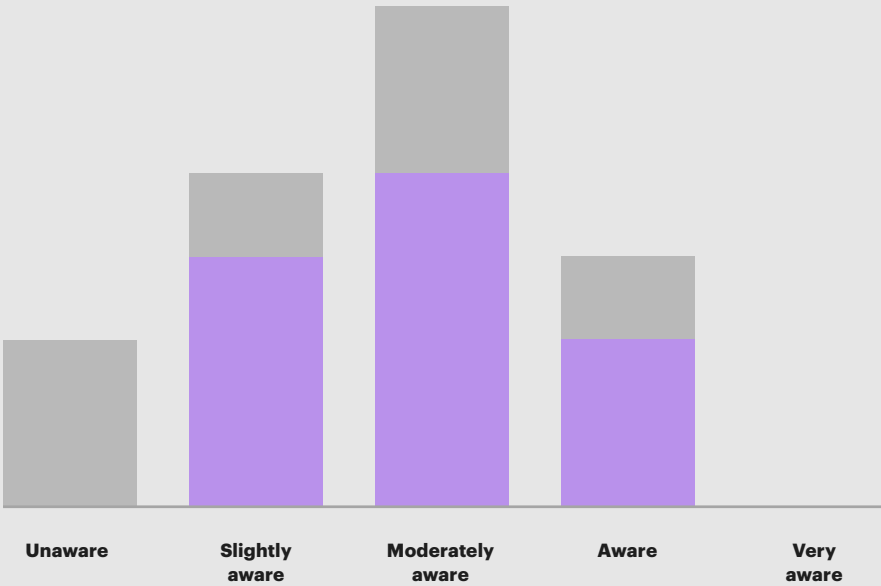
One respondent from a radio broadcaster believes broadcasters are only moderately aware of edge, “depending on the size of the broadcast facility and how much money they have to play with.” And a small television broadcaster noted the differences between its goals with ATSC 3.0 versus broadcasters with scale and coverage, and believes that edge will follow a similar approach, with “each broadcasters’ edge focus different and based on the communities that they serve.”

That said, some broadcasters say they have begun to selectively use edge or edge-like capabilities and technologies. For example, one respondent reported using off-site controls and management to execute workflows in remote control and monitoring, while another pointed to an edge-like use in storing content in the cloud before placement in the station or online for playout, and in archiving media. “There may be a business model for archiving as an edge use case” stated a television broadcaster.

Figure 3
Broadcasters are only moderately aware of edge technology

Awareness of edge among broadcasters

- Radio broadcasters
- TV broadcasters

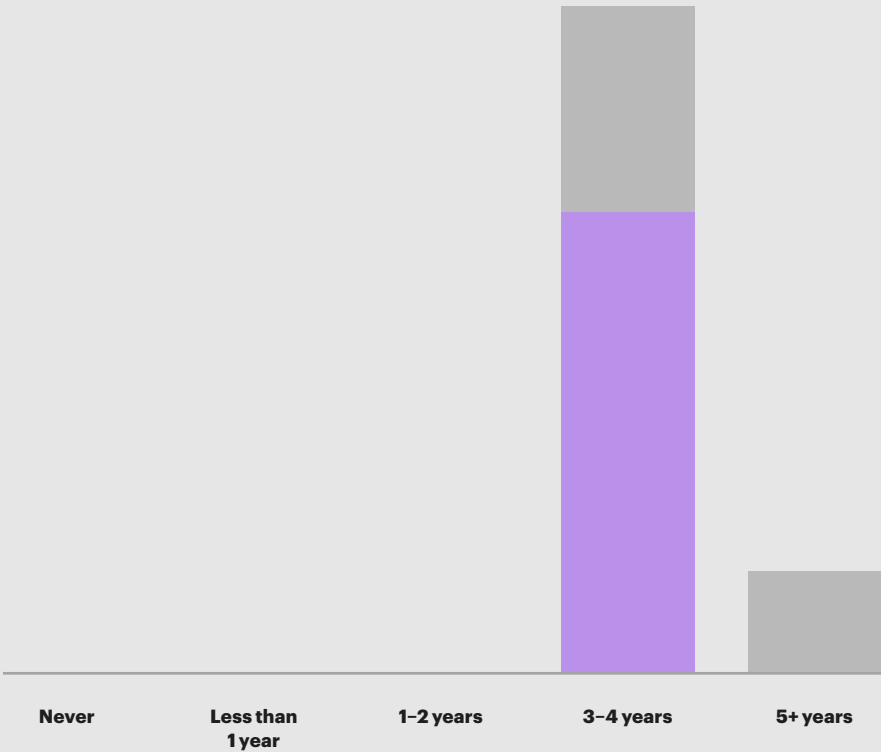


Note: Sample size is 15.
Source: Kearney analysis

Figure 4
Edge will be widely adopted in the broadcast industry within three to four years

The broadcast industry's edge adoption horizon

- Radio broadcasters
- TV broadcasters



Note: Sample size is 15.
Source: Kearney analysis

Using edge-like approaches to targeting and insertions for digital advertising was also mentioned, while digital video and audio broadcasters are leveraging edge through CDNs to support their OTT platforms. Looking ahead, such isolated pockets of edge use will give way to widespread adoption across the industry, which respondents expect to happen within three to four years (see figure 4 on page 8).

One respondent from a television broadcaster said three to four years was feasible because “the cycle of investment for traditional broadcasters undergoing a digital transformation has not run out yet; the market has for the next cycle of investment to commence for edge to become more widely adopted.” Another television broadcaster thought that timeframe was reasonable because “it will take a while for the smaller fragmented players to enter the market.” However, pervasive use hinges in large part on broadcasters’ ability to work through several challenges they’ll likely face.

For traditional broadcasters, their legacy one-way OTA broadcast architecture is a potential stumbling block, as it lacks the return path to the broadcaster for data captured from a device. Next-generation broadcasting via ATSC 3.0 rollouts will eliminate this barrier over time, market by market. But broadcasters will have to find the right economic and service model to capitalize on multicast with a return path in the future.

Privacy and security are also concerns. With edge, broadcasters can capture a lot more data and, thus, need to develop the appropriate security protocols for managing it. Also, questions remain as to which types of data consumers will consent to sharing with broadcasters as well as how data captured on devices will be shared.

Government regulation and potential intervention could also come into play. Broadcasters need to use their spectrum to the fullest extent as the government continues to seek additional spectrum for broadband.

Perhaps the biggest obstacle to widespread adoption of edge is money—more specifically, lack of it. This is especially true for smaller broadcasters, which may not have the investment capacity for edge-related technologies that their larger counterparts do. “With so many sources of content now, and so many changes that have been forced upon the industry, broadcasters will be reluctant to fork out more investment dollars to develop a new technology on the heels of what they have already suffered in the industry,” said a television broadcaster. A radio broadcaster added, “We could push everything closer to the edge and it may be more efficient, but there is no pressure to do so.”

Insight #4: When broadcasters ultimately do begin deploying edge, it’s likely to be a highly collaborative affair, with broadcasters relying on experienced third parties to handle more of the capability development.

Broadcasters we spoke with said they will primarily work with third parties to develop and deploy edge, with select broadcasters developing components of edge in house. Respondents noted that their core competency is content, not computing, and therefore they’ll most likely take a hybrid approach—especially larger companies.

According to respondents, the large broadcasters that already have a strong internal technology development model will probably begin initial development and architecture in house before partnering with an external third party. Conversely, many smaller broadcasters lack the skillsets and, as noted earlier, investment capacity, to do it themselves. They’ll likely wait and watch as first-movers develop and adopt edge technologies, and may end up having to work together with each other as a consortium to support the scale required for edge investments.

“Larger broadcasters will employ a hybrid model, and we need the larger ones to take the lead on getting things to a more marketable place where the rest of broadcasters will adopt,” said a radio broadcaster participant. A television broadcaster said, “I want to believe that broadcasters will do [edge] as a consortium, but I can see a scenario where one broadcaster does this for themselves and allows others to rent from them.”

Broadcasters that choose to handle some aspects of edge deployment themselves will develop internal capabilities around content creation and data gathering—capabilities that are differentiating and can provide competitive advantage. They’ll look to partners for commodity or non-core capabilities and infrastructure, including content delivery and distribution, artificial intelligence, app development (although some respondents from larger companies said they’d handle this in house as well), and measurement. But while broadcasters will get core solutions from third parties, they may customize these solutions internally to align to their workflows or, in some cases, collaborate directly with third parties to jointly develop unique applications that could be market leading.

When they do go outside for help, broadcasters will find a wide range of companies that can provide the technologies and networks to make edge a reality. The most prominent of those cited by respondents include the following:

- Big technology and cloud companies, such as Amazon, Microsoft, Google, and IBM
- Consumer electronics manufacturers, such as Samsung, LG, Apple, and Sony
- Broadcast equipment original equipment manufacturers, such as Harmonic and Grass Valley
- Advertising and measurement software and platforms, such as AdsWizz, FreeWheel, Wide Orbit, and Triton
- CDNs, such as Fastly, Akamai, Limelight, and Verizon Media
- Mobile network operators, such as Verizon, AT&T, and T-Mobile

We can expect to see TV broadcasters placing more weight than radio on edge’s ability to boost revenues—particularly when it comes to advertising.

Insight #5: Edge will play out differently across TV versus radio broadcasters, mainly because of the inherent differences between the two groups.

Our conversations reveal that TV broadcasters tend to be more aware of edge, largely because of the disruption that OTT platforms have been causing for years in the TV industry. Cord-cutting consumers are switching from traditional pay TV to digital and application-based media platforms that already use some elements of edge computing that are just emerging in radio broadcasting. And with this head start, it stands to reason that TV broadcasters would be more bullish on a shorter adoption horizon than radio, which our interviews confirmed.

Also, according to our research participants, we can expect to see TV broadcasters placing more weight than radio on edge’s ability to boost revenues—particularly when it comes to advertising. Radio and TV broadcasters have watched as digital and targeted advertising platforms such as Google, Facebook, and YouTube have eaten away at their main source of revenue, and stations are eager to use any tool they can find to help level the playing field. As [NAB reported to Congress](#) last fall, “The structure of today’s advertising marketplace, dominated by massive digital platforms present in every local market in the U.S., inhibits TV and radio stations from competing effectively for the ad dollars necessary to maintain their day-to-day operations and sustain—let alone improve—local news, emergency journalism, and other highly valued free, OTA programming.”

For their part, radio broadcasters could find edge to be a boon to their own transformation as they increasingly shift their focus toward capitalizing on the opportunities in digital audio channels—especially the ability to get the kind of intelligence on listeners that’s impossible to generate with terrestrial channels .






What does this all mean for broadcasters?

Although actual adoption of edge in the broadcast industry is just beginning, broadcasters will be well-positioned to exploit edge in the future given the significant investments they are making in new technologies and infrastructure. As we discussed earlier, edge technologies will power future innovations and use cases across all parts of a broadcaster’s business and create numerous opportunities for broadcasters to reshape how they operate various functions. Figure 5 illustrates where edge could fit into the typical broadcaster’s business.

Given the wide range of opportunities and applications edge makes possible, broadcasters should think about edge holistically when evaluating where to deploy edge so they can maximize its benefits and return on investment. This includes devising long-term plans that allow broadcasters to build on early successes with edge and then expand. Broadcasters also need to identify the key third parties that can help broadcasters realize the value of edge, and the collaborations that are necessary to develop fit-for-purpose solutions—either for broadcasters overall, or for television and radio, specifically. Collaboration across broadcasters could help standardize edge applications and, ultimately, accelerate edge adoption and the resulting benefits.

Figure 5
Edge computing can bring a wealth of benefits to broadcasters

Blueprint of edge use cases for broadcasters

Content creation	Targeted content	Playout and distribution	Consumption and experience	Measurement and engagement
				
Production <ul style="list-style-type: none">— Agile news gathering— Hyper-local viewer-generated content— Remote-control production operations— Sports and live events workflows and automation	Programming <ul style="list-style-type: none">— Geo-targeted content— Interest-based content— Community-level alerting Advertising <ul style="list-style-type: none">— Location-based advertising— Storytelling in campaigns— Targeting and replacement	Delivery <ul style="list-style-type: none">— Content caching and delivery— Broadcast stream stitching— Remote monitoring and control— Edge-based services (multicast + device computing)— Facilities monitoring— Security	Consumption <ul style="list-style-type: none">— Quick-response applications— Device-level processing Experience <ul style="list-style-type: none">— Personalization— User curation— Multi-screen interactivity— Augmented experiences	Measurement <ul style="list-style-type: none">— Audience panel expansions— Real-time measurement— Census-level measurement— Audience emotions— Content tracking and usage— Advertising attribution
Analytics				

Source: Kearney analysis

Conclusion

As digital disruption continues to upend the media industry, traditional broadcasters are redoubling their efforts to become “more digital” themselves. Edge computing can play a significant role in this transformation, giving broadcasters the ability to understand, engage with, and measure audiences as never before, create compelling new advertising propositions, and streamline certain aspects of their business.

The broadcasters who participated in our research recognize edge’s potential—as well as the challenges they need to overcome to fully capitalize on what edge has to offer. While edge is in the embryonic stage in the media industry, broadcasters anticipate things will look very different in three to four years, when edge adoption is widespread and broadcasters are using edge to uncover new revenue streams and boost profitability.

One participant from a television broadcaster perhaps sums up why edge could be so important to media companies: “Local broadcasters are the last entity to reach local communities. As that model continues to cement itself, combined with next-generation TV, broadcasters will see more opportunities to utilize edge to better serve their respective communities.”

**Broadcasters
will see more
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The opinions expressed by the participants in this research are solely those of the individuals involved and do not necessarily reflect those of the organizations that they are affiliated with.

About PILOT

PILOT is a coalition of innovators, educators and advocates dedicated to advancing broadcast technology and cultivating new media opportunities. PILOT propels broadcast television and radio into the future. It provides a platform for innovation, an engine for incubation, a venue for testing new technologies and a forum for broadcaster education.

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