

 **accenture**



# INTERNET OF THINGS

THE NEXT BIG OPPORTUNITY  
FOR MEDIA COMPANIES

To ride the wave of opportunities that the IoT will provide, media companies need to understand their potential role, their key success factors and the IoT domains they should operate in.



# IOT: THE NEXT BIG OPPORTUNITY FOR MEDIA COMPANIES

Today there are a multitude of objects and devices connected to the Internet of Things (IoT), each anticipating, reacting and responding to every interaction and collecting data to provide actionable insights. Although the IoT is still in its early stages of development, it will shortly become mainstream – the number of connected devices is expected to exceed 40 billion by 2024<sup>1</sup>. This rapid growth will enable a host of new business use cases and open up major new opportunities for media companies.

With IoT ecosystem revenues globally projected to reach US\$4,300 billion by 2024<sup>2</sup>, the IoT sector is attracting players from various industries – creating a competitive landscape in which consumer electronics companies, telcos, and internet players are all investing strongly. Media companies’ capacity to deliver content to connected objects, and to collect, transmit and monetize data from them, positions them as important players in the IoT value chain – particularly in the consumer domain, where IoT devices will be an important channel for direct-to-consumer interaction.

To date, annual IoT spending per company in the media industry has been comparable with other sectors, but we expect to see this increase by nearly 54 percent over the three years to 2018. IoT spending as a proportion of company revenue is now 0.57 percent in the media industry, behind only travel, transportation and hospitality<sup>3</sup>.

We also expect to see more media companies launch large IoT initiatives focused on carefully selected opportunities to use the hyper-connected IoT world and collected data to power new customer experiences across their services and content propositions. For example, Disney has already invested US\$1 billion in the IoT since 2008 to provide its customers with a unique, connected experience in all Disney parks<sup>4</sup>.

To ride the wave of opportunities that the IoT will provide, media companies need to understand their potential role, their key success factors and the IoT domains they should operate in. They must also evolve operating models, technologies and skills, while developing a new ecosystem approach and capitalizing on their partners’ complementary strengths.





# IOT FLUX ACROSS THE EVOLVING MEDIA VALUE CHAIN: UNLOCKING IOT POTENTIAL BEYOND A CONTENT BUSINESS

Accenture has identified two main roles that media companies could play in the IoT landscape, with the level of complexity varying depending on how far they move from their core business.

## THE COMFORT ZONE: CONTENT PROVIDERS AND AGGREGATORS FOR IOT PLATFORMS AND DEVICES

Content Providers and Aggregators are a new breed of business, typically serving content directly to any IP device, or packaging and serving content from multiple providers directly to consumers on a subscription basis. In the IoT era, they will adapt their content and

packages to any connected smart object and IoT platform, serving their audience across a wide array of digital channels. However, they also face the challenge of “smartifying” their content production to compete at speed in the new ecosystem.

## THE DIGITAL BATTLEFRONT: MOVING BEYOND THE COMFORT ZONE

Apart from serving IoT platforms and devices, Digital Content Providers and Aggregators can assume an even more complex role, becoming **Digital Content and IoT Services Aggregators**.

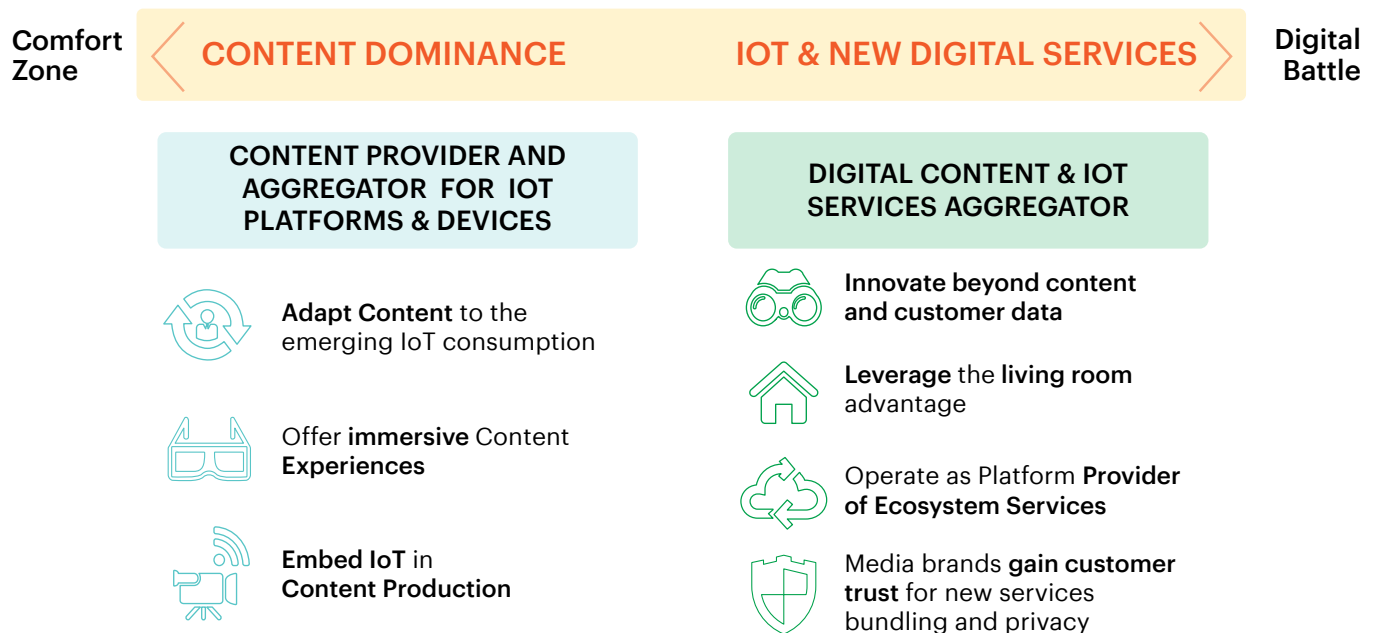


Figure 1: The new IoT-enabled roles for a media company and each roles' key success factors



IoT enables Digital Content Providers and Aggregators to move beyond the traditional content and entertainment space. For example, they can leverage their position in the home to offer a plethora of new services – utilities, smart metering, home automation, etc – developed directly or in partnership with cross-industry players, within the same subscription packages and established customer relationship. Digital Content and IoT Services Aggregators can offer these services by using their key capabilities to build a delightful and engaging customer experience around content.

In this way, they can become aggregators of IoT services, leveraging on their longstanding and trusted relationship with customers through their brands, their presence on multiple digital touchpoints, and their direct billing relationship – together with consolidated sales and customer care channels.

A further opportunity for Digital Content and IoT Service Aggregators is to offer customers highly tailored IoT services and targeted advertising and marketing services, leveraging on their knowledge of customers’ entertainment habits and passions, and their advertising monetization capabilities. They can also enhance the content experience and maximize customers’ engagement by

integrating their existing data with the mass of data produced by connected objects on customers’ taste and consumption patterns.

These two roles bring different levels of complexity, and the choice between depends on how far companies are willing to move from their traditional comfort zones. New battlefronts will be opened as companies evolve their service portfolios and compete in the increasingly crowded IoT ecosystem. This is a challenging scenario for media companies, who will need to succeed in both their core and IoT businesses.

### THE IOT MEDIA BATTLEGROUND

As each new IoT domain emerges, media companies will need to evaluate their potential and, if appropriate, reshape their IoT strategy accordingly. This approach requires a company to continuously keep pace with the accelerated IoT innovation lifecycle. Based on the degree of growth potential and fit with their existing business, we foresee a major potential role for media companies in three high-priority IoT areas: the connected home, car, and health & fitness.

Our analysis of IDC Data<sup>5</sup> suggests the connected home is by far the most valuable domain, with an expected market value in 2020 of US \$85 billion and year-on-year growth of 16 percent. This segment has already

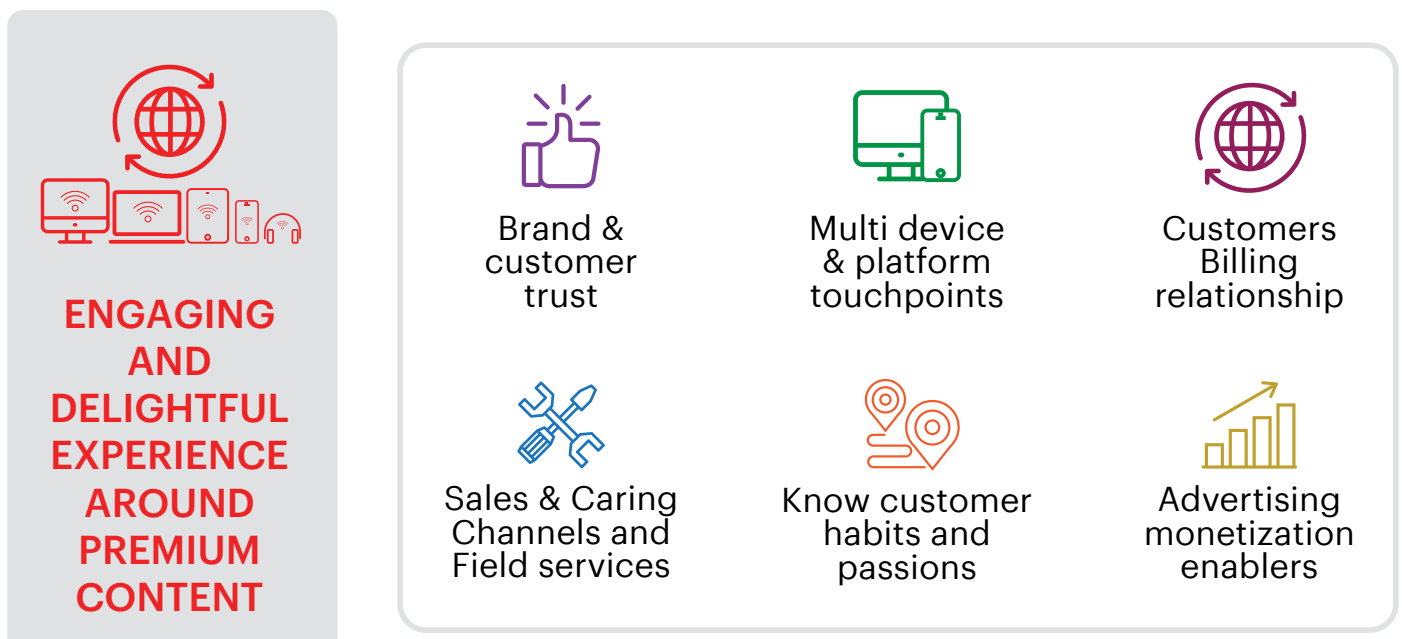


Figure 2: Media Companies key differentiators and capabilities

seen strong investment from a vast array of competitors including telcos, super platforms, device manufacturers and media companies. Making the TV the command center of the connected home, with media companies playing the role of IoT services aggregator, will require a tough battle for control of the living room, and heavy investment in skills, business models and technology.

The connected car domain, although smaller in value, is showing the fastest growth (CAGR of 23 percent). Moreover, its infotainment and in-car entertainment components make this domain particularly appealing for media companies, given the close fit with their

editorial, brand and advertising capabilities.

The health & fitness domain exhibits growth in line with the connected home, but has a smaller market value, closer to the connected car. That said, smartwatches and fitness-related wearables have higher market penetration than connected cars. Media companies can play the role not only of Digital Content Provider, targeting dedicated content at wearable devices, but also of services aggregator, using proprietary platforms to collect data and unlock new advertising opportunities.

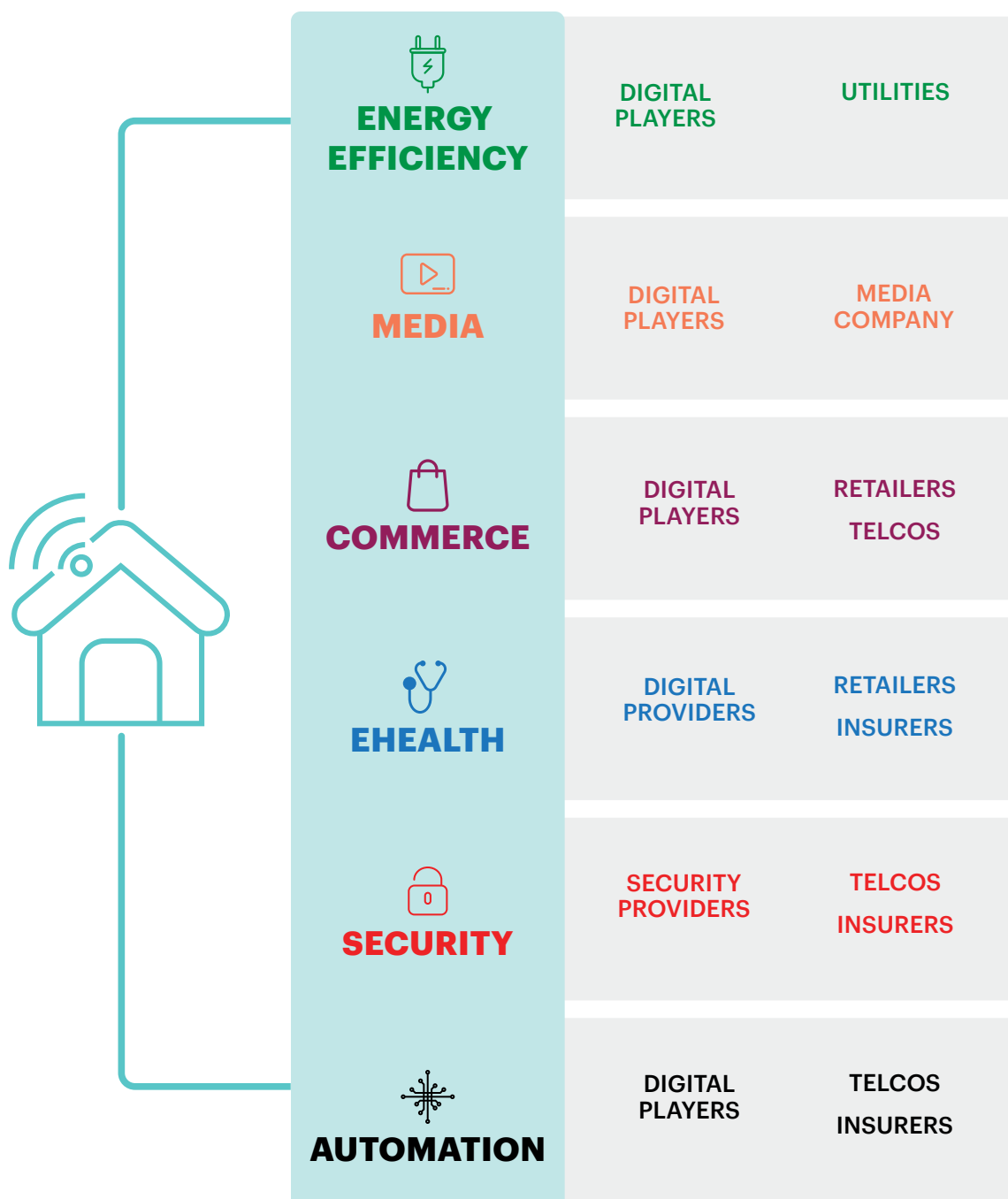


Figure 3: The competitive IoT landscape for the connected home





# HOW TO MASTER THE NEXT IOT WAVE

To ride the wave of IoT opportunity and unlock its full potential, media companies must focus on exploiting several determining factors closely linked to their competitive environment and role in the value chain. Now is the moment for them to do this – by building their IoT entry and development strategy around their core competencies.

## 3.1. THE COMFORT ZONE: PLAYING THE CONTENT GAME IN THE IOT WORLD

In the IoT era, **Digital Content Providers & Aggregators for IoT platforms and devices** can deliver and monetize content on a multitude of new devices and connected objects, leveraging new technology and device features to provide ever more engaging content experiences.

**Digital Content Providers and Aggregators for IoT platforms and devices** are already making their content available on IoT platforms, including connected cars and connected homes. The big IoT platform players in various B2C domains have recognized that content and entertainment are key drivers for mass-market IoT adoption. Going forward, Digital Content Providers and Aggregators for IoT platforms and devices will need to focus on four key success factors:

- Adapt content to emerging IoT consumption, and be ubiquitous, serving any B2C IoT platform;
- Offer immersive content experiences, delighting and surprising at every touchpoint;
- Embed IoT technology in content production;
- Monetize valuable new insights.

### ADAPT CONTENT TO EMERGING IOT CONSUMPTION, AND BE UBIQUITOUS, SERVING ANY B2C IOT PLATFORM

The explosion of IoT-connected devices

completely changes the way content can be discovered and enjoyed. While most consumer-facing IoT applications will probably be managed from smartphones for the near future, other connected devices, including watches, wristbands, laptops and tablets, can be gateways to customized content. Media organizations can leverage their brands to attract customers to IoT applications and drive adoption of new services. Some providers have already experimented with wearables such as the Apple Watch. Publishers (Tribune Co. and New York Times Co.), TV news networks (CNN) and radio stations (National Public Radio) are delivering content to these devices, some with dedicated apps designed mainly for consumption and discovery.

Other IoT devices and connected objects allow completely new forms of interaction, discovery and consumption, requiring changes in the way content is produced, designed and



delivered. Current examples include immersive, 360-degree video, championed by YouTube and Facebook, and virtual reality (VR) using devices like Oculus Rift. Media companies are starting to test out these new technologies and formats, with Condé Nast and Vice Media having forged partnerships with companies that make VR headsets and software developers that broadcast events in VR. In this context, the creative process must blend art and technology – and completely new software languages and content format standards will need to emerge.

New ways to engage an audience are also emerging. Companies like Mitsubishi Electric are looking at holographic aerial displays, creating an illusion of objects floating in mid-air, with a view to projecting these in public spaces during the 2020 Tokyo Olympic Games.

### OFFER IMMERSIVE CONTENT EXPERIENCES, DELIGHTING AND SURPRISING AT EVERY TOUCHPOINT

Bundled with technologies like VR and artificial intelligence (AI), the IoT will create entirely new ecosystems of user interaction such as voice and gestures, and opportunities for storytelling. Emerging technologies will give audiences a new perspective, and allow characters a new voice, across different platforms – making storytelling an immersive experience, enhanced by augmented reality and personalized content.

Voice-activated experiences, as Amazon and Apple have already demonstrated, are likely to become integrated into mainstream devices in the coming years, offering new ways to discover and access content.

IoT sensor technologies – such as GPS, RFID working with near-field communication, cellular data, infrared signals, Wi-Fi, or Bluetooth – can be personalized and programmed to perform specific functions and communicate directly with customers. Sport, music and other live events can be enriched with associated services like free music downloads, contactless payment for food and merchandise, traffic prediction and waiting times monitoring. At Bonnaroo Music Festival in Tennessee, Intellitix RFID bracelets are used by AC Entertainment to deliver real-time event-related offers to attendees. Dublin's Croke Park

and Arizona State's Sun Devil Stadium have been transformed by Intel into the world's first "IoT stadiums" to enhance fans' experiences.

For the Digital Content Provider and Aggregator for IoT platforms and devices, one of the biggest challenges is linking customers' content experiences across multiple devices. Smart TVs, speakers, lighting systems, appliances, game consoles, over-the-top video devices, vehicle entertainment systems and other internet-enabled appliances deliver a variety of customized information and programming. As these devices are networked together in the IoT, services must be integrated to enable a rich and seamless customer experience<sup>6</sup>.

Competition for customer attention is increasingly based on delivering engaging and delightful experiences. The IoT enables the gathering of a mass of data that can enable media companies to better understand users' habits and respond to feedback in near real time. This will help aggregators improve customer interactions and take their experiences to the next level. Sensors can measure reactions to different types of content and the context in which programs are consumed. Connected TVs can work with smart speakers, OTT content, mood lighting, game consoles, thermostats, refrigerators and other appliances to amplify experiences. The Syfy TV network recently partnered with Philips to create a program-synchronized lighting experience, for example. The Syfy Sync app lets users coordinate the colors of their Philips Hue lighting with scenes from Syfy movies they're watching on TV<sup>7</sup>.

### EMBED IOT TECHNOLOGY IN CONTENT PRODUCTION

The IoT can help media companies rethink the way they produce content. Real-time data from IoT networks is helping content providers and aggregators for IoT platforms and devices understand more quickly what's working and what isn't – opening the way to a world in which specific digital content can be automatically offered to the consumers most likely to want it. In this world, audiences become content creators; everything revolves around them, tailored not only to their feedback but also to their daily schedule, activities and plans.

To succeed in this scenario, media organizations face the challenge of producing “adaptive” content that appears in the optimal format for each user’s circumstances. This means short, text-based headlines for smartwatches but high-quality 4K video for large screens at home. It also means audio-only services for mobile devices and cars but high-quality print versions for longer reads and evergreen content. Like responsive web design, adaptive content must be totally focused on user experience, something not necessarily in traditional content producers’ DNA.

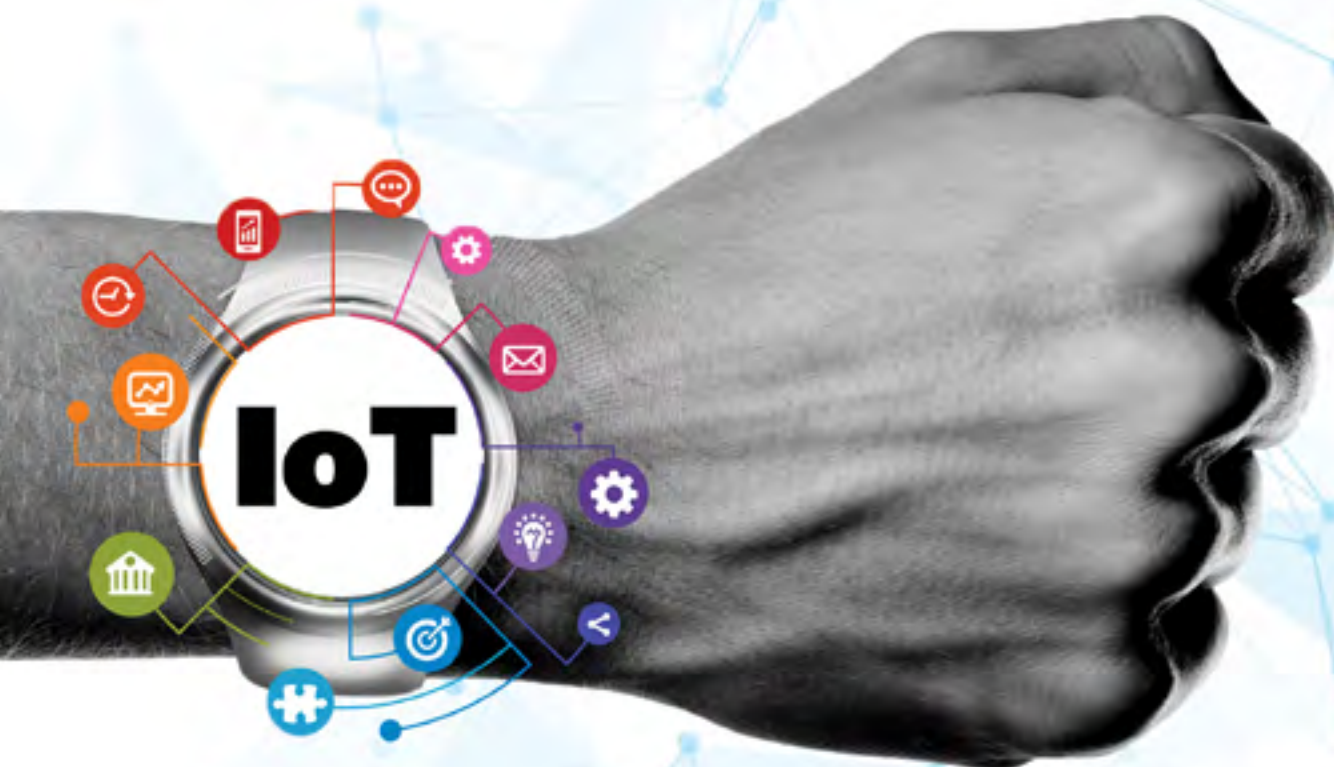
The IoT can also guide what content gets produced. Dashboards and monitors for reporters and editors are changing the way newsrooms at Quartz, BuzzFeed, and The Huffington Post operate<sup>8</sup>. Readers’ feedback collected through smart objects can identify which topics are trending and predict which content is most likely to be consumed.

The IoT offers the possibility of creating new types of content. Crews out on location might dispatch drones to collect real-time footage in inaccessible areas or record video on smart glasses. Data collected in this way can be used to generate complete renderings of scenes or situations – such as drone footage showing the devastation of Homs in Syria<sup>9</sup>.

## MONETIZE NEW DATA INSIGHTS

The ability to track and measure customers’ reactions to specific content and experiences can be valuable both internally, to guide content spending, and externally, to enlarge advertising opportunities. BBC Worldwide Labs is partnering with CrowdEmotion<sup>10</sup>, a London-based startup that uses face-scanning technology to track and code real-time changes in facial expressions, for example. The ability to collect both conscious and unconscious emotional reactions to content helps the BBC’s advertising division to generate valuable insights for marketers, over and above standard advertising metrics.

Furthermore, data can be used to increase customers’ immersion in the content experience. The US National Football League (NFL) uses a combination of RFID tags embedded into players’ uniforms with ultra-wideband receivers installed in the stadiums and data analytics platforms, to provide both teams and spectators with unprecedented insights into the players’ actions. Fans can use their apps to track real-time data on players in their vicinity; coaches can analyze in detail their squad fitness status, even measuring muscle movements or breathe capacity; and doctors can make data-enabled judgements on injuries.



## 3.2. THE DIGITAL BATTLEFRONT: DIGITAL CONTENT AND IOT SERVICES AGGREGATOR

**Digital Content and IoT Services Aggregators** consolidate not only content but also IoT services from multiple providers and serve them to consumers. IoT services can be developed internally or, particularly when requiring specific know-how and capabilities, by the wider ecosystem. This domain has seen strong investment from telcos, device manufacturers and internet giants, and will be very challenging for media companies.

Today, the multitude of data collected through internet use, social media analysis, subscription information and loyalty programs enables media companies to deliver customized, filtered, engaging and timed content and advertising to meet each individual's needs.

The key success factors for achieving this are:

- Innovate beyond content and customer data;
- Leverage the "living-room advantage";
- Operate as a platform provider of ecosystem services;
- Build media brands' customer trust for new services bundling and privacy.

### INNOVATE BEYOND CONTENT AND CUSTOMER DATA

Media companies can capitalize on their consumer relationships to create new services, complementary to their core proposition, addressing specific customer needs. Using their brand to bundle content with additional services, they can operate as market makers for the adoption of new services around the home, security and health. They can also aggregate and integrate a range of services from other providers on a proprietary platform, increasing customer stickiness.

Media companies have already begun to consolidate a view of their customers, incorporating consumption behavior, tastes and reactions to content. This presents opportunities not only to engage and provide value to consumers, but also to sell a unique data-driven vision of the customer for targeting hyper-segmented audiences.

Media companies have also created new metrics to exploit their data analysis and offer additional services. For example, Spotify is analyzing its content consumption, looking at metrics like length and depth of listening to identify "high-passion" fans who they believe are five times more likely than average listeners to spend money on concerts, pre-sale tickets, etc.

## LEVERAGE THE LIVING ROOM ADVANTAGE

The home, and especially the living room, is the next battleground in the competition for IoT supremacy, and provides a unique opportunity for media companies to offer a wide variety of collateral services, including from third parties. Several players from other industries – including the likes of Google and Facebook – are already investing in this space, looking to acquire a prominent position in the living room<sup>11</sup>. But media providers have the advantage of already being there – and some are now evolving their customer premise equipment (CPE) to offer a higher level of customer experience. Sky has invested in a new SKY-Q app-ready premium device<sup>12</sup>.

## OPERATE AS PLATFORM PROVIDER OF ECOSYSTEM SERVICES

Media companies need to work closely with the wider ecosystem, opening their platforms to developers and vertical players to build a portfolio of applications and services that goes beyond the traditional media and content space, offering their partners access to a large B2C customer base. One of the core functions of a hub is to provide services and information by hosting third-party apps, linked via APIs (application programming interfaces). Amazon has moved quickly into this area, launching its free Alexa Skills Kit (ASK) last year.

## MEDIA BRANDS GAIN CUSTOMER TRUST FOR NEW SERVICES BUNDLING AND PRIVACY

Media companies have an inherent competitive advantage in that users regard them as established and trustful content and advertising distributors. Large publishers and broadcasters are working to capitalize on this advantage, building sophisticated data hubs and analytics programs to power their advertising operations, and integrating a wide variety of internet-enabled components, including smartphones, tablets, wearables, sensors, and other gadgets. As they do this, they gain the ability to sell more sophisticated data and insights to marketers, helping brands deliver value to their customers. Contextual data from the IoT can be used to target tailored advertising in both publishing (e.g. programmatic advertising) and video (e.g. dynamic advertising on TV screens). Advertising, marketing and PR agencies are also adding new layers of data to the demographic statistics they already collect, opening new opportunities to add value for the brands they serve<sup>13</sup>.



# KEY ENABLERS TO SUCCEED IN THE INTERNET OF MEDIA THINGS

Whichever of these roles a media company chooses to play, there are several key cross-role capabilities which will help enable strong performance in the Internet of Media Things.

## WORK WITH THE ECOSYSTEM TO OFFER CONTENT AND IOT DIGITAL EXPERIENCES

Creating, implementing and managing IoT applications while managing and serving customers on top of a traditional media offering is a complex proposition. It involves sensors and mobile devices, secure network connectivity, storage, big data analytics, the ability to scale new services, and ongoing integration and fine-tuning. Organizations will also need to collaborate across the ecosystem to identify suitable partners to cover vertical applications and identify the right business models, taking account of incremental service costs, customer care needs and revenue per customer. Many media and entertainment companies have already forged alliances in their quest for new revenue streams and new ways to create value for customers.

## BE EQUIPPED FOR THE IOT ERA

To play a role in the IoT, media companies must develop specific operating model, organization and technology capabilities. The media organization of the future will have a centralized, data-driven infrastructure and management, using cloud services and a digitized catalog of content. Around this core, independent units will move quickly to create new products across different platforms and apps. These companies will balance art and science, with a mixture of creative roles (designers, editors, writers, creatives) and data-oriented roles (engineers, analysts, data scientists). With IoT-connected devices generating an increasing volume of data, capabilities such as data collection, analysis and interpretation will be crucial in discerning new monetization opportunities in both B2B and B2C segments.

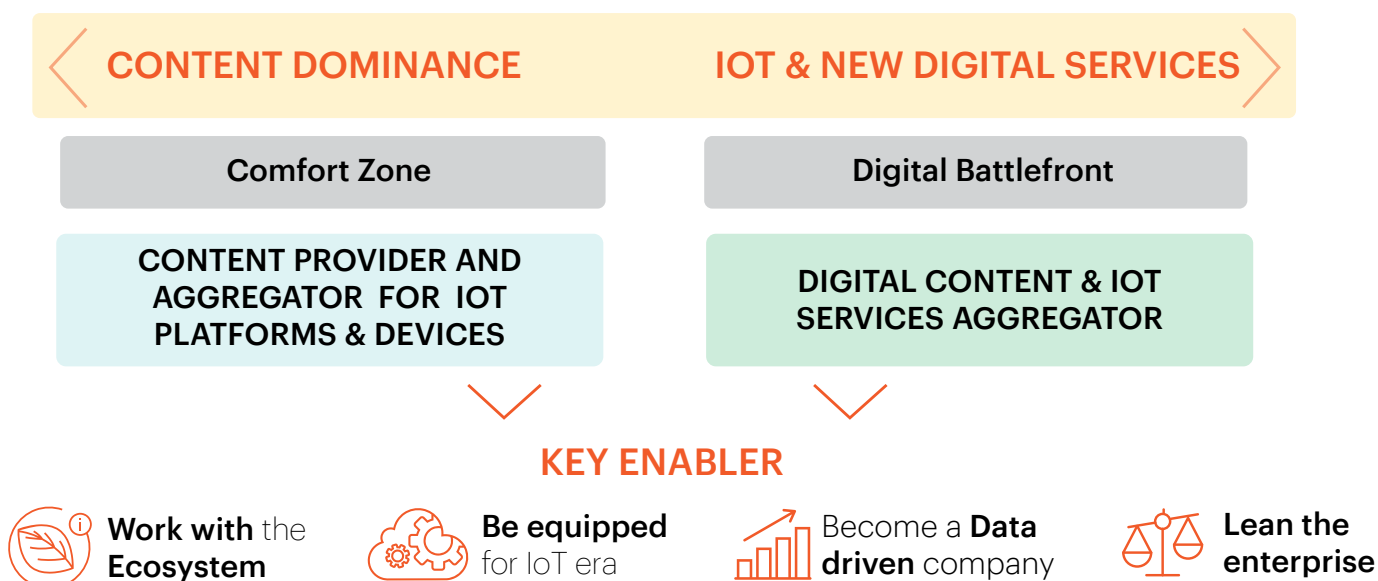


Figure 4: The complexities across different roles

## BECOME A DATA-DRIVEN COMPANY

Connected and smart devices create a huge amount of data that media companies can use to create new metrics and exploit customer profiling. However, with market rules strongly influenced by **public policy** constraints in almost every country, the question of who owns the data generated by the IoT is yet to be settled.

Another potential hurdle is **privacy**. Users care about their personal data, and it's crucial to make them feel confident about privacy and security. This means increasing customers' awareness of data storage and treatment, being transparent, and making them aware of the benefits of sharing data.

Finally, **interoperability and integration** between different IoT platforms and systems are crucial. The IoT ecosystem encompasses a huge number of connected devices exchanging data and instructions. The more communication there is between different IoT platforms and systems, the greater the potential value for users and companies.

## LEAN THE ENTERPRISE: IOT POWERS MEDIA COMPANIES' TRANSFORMATION

As in many other industries, new IoT-enabled capabilities are creating opportunities for operational efficiencies along the entire media value chain. Several companies are already reducing costs by using IoT data to remotely run software updates, and analyze and fix product, network and service issues; indeed, most media and entertainment executive identify cost efficiency as the main benefit of IoT. This mirrors the view in other industries: an Accenture analysis of IDC data confirms that lower operational costs are the primary IoT investment driver (Figure 5).

However, technological innovations and the IoT are also bringing a wide variety of other benefits to media companies. For example, field services and customer care are reaping the benefits of IoT technology by troubleshooting customer service issues remotely through connected devices. This is a win-win, in which customer care costs are reduced while customer experience is enhanced.

### IOT INVESTMENT DRIVERS – IDC BUYER BEHAVIOR REPORT 2015

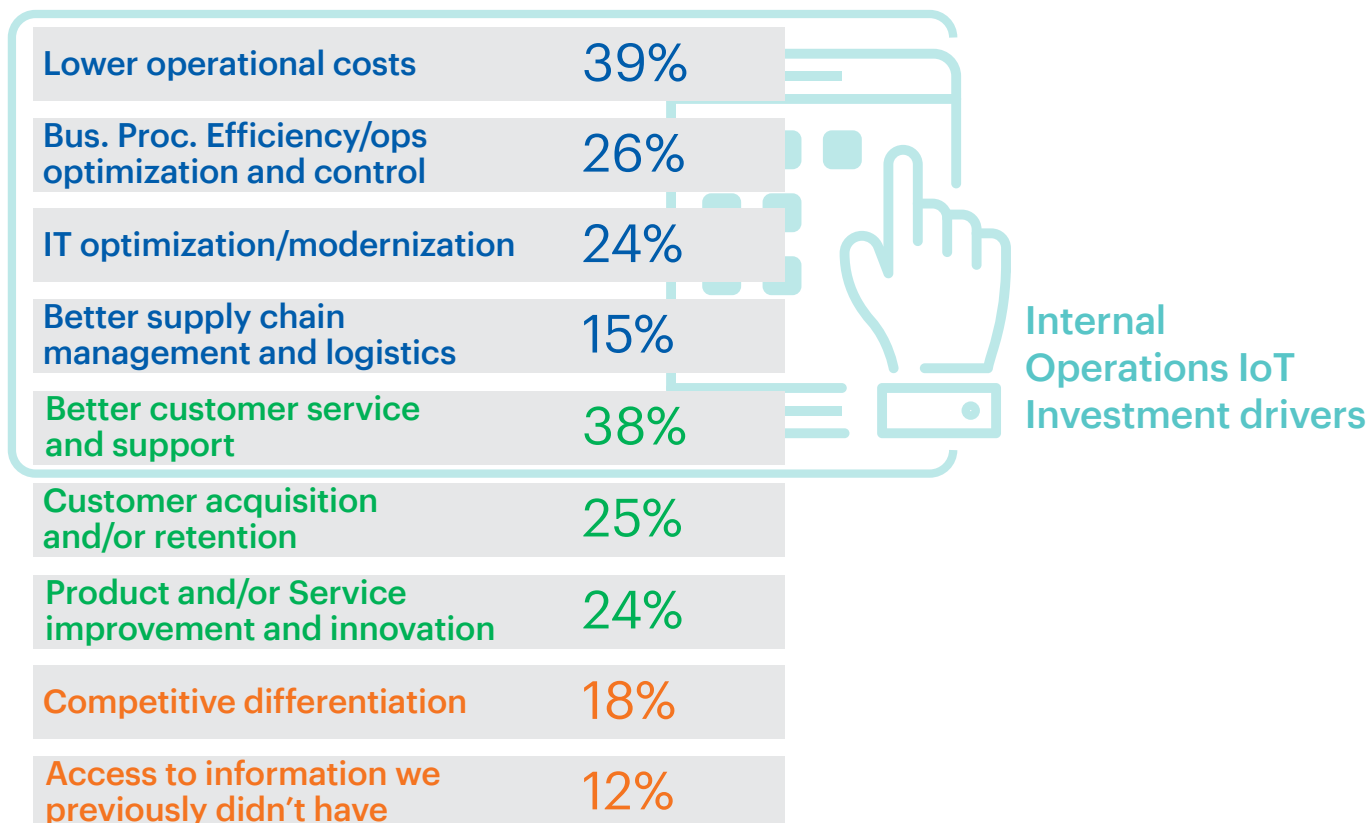


Figure 5: Internal operations business benefits and impact of IoT  
Source: Accenture Digital based on the IDC Research





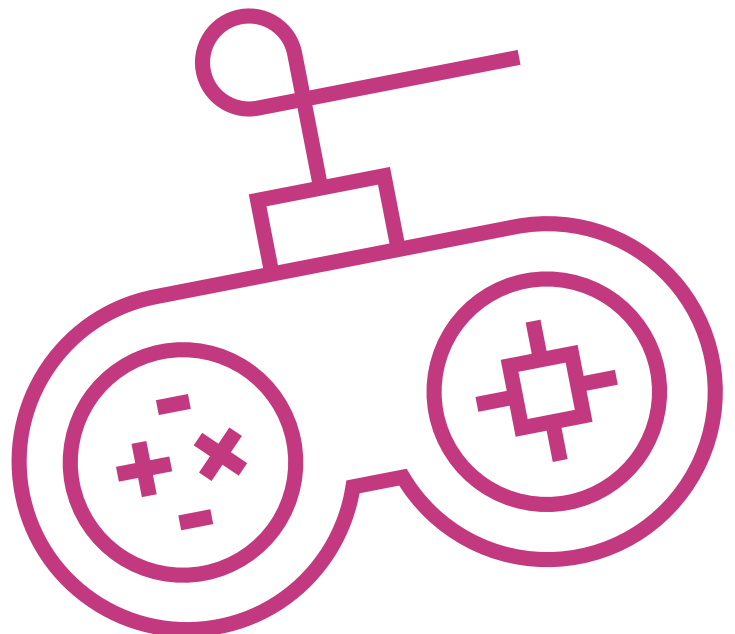
# IT'S TIME TO PLAY THE IOT GAME

The IoT represents a paradigm shift for many industries, media and entertainment included – and now is the right moment for media operators to explore the opportunities it presents. Thanks to their brands, their ability to manage a customer base, and the possibility of post-sale services, media operators are ideally positioned to seize a role to the IoT ecosystem. They should do this by using focused technological investment and partnerships to:

1. Innovate in their service portfolios, moving beyond content: leveraging proprietary hubs and existing customer relationships to move outside traditional industry boundaries;
2. Adopt a platform-based business model: operate as business aggregator with a platform-based model to allow vertical partners interactions and new business models
3. Monetize data for B2C and B2B domains: transforming data from connected devices into actionable insights for both internal and external use;
4. Adapt content for IoT consumption: evolving content production and delivery models to offer the right types of content to IoT devices or direct-to-consumer IoT platforms, blending creativity and technology to exploit the full potential of each;

5. Power internal transformation by driving operational efficiency: using the IoT to transform the media enterprise and its core industry processes.

To win the race to IoT value, media companies must identify a business and operating model that balances IoT development and management costs with investment returns and incremental revenue per user. There's no one-size-fits-all model: each operator will need to forge its own place in the IoT ecosystem. But whatever the chosen path, what's certain is that now is the time for media and entertainment companies to start playing – and winning – the IoT game.



# ENDNOTES

1. GSMA Network 2020: "Unlocking Commercial Opportunities: from 4G Evolution to 5G"
2. GSMA Network 2020: "Unlocking Commercial Opportunities: from 4G Evolution to 5G"
3. According to an April 2015 survey of worldwide business executives, IoT average revenues per company were US \$8.24 billion
4. <http://www.bloomberg.com/news/articles/2014-03-07/disney-bets-1-billion-on-technology-to-track-theme-park-visitors>
5. Accenture analysis on IDC WW Semiannual Internet of Things Spending Guide.
6. <http://www.niemanlab.org/2015/03/the-next-stage-in-the-battle-for-our-attention-our-wrists/>
7. eMarketer "The Internet of Media and Entertainment Things" Report
8. eMarketer "The Internet of Media and Entertainment Things" Report
9. <https://www.theguardian.com/world/video/2016/feb/04/drone-footage-homs-syria-utter-devastation-video>
10. <http://www.independent.co.uk/life-style/gadgets-and-tech/news/bbc-to-use-face-scanning-technology-to-shed-light-on-viewers-tastes-a6866041.html>
11. <http://www.ibc.org/hot-news/why-the-internet-of-things-matters-to-the-broadcast-industry#sthash.VONavdSC.dpuf>
12. 2015 Sky Annual Report
13. Matthew Knight, Head of Innovation at media buying agency Carat, believes that the extra data from connected devices "deeply enriches what we already know about our audience", according to a July 2015 article in The Guardian, adding that these insights will enable agencies to help their clients "develop better ways of reaching consumers, across a much wider ecosystem of touchpoints".

## ABOUT ACCENTURE

Accenture is a leading global professional services company, providing a broad range of services and solutions in strategy, consulting, digital, technology and operations. Combining unmatched experience and specialized skills across more than 40 industries and all business functions—underpinned by the world's largest delivery network—Accenture works at the intersection of business and technology to help clients improve their performance and create sustainable value for their stakeholders. With more than 401,000 people serving clients in more than 120 countries, Accenture drives innovation to improve the way the world works and lives. Visit us at [www.accenture.com](http://www.accenture.com).

## ABOUT THE ACCENTURE DIGITAL CONSUMER THOUGHT LEADERSHIP PROGRAM

The Accenture Digital Consumer Thought Leadership program for communications, media and technology companies is based on a survey which was conducted online between October and November 2016, with 26,000 consumers in 26 countries, including Australia, Brazil, Canada, China, Czech Republic, France, Germany, Hungary, India, Ireland, Italy, Japan, Mexico, the Netherlands, Poland, Romania, Saudi Arabia, Singapore, Slovakia, South Africa, Spain, Sweden, Turkey, the United Arab Emirates, the United Kingdom and the United States. The sample in each country is representative of the online population, with respondents ranging in age from 14 to 55 plus. The survey and related data modeling quantifies consumer perceptions of digital devices, content and hyperpersonalized services, purchasing patterns, preference and trust in service providers, the future of their connected lifestyle and appetite in new technologies such as artificial intelligence or virtual reality.

## AUTHORS

Raffaella Masoero  
Accenture Media & Entertainment Managing Director

Simona Buono  
Business Strategy Senior Manager

Leonardo Malatesta  
Business Strategy Manager

## TO LEARN MORE, PLEASE VISIT

[www.accenture.com/pulseofmedia](http://www.accenture.com/pulseofmedia)

Join the conversation:  
[#pulseofmedia](https://twitter.com/pulseofmedia)

Copyright © 2017 Accenture  
All rights reserved.

Accenture, its logo, and  
High Performance Delivered  
are trademarks of  
Accenture.