

Activation Guide

**Digital transformation  
through data:** a guide for  
news and media companies  
to drive value with data

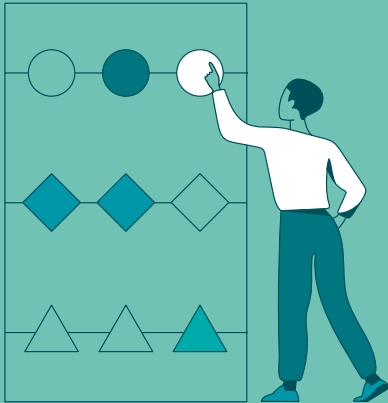
March 2019

# Content



## Data foundations 7

- Culture and ways of working..... 8
- Skills..... 10
- Technology..... 12
- Data ..... 14



## Use cases 17

- Improve overall reader engagement**
  - Content planning ..... 18
  - Recirculation..... 20
  - Reader experience..... 22
- Increase direct-paying relationships with readers**
  - Subscription pricing and promotion ..... 24
  - Design for reader lifetime value (LTV)..... 26
  - Revenue diversification..... 28
- Drive revenue from advertisers**
  - Audience-based advertising ..... 30
  - Advertising pricing strategy..... 32
  - Inventory yield management ..... 34

# Introduction

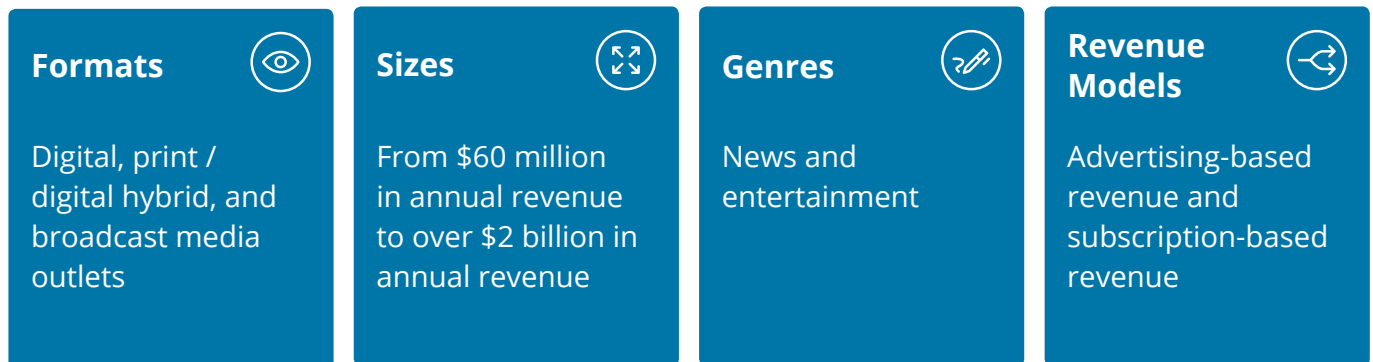
Digital innovation has reshaped the news and media industry. The transition from print to digital started more than two decades ago, and the changes to news and media companies during this time have been dramatic. Few publications still exist as print-only editions anymore. Almost all major print and broadcast news outlets now maintain digital versions.

To capitalize on this evolution, news and media companies are harnessing the power of their digital platforms to **generate insights on reader behavior in ways that were never before possible**. By applying these insights with increasing sophistication, companies are improving both reader engagement and online revenue performance.

## A guide on how news and media companies can deliver more value with insights

Digital transformation is not a new agenda item for most news and media companies, but it is increasingly important. Deloitte conducted a digital transformation study to understand **how** news and media companies **use audience data to better engage readers online and drive revenue**.

As part of this study, Deloitte held interviews with **more than 80 individuals across more than 50 news and media companies from 16 countries across the globe**. Study participants spanned:



In order to compare news and media companies' data capabilities across regions and highlight how organizations can become more advanced, Deloitte created a **Data Maturity Scale** with four distinct levels of maturity - Level 1 (Nascent), Level 2 (Developing), Level 3 (Mature), and Level 4 (Leading).

In addition to representing the news and media company perspective, interviews were conducted with **more than 20 technology providers, advertisers, and advertising agencies** to understand the data trends affecting the overall news and media ecosystem.

### About the report

This report was published by Deloitte with the support of the Google News Initiative (GNI). The findings were discussed with Google executives; however, Deloitte is responsible for the analysis and conclusions from the study.

### So where are news and media companies on the digital transformation journey?

Not surprisingly, news and media companies around the world are at different stages of maturity. Some use audience data to drive meaningful value through innovative data-supported efforts, while others are still trying to get the foundations established and struggle to prioritize data over competing capital investments.

Among other things, limited visibility into what peers are doing can distort a company's view of its own data and analytics capabilities. To provide a common view, Deloitte developed a **Data Maturity Scale** to help plot study participants on a defined spectrum. The outputs of this analysis were then used to construct the **Diagnostic tool** to help companies self-assess their data maturity and plan the best path forward for their own transformations.

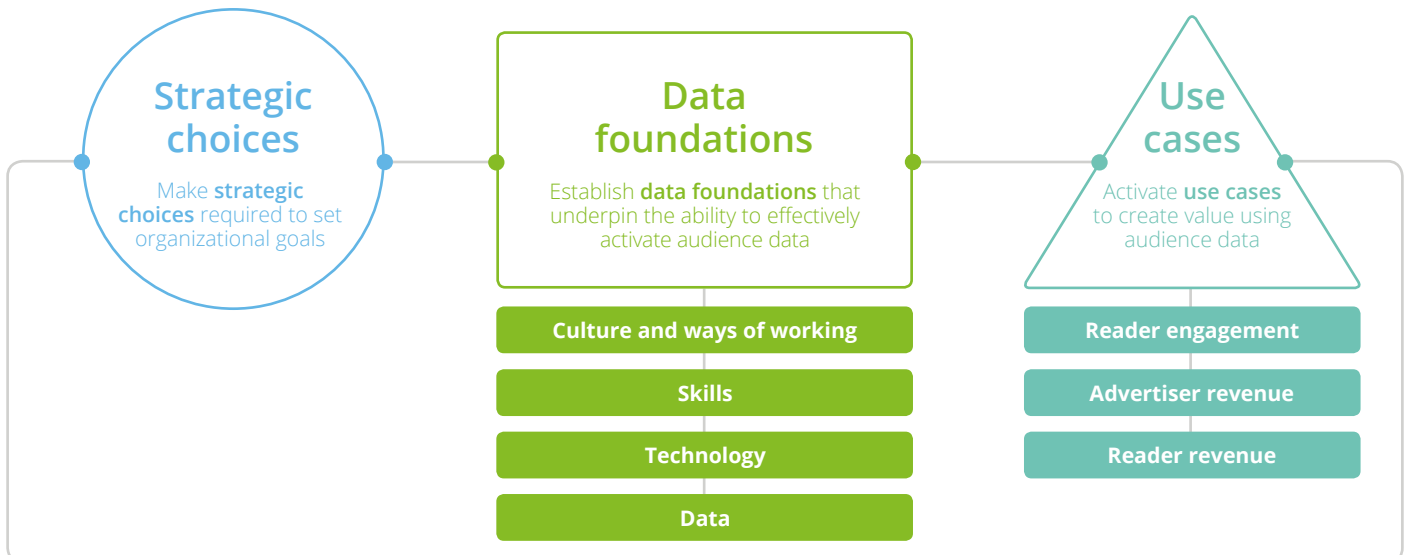
**A challenge for news and media companies is how to improve data maturity.** The **Data Maturity Scale** provides helpful context for a news and media company's current position relative to best-in-class organizations, but this knowledge alone fails to show companies how to improve their current position. The intent of this guide is to help companies understand and articulate the key activities needed to improve the use of audience data within their organizations.

To learn more, go to the **Data maturity scale** section.

## Data Activation Framework

Based on interviews and learnings from top-performing news and media companies, Deloitte developed the **Data Activation Framework** shown below.

The following three stages are critical to a company's transformation:



## Making Strategic Choices

Many factors, including business model, region, and editorial strategy, influence where a news and media company should focus its digital transformation efforts. To prioritize investments and plan initiatives to enhance data capabilities, news and media companies must first begin by answering a set of questions designed to express the organization's strategy:

### What is our winning aspiration?

What does it mean to win — do we want to have the largest reach, be the authority on a particular topic, or be the nation's daily digest? What are the corresponding organizational goals when balancing financial profit with other factors (e.g., social impact)?

### Where will we play?

Which markets do we want to prioritize — regional, national, or international? Which readers do we want to serve, and what products or content do we serve them?

### How will we win?

How do we plan to differentiate to win readers - breadth or depth of content, convenience, or cost?

### What capabilities must we have?

What distinctive activities must we excel at to win — content creation, distribution, or personalization? Should we build proprietary technology or can we buy off-the-shelf solutions?

### What management systems do we need?

How will we measure success? What are the key performance indicators (KPIs), and how will we govern the organization to achieve them?

To learn more, read **Playing To Win: How Strategy Really Works**, by A.G. Lafley, and Roger L. Martin.

Bypassing this key starting point and moving forward without a strategy puts the organization at risk of solving the wrong problem. The most common error is solving a problem that might be critical to another company's strategy, but not the company's own strategy. Think about a niche vertical news publisher investing heavily in ad targeting and programmatic capabilities when its advertisers want a direct, collaborative relationship. Or imagine an emerging market news publisher attempting to launch a premium subscription model, despite consumers in the market showing low willingness to pay for news content. In articulating the strategy, companies are defining a set of guiding principles for their digital transformation and associated initiatives.

## Building Data Foundations

There are core cultural, technological, skill-based, and data-related capabilities required to successfully activate audience data. For example, a trustworthy data supply chain is a prerequisite to audience-based advertising, and hiring data analysts comes before optimizing a recirculation tool. While these topics may seem obvious to most, the reality is that even though news and media companies try to pursue more advanced audience data applications, most still struggle to build the data foundation that will underpin their data strategy.

To learn more, go to the **Building Data Foundations** section.

## Activating Use Cases

There are multiple ways in which news and media companies collect, analyze, and activate audience data to drive value. These efforts tend to fall into one of three operational objectives:

- **Improving overall reader engagement**
- **Increasing direct-paying relationships with readers**
- **Driving revenue from advertisers**

Within each operational objective is a set of defined use cases designed to drive value through more effective application of audience data.

To learn more, go to the **Activating Use Cases** section.



## How to use this guide

This document is designed to guide news and media companies through the **Data Activation Framework**. Best practices are outlined in both the **Building Data Foundations** and **Activating Use Cases** sections to help companies ask the right questions and facilitate conversations necessary for positive change.

The material is intended to provide value to news and media companies at any stage of the Maturity scale. As a result, certain sections may resonate more depending on a company's maturity.

As a rule of thumb, companies with lower data maturity may want to direct their focus toward understanding how to build data foundations, while leading companies may focus on specific use cases that validate existing decisions and spark new ideas for improvement.

We encourage readers to self-assess their data maturity using the **Diagnostic tool** and hone in on the sections of this guide that are most applicable to their near-term and long-term data needs.

To learn more, go to the **Data Maturity Scale** section.

# Building Data Foundations

This section of the guide is designed to explore detailed perspectives on improving data foundations across four layers:



## Culture & ways of working



- | Broadcast a thoughtful data strategy
- | Strive for inspired data leadership
- | Foster collaboration and cross-functional working
- | Create a safe place for experimentation

## Skills



- | Identify the skills you need
- | Integrate the team with the rest of the business
- | Attract the right talent and fill gaps with third parties

## Technology



- | Democratize your data using tools and applications
- | Build vs. buy, take a strategic view
- | Open the technology toolbox
- | Take your technology to the next level

## Data



- | Understand the different types of data
- | Categorize the audience data
- | Activate and differentiate the value of data

# Culture & ways of working

Culture plays a significant role in determining whether a news and media company will be successful executing data initiatives. A winning culture articulates data's role in achieving the organization's overall strategy, fostering an environment that encourages data-informed decision making, and creating mechanisms for cross-functional working and collaboration.

**Companies should focus on the following four actions:**

?

## Key questions

Do any senior leaders live and breathe data?

Can the leadership team articulate how data supports the organization's mission or strategy?

Who is rewarded by using audience data in business decisions? How is success measured and failure treated?

How often do sales, marketing, data, editorial, and information technology (IT) teams work together?

## Broadcast a thoughtful data strategy

News and media companies have mission statements. When asked, most employees can share their organization's mission statement with some degree of accuracy. However, **most employees do not know their organization's data strategy**. While a data strategy is not as foundational as a mission statement — it is important for leaders to send a clear message about **why** and **how** the organization uses data. Consider these **three examples** that were heard during interviews with *leading* news and media companies:



"We are data-informed, not data-driven"



"We like to consider ourselves a data-obsessed company and all employees have data-based KPIs"



"As a reader-first publisher, data is a tool to better know and serve our readers"

## Strive for inspired data leadership

It is important to align data functions with the centers of power in an organization. **Most news publishing executives are not data natives, and yet they are critical influencers of data investment, cross-functional support, and strategy**. Absent senior leadership to explain and shape how data supports both the editorial and commercial objectives of the organization, the data team will struggle to communicate the data strategy and empower the rest of the organization.

### For leaders aiming to become more data forward:

- **Listen** to your team.
- **Identify** cross-functional subject matter experts at varying levels of the organization to help you think through the data challenges you see.
- **Leverage** the strengths of staff that have an intimate understanding of how data is used in the business.

### For managers aiming to inspire interest in senior leaders:

- **Document goals and aspirations** for data. Though some leaders may have an inherent bias against data initiatives, others may not be equipped with the right facts, or they may be prioritizing other costly initiatives.
- **Isolate the relevant** facts and model the overall impact to the business - start incrementally and, once credibility is established through precedent, propose transformational solutions.



*"We have data that even Facebook and Google don't have. We're sitting on this data and people, to some extent, don't know we [data team] exist in the group." - Mature media company, APAC*

## Foster collaboration and cross-functional working



Set KPIs to bring teams together

There is **no one-size-fits-all approach for goal setting and incentives**, but leading news and media companies typically identify an overarching organizational objective that is tied to **well-defined metrics**.

One company that optimizes for subscription revenue isolates **page views per subscriber**, meaning subscribers should be deriving the most value from their subscriptions.

One news publisher that optimizes for its social mission to affect how society sees and thinks about the world isolates **unique page views**, meaning more new people are exposed to the publisher's world view.

One company that optimizes for virality measures **social clicks versus total clicks**, meaning it can evaluate overall social sharing across different pieces of content.



Break down walls without apology and bring people together

Setting the appropriate KPIs and managing incentives empowers positive behavior over the long-term, but in the near-term, **brute force is occasionally required**.

A leading news publisher in the United States noted that changes started to take hold when a new senior executive joined the team and **"broke down walls"**. The executive set organizational objectives and routinely hosted meetings with cross-functional teams. These meetings built the habit of having collaborative conversations. **Discipline** was critical to making cross-functional teaming the norm.



Create mechanisms that both require and support cross-functional work

**Engage the data and IT teams** to design and build a data infrastructure that captures relevant data for marketing and reader segmentation purposes.

**Implement a reader engagement dashboard** that enables:

- **Editorial** team to understand drivers of content performance
- **Marketing** team to time email marketing campaigns based on reader behavior
- **Data** team to be responsible for designing and managing the data infrastructure

**Develop data governance policies** that take into account relevant legal, public relations, human resources, and product considerations.

## Create a safe place for experimentation

Fostering a culture of experimentation and putting tools in place to support processes represents a complete paradigm shift for some companies. **It can feel contrary to the draft, edit, perfect, then publish nature of media, but it is key to thriving in a digital environment.**

**Leading news and media companies not only collect and analyze audience data — they generate it** by running experiments and tests on new strategies and initiatives. Companies generate real feedback and data points that can guide decisions to pursue or abandon certain activities.

**Leading companies encourage experimentation** by using control groups to test new ideas for just about everything related to the news, including designing the user experience, testing headlines and formats, advertising, or pricing and promotions.

# Skills

Digital transformation requires unique skill sets, including some highly technical skills. Organizations must identify, recruit, and grow individuals with the specialized data skills they need. Establishing a permanent fit for data talent in the organizational design is critical to bringing the most qualified voices to the table in any data-focused effort.

**Companies should focus on the following three actions:**



## Key questions

- What functions does your data team serve?
- What data roles are a part of your organization?
- How do you attract data talent?
- How do you grow data talent through training?
- How does your data team support weekly, monthly, and quarterly planning meetings?
- Who on your team can translate business needs into data and analytics requirements?

## Identify the skills you need

Starting with the basics, **what does a data professional do?**

The concept of a data team or data organization can be an amorphous catchall. A multitude of different data roles exist, from digital business analyst to audience specialist to cloud engineer. To demystify this growing list, **the four primary data roles a news and media companies should consider when staffing a data function include:**



### Architects

These highly technical system engineers are responsible for the back-end technological integration of data sources. Architects design the blueprint for how data enters, resides, transforms, and exits the company's technology systems.

**Role:** architecture, network and security, platform and data engineering, development, and cloud operations



### Insight generators

While architects are concerned with designing and constructing the pipes through which data flows, insight generators are more concerned with the data itself. Insight generators organize, curate, and analyze data to make it usable and actionable for a stated business purpose.

**Role:** engagement analytics, sales and marketing analytics, business intelligence enablement, and data supply chain



### Business translators

Business translators are data-fluent business leaders that serve as catalysts between architects, insight generators, and the rest of the organization. Business translators ensure that data teams build products that satisfy business needs, as well as educate the rest of the business on data's impact on their goals, including its limitations and possibilities.

**Role:** Data Partner Management, Business Operations, and Business Development



### Data governors

Data governors are responsible for understanding the legal and security risks associated with how customer data is handled within the business. Data governors translate regulatory and compliance requirements into policies and procedures that govern how data systems and processes are designed, built, and maintained.

**Role:** privacy, policy compliance, and security assurance

*"The biggest bottleneck is that we can't hire enough people who understand the business and the data side. They are very hard to find...even harder to keep." - Developing news publisher, EMEA*

## Integrate the data team with the rest of the business

Across the wide variety of news and media companies interviewed in this study, no single organizational structure emerged as "the right one." However, **three common approaches on how to fit the data team into the overall organizational design** did emerge:



**Center of excellence (centralized)**

A single, central data team acts as a shared capability for the organization.

The role of the central data team is to drive innovation and change through all areas of the business. In best-in-class companies, the central data team drives action by setting the agenda for itself and various groups within the business. Conversely, in less mature organizations, the data team is passively driven by data requests to produce reports and analysis.



**Distributed / embedded team (decentralized)**

Data professionals are embedded in different teams (e.g., marketing, editorial) and apply the organization's data to the team's specific business problems and data needs.

This distributed team acts as a network of data "ambassadors" that show the business value of using data in the day-to-day activities. In this structure, the technology and infrastructure responsibilities for data typically sit with IT.



**Hub-and-spoke (hybrid)**

A central team focuses on developing capabilities to serve the wider business, while specialized team members are embedded (and sometimes rotated) through different areas of the business.

This allows the central team to push forward on significant projects (e.g., new technology or infrastructure), while the specialized team serves day-to-day business needs and feeds information back to the central team.

## Attract the right talent and fill gaps with third parties

A common practical challenge for news and media companies across all parts of the **Data Maturity Scale** is recruiting the best talent. Many factors, including brand, location, and maturity, may affect a company's access to talent. **Some leading companies shared their successful approaches to talent acquisition**, which can be used by all companies.



**Articulate a data-specific value proposition** - The nature of the work is critical for data professionals. Those who are attracted to *leading* companies may be enticed by the potential for innovation, while those who are attracted to nascent companies may enjoy the ownership and challenge of building a data operation from the ground up.



**Appeal to values** - Given the creative, social, and cultural impact of news organizations, data specialists may be attracted to the purpose of the organization. To create the most attractive roles for their target hires, companies should articulate how data supports the organization's overall strategy and day-to-day operations.



**Share a data-friendly culture** - Similar to other professionals, data professionals are attracted to an organization's culture. Excited and driven data teams lead to more excitement and bigger teams. Companies who see data as merely an operational support function will struggle to attract top talent.

**Due to recruitment challenges or financial constraints, a news and media company may need to seek alternatives to hiring talent. To fill this gap, companies often forge relationships with third parties, such as universities, think tanks, temporary agencies, consulting firms, or systems integrators.**

# Technology

Technology, tools, and platforms activate the critical processes required to spur innovation and drive growth through data. Deploying the right technology to embed data in your key business functions is fundamental to the success of the data strategy, but it is often foreign territory to many executives.

**Companies should focus on the following four actions:**

?

## Key questions

What components of your technology stack are used to improve the experience of readers and advertisers?

What components of your technology stack are built in-house?

What components of your technology stack are sourced from external providers?

What drives your decision to build or buy?

Who are the users of technology in your organization?

What proportion of data-related activities require technical specialists?

## Democratize your data using self-service tools and applications

The technology platform or data layer is generally not something that can be easily used or accessed by the majority of the business. This is the root cause of the complaint, **"It takes me weeks to get the data from the data team."** More than 50% of news and media companies in the study said that the availability of data resources was a bottleneck that slowed adoption of desired data practices in the business. Extending access and education for data-related technology and designing systems and tools with self-service in mind can mitigate the risk of a data bottleneck.

Implementing self-service tools achieves two key goals. First, **self-service tools empower a broader set of teams to access data independently and use it to support their decision making.** With data in their own hands, teams are more likely to uncover new patterns and drive new initiatives. Second, **self-service tools free up time for data teams to work on more sophisticated initiatives.** Data teams are often relegated to just reporting, but by widening access and educating the business on how to use data-related technology, you can widen the data team's role within the organization and increase the value you derive from data.

## Build versus buy — take a strategic view

A common decision most news and media companies in the study faced in developing their technology stack is whether they should build a component in-house or license a customizable solution from a vendor. There is no one-size-fits-all answer to this question. The best approach is to think of it as a strategic question. While these decisions are multidimensional, a key driver is whether the company has the human and financial resources to undergo an internal development project. Should you have the resources to build technology components in-house, a helpful philosophy to follow is: **if it's core, build it, otherwise buy and customize.**

Internally building your technology can enhance customization and lead to a unique competitive advantage, if you are able to make the build and maintenance investment. Certain news and media companies in this study have taken this a step further and actually developed an entirely new business selling their proprietary technology to other companies.

The proliferation of technology products — those developed by news and media companies and existing off-the-shelf solutions — means that **if you can't build it or it's not core**, then there are viable options to maintain a competitive user experience without risking major investment.

*"We work closely with vendors. It helps us to influence roadmaps and get more value out of their products" - EMEA publisher*

*"We will take the editorial teams through the limits you can place on machine learning so we know we're making the right decisions." - Mature news and media company, US*

## Open the technology toolbox

Over 50% of news and media companies interviewed for this study cited "access to the right technology" as a bottleneck in their digital transformation journey. As a starting point, below is a list of some technology components and functionalities leading companies have in their toolboxes.

**A data management platform (DMP)** helps companies build audience segments, manage first-party segments with third-party data, and push segments to other systems.

**A customer relationship management (CRM) system** records and tracks user interactions for all registered readers and subscribers. This data is critical as it enables the business to enhance segments with known, persistent user identifiers, which aids individualized targeting efforts.

**Reporting and web analytics tools** collect and organize data captured from online activity, including key insights from the reader's journey. These tools help the business build and monitor systems based on aggregate on-site and in-app activities.

**A data lake (or warehouse)** is a centralized repository of data from multiple sources. It is critical to define the most appropriate structure and rules for the data lake to ensure the data is stored in an organized and accessible manner.

**A customer data platform (CDP)** records and tracks readers' online behavior across devices. A CDP functions similarly to a DMP, but with a greater emphasis on capturing 360-degree user identities.

**A content management system (CMS)** stores, organizes, and updates all aspects of content development from creation through publishing. The CMS can provide real-time control of which layouts and stories go to specific user segments.

**Cloud computing** is the delivery of computing services using a network of remote servers, instead of a local server. It solves many of the challenges of on-premise data storage and analysis. Reduced total cost of ownership, increased reliability and scalability, and more manageable integration with third-party analytical tools help companies move quickly and with great flexibility as their needs change.

### Case study

A multi-title media company in EMEA made the decision to move all of its data to the cloud. The transformation took less than a year and delivered massive value by opening up data access and reducing costs. Moving to the cloud enabled the company to democratize its data through global access and self-service tools, leading to greater insights and reducing the number of requests in the IT backlog.

## Take your technology to the next level

Leading news and media companies are pushing the edge of their technical capabilities. They spend years acquiring an integrated mix of core data-related technology components and continuously introduce new and more powerful infrastructure components and applications. But being at the forefront of technology innovation is not just for best-in-class companies, many less mature companies are looking to make a step-change in processing and analytical capabilities and are seeking opportunities to leapfrog traditional solutions.

**Artificial intelligence (AI) and Machine learning (ML)** help deliver rich, predictive insights for companies. Not only do AI and ML uncover patterns in extremely large datasets, but trained models improve their insights over time as more data is added.

### Case study

A leading EMEA news and media company is using ML to improve subscriber retention. The model ingests vast quantities of subscriber data to determine behavioral flags that indicate whether a subscriber is likely to cancel a subscription. The company can then target the subscriber with retention activities.

Data about which retention strategies worked in the past is fed back into the model, and the company is able to identify the types of retention actions that are best suited to different types of readers.

# Data

Managing first-party data sources, along with **Making Strategic Choices** on how data can be augmented fuels some of the critical use case activities that differentiate leading news and media companies from others. Companies also need to consider how they incorporate the right governance practices to ensure their data is well-structured, responsibly handled, and compliant. **Companies should focus on the following three actions:**

?

## Key questions

What is the value of your first-party data?

In what way is your first-party data unique?

How do you prioritize and pursue data partnerships?

What is your organization's policy on data privacy and compliance?

How are you preparing for current and future regulatory changes?

## Understand the different types of data

?

**What is the difference between first-party data, second-party data, and third-party data?**

**First-party data** is information collected directly from your readers (e.g., subscription data).

**Second-party data** is another entity's first-party data. This is similar to first-party data, but it comes from a source other than a company's own readers.

**Third-party data** is data that a company buys from an outside source that pulls it from various other platforms and websites where it was generated.

## Categorize audience data

News and media companies collect a wide variety of audience data using their analytics platform, including time on site or referral source (i.e., where the reader was prior to clicking onto the company's website). While the specifics may differ, there are **four common categories of audience data** that companies either collect directly or through external data sources:



### Account

Registered user data and transaction data across all websites, products, and services

#### Example data

Name  
Email  
Address  
Transaction history



### Location

Reader's location during on-site and in-app browsing activity (i.e., IP address, geolocation)

#### Example data

IP address  
Mobile device location



### Browsing

Reader's on-site and in-app behavior, including what and when he or she browses, and how he or she navigates the website

#### Example data

Pages viewed  
Session length  
Frequency of visits



### Profile

Data from other sources (e.g., third-party providers) that help augment reader profiles

#### Example data

Demographics  
Social media activity  
Other sites visited

*"First-party data-driven audience segmentation helps us anchor CPM 30%-40% higher than the overall market." - Mature news publisher, APAC*

## Activate and differentiate the value of data

Many advertisers and advertising agency representatives interviewed for this study said **the value of news and media company data is maximized when it has scale, is unique, and / or is attributable to a high-value reader segment.** A common complaint from advertisers is the need to connect to separate systems for separate companies as it limits the scalability of the data. Other times, advertisers and agencies feel they can attain a similar level of insight from third-party data providers when companies cannot attribute data to a specific segment. When promoting the value that first-party data can provide, it is important for news and media companies to align their data strategy with the needs of advertisers. **Companies should focus on the following four actions to activate their first-party data:**



### Create

**All news and media companies create first-party data. Successful companies** set up systems and processes to **capture and create relevant audience datasets.** Instead of simply tracking unique visits, click-through rates, or scroll lengths, sophisticated companies tie these behaviors to other relevant segmentation efforts such as content genre or user demographics. They also actively engage readers in direct surveys or other experimental marketing research to gather more relevant audience data.



### Source

All news and media companies interviewed for the study source second- or third-party data to augment their first-party datasets. However, **the extent to which they rely on outside data varies considerably.** Most leading companies are focused on honing their first-party data capabilities and limiting their reliance on external data providers to counteract quality concerns associated with some third-party data and ensure compliance with user privacy regulations.



### Analyze

Effective insight generators (see *Skills* section) develop diverse and valuable audience segments to serve market demand for these specialized groups. **They identify patterns within the data to isolate common characteristics within the readership.** The more robust the data collection and ingestion, the more specific the segmentation and analysis that can be done.



### Sell

It is difficult to generate significant uplift in cost per thousand impressions (CPM) from a company's audience data via open auction programmatic channels. News and media companies that build trusting relationships with advertisers are able to directly engage and articulate the value potential of reaching certain parts of their reader base. **Successful companies have proven the performance of their data** through A/B testing, and they work with advertisers to identify campaign-level opportunities to activate their data.

## Case studies

### US news publisher

*A leading publisher* includes an emotion tracker at the end of certain articles so readers can identify how they feel about the article. This layer of reader engagement creates a rich connection between the publisher and readers.

## Common challenges along the data journey

News and media companies that struggled to improve data maturity shared **common challenges** in trying to drive meaningful transformation. **Leading companies shared their success stories in overcoming similar battles.**

### Challenges

### How others have overcome this...



**Data is at odds with the editorial strategy. Intuition plays a critical role in defining great journalism, and data is perceived as a threat to intuition**

- **Ease into the integration** by introducing intuitive tools and plainly communicating how data supports, instead of replaces, the strategy or editorial mission.
- **Drive deliberate collaboration** between data teams and the newsroom to dispel any mysteries around data.



**Scarce data resources are devoted to competing priorities. It is hard to articulate an ROI for data initiatives**

- **Start small** to prove small concepts and leverage proven concepts to influence leaders on more transformational investments.
- Require that **KPIs** are part of the business case for any new data initiative so that the impact to the business can be clearly articulated.



**Leaders are not data-natives and lack an appreciation for its necessity to compete and grow**

- **Invest in senior talent**, sometimes from other consumer-forward industries such as retail, to own the data agenda and give senior talent the power necessary to affect change.
- **Educate senior leaders** on the value of data, including what it can do (and what it cannot do), to make it relevant to their individual priorities.



**Siloed organizational structure makes cross-functional collaboration difficult**

- **Set KPIs to bring teams together** by identifying an overarching organizational objective and tying performance metrics to the desired outcome.
- **Break down walls without apology.** Brute force may be required to change well-worn practices.
- Use the **same tools** across functions to get people using the same reports and speaking the same language.



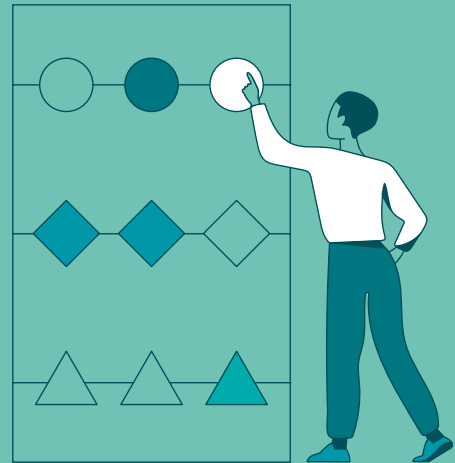
**Different businesses that were acquired or built over time have their own data and technology, but technology silos make it difficult to get a single view of the reader**

- Admit there is a problem, but **do not become paralyzed** — a completely frictionless technology stack is not an all-or-nothing prerequisite.
- **Align organizational priorities** and involve senior leadership to resolve turf wars and territorialism.
- **Take a long-term view** and set clear expectations because transformational changes take time. Rushing into short-term fixes can further complicate your technology architecture.



# Activating use cases

This section is intended to provide a directional guide for news and media companies who aspire to execute or improve upon a given use case.



## Improve overall reader engagement

Content planning



Recirculation



Reader experience



## Increase direct-paying relationships with readers

Subscription pricing and promotion



Design for reader lifetime value (LTV)

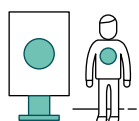


Revenue diversification



## Drive revenue from advertisers

Audience-based advertising



Advertising pricing strategy



Inventory yield management



# Content planning

Use content engagement metrics and reader behavior patterns to inform the content brief, format, channel, and calendar to ultimately drive higher engagement.





48%

of companies in the study scored themselves as **nascent** or **developing** in content planning.

Continuous A/B testing is a key differentiator that separates leading companies from nascent ones. One company saw a **click-through rate increase of 70%** due to slight tweaks to headline titles over a two-week time period.

## Master these data foundations

Leading companies who excel in content planning exhibit common characteristics that enable them to succeed.

 <b>Culture</b>	<p>Recognize the value of data and balance that with editorial judgment to optimize its use.</p>	 <b>Skills</b>	<p>Editorial and data teams collaborate and speak one language; in other words, journalists and editors understand the data and how to use it effectively.</p>
 <b>Tech</b>	<p>Content analytics are available across business areas, and supporting tools are intuitive and accessible to those without a data background.</p>	 <b>Data</b>	<p>Effective content classification through robust and accurate tagging processes and mechanisms.</p>

## Maturity scale (extended version in the [Diagnostic tool](#))

Nascent	Developing	Mature	Leading
<p><b>No segmentation:</b> Little to no segmentation of readers.</p> <p><b>Basic KPIs:</b> Monitor basic KPIs for each piece of content to understand performance.</p>	<p><b>Basic segmentation:</b> Analyze content consumption patterns between segments to find broad insights for content planning.</p> <p><b>Regular KPIs:</b> Cross-platform performance metrics tracked using standard analytics capabilities from leading providers.</p>	<p><b>Detailed segmentation:</b> content consumption patterns analyzed by segment (derived using personal and behavioral data).</p> <p><b>Advanced analytics:</b> Single view of KPIs available for each piece of content, typically using off-the-shelf analytics tools.</p> <p><b>Data-informed content strategy:</b> Insights inform, but do not lead, editorial choices.</p>	<p><b>Dynamic segmentation:</b> Strong knowledge of content consumption by segment (derived dynamically using advanced characteristics and behavioral data) can be used to indicate content value.</p> <p><b>Custom analytics:</b> Customized set of performance metrics tracked in near real-time.</p> <p><b>Data-enabled content strategy:</b> Intuitive visualization tools used by all editorial teams to make insights more accessible.</p>

### Case study

## EMEA news and media company

An EMEA publisher went from **developing to mature** as it organically developed an in-house content planning tool over **two-to-three years** that originated from a hack day. The tool tracked a simple set of metrics focused entirely on journalism and was developed within the newsroom to ensure it addressed editors' needs. The tool was made available to everyone in the organisation and reached a significant number of active users across the breadth of the company. The tool is now a

means to support wider strategy, recognizing regular readers as revenue models shifted, and helping the publisher to identify that **the lower third of its articles generated a tiny proportion of digital traffic**. The publisher used this insight to help editors understand the **limits of their promotional ability, focus their journalism more effectively, target their resources and increase audience reach and engagement**.

## Five steps to activation

Activate this use case after you have properly developed your data foundations. Depending on your level of maturity, you may have mastered certain steps and should focus efforts on perfecting activities further along the journey.



### Key teams to activate:

Business intelligence

Data engineering

Audience insights

Editorial

### 1 Audit your content tagging

Content analytics that support content planning rely on metadata tags that **identify the key characteristics of a piece of content**. Ensure you have a robust and sufficiently granular content tagging process and decide how you will manage and govern that data. This hygiene factor will have a significant impact on the **insights you can draw from your content analytics**.

### 2 Set objectives together with editorial

Set objectives for using audience insights and content analytics within the content planning process. Data and editorial teams need to **articulate the role of data in achieving the editorial mission**.

#### TWO PERSPECTIVES ON OBJECTIVES

#### 1. Decide HOW to tell the stories

Use data to maximize the impact that a journalist can make from the content he or she produces.

Once a journalist has produced a piece of content, he or she and the editors can use data to inform the headline and link trending hashtags, keywords, images, or video thumbnails.

More typical for a core news company

#### 2. Decide WHAT stories to tell

Make the content planning process more efficient by using audience data to plan what stories to tell.

Data can be used to identify patterns in the content that people engage with and suggest the types of content that will lead to greater engagement.

More typical for an entertainment and lifestyle company

### 3 Test the process and develop buy-in

Design the content analysis and **test how you use it as part of content planning**. Audience insights can be powerful, but if you do not master how this feeds into the editorial planning process, these insights will not go anywhere. **Establish guardrails around the decisions** you will use data to enhance, and determine who will make the final decision with key stakeholders.

Several news and media companies said that a key barrier to using data in the content planning process is the fear of imposing on the editorial mission. Leading companies tackle this head on. They use data to support the editorial mission and the newsroom's day-to-day activities. They have not achieved it overnight. They spend time with the editorial team and journalists and strive for the same organizational goals.

### 4 Collaboratively develop tools and reports

Work with editors and journalists to develop the report or tool that will be used on an ongoing basis. **Be clear on the needs and priorities of the newsroom** and how those translate into a **prioritized list of technology requirements**. The most sophisticated instances of these tools typically have been developed in-house; however, many companies drive significant impact using vendor solutions customized to their needs.

#### TOP TIPS

- **Continuously collaborate with the newsroom** and people who will use the content planning tools. What are their pain points and how can you solve them?
- **Be clear on the boundaries within which you are working**. What outcomes does data have a right to decide and influence?
- **Be mindful of what you decide to measure**. Your data points should be actionable, precisely defined, and meaningful. They should help editors and journalists achieve their editorial mission.
- **Judiciously prioritize development activities**. What are the 20% of features that drive 80% of the value in the content planning process?

### 5 Test, refine, and democratize

**Test proof of concepts and prototypes with would-be users**. It is important to get early feedback and refine before embarking on a large-scale rollout. Identify individuals who will champion the use of the tool and the insight it brings. These influencers will be critical to embedding the use of content insights across the organization and building momentum.

# Recirculation

Serve relevant and personalized content recommendations to increase the percentage of readers who visit another page on a company's website after reading the first article.

67%

of companies in the study scored themselves as **nascent** or **developing** in recirculation.

While most companies have implemented some content recommendation capability, additional revenue uplifts can be realized by making recommendations based on individual reader interests (or the interests of lookalike audiences). Personalization of content recommendations has **improved click-through rate by 50%** for mature companies who have taken this approach.

## Master these data foundations

Leading companies who excel in recirculation exhibit common characteristics that enable them to succeed with this use case.



### Culture

Culture of experimentation that drives constant testing of content recommendations to uncover new behavioral insights.



### Skills

Data analysts adept at descriptive and predictive modeling techniques identify the best content choice for a given reader.



### Tech

Sophisticated Content Management System to manage content classification and integrate with other data sources.



### Data

Effective content classification through robust and accurate tagging processes and mechanisms.

## Maturity scale (extended version in the [Diagnostic tool](#))

Nascent	Developing	Mature	Leading
<p><b>No segmentation:</b> All readers served the same content.</p> <p><b>Limited content segmentation:</b> Content is static with only basic segmentation by topic.</p>	<p><b>Basic segmentation:</b> Segmentation uses standard characteristics.</p> <p><b>Basic content targeting:</b> Readers see content recommendations based on their history or expressed interests.</p>	<p><b>Advanced segmentation:</b> Segmentation uses personal and behavioral characteristics.</p> <p><b>Automated content targeting:</b> Some content is static and universal, but other content is personalized based on historical behavior, including cross-device views, referral channel, location, time, and interests.</p>	<p><b>Dynamic audience segmentation:</b> Near real-time segmentation uses advanced characteristics and behavioral patterns.</p> <p><b>Personalized content targeting:</b> Content is dynamically served based on the user's historical activity, interests, and near real-time browsing behavior.</p>

### Case study

## US news and media company

A multibranded news and media company is on its journey from **developing** to **leading** maturity as it expands its capabilities in **content tagging and machine learning** to predict emotional responses to articles. The company now employs a team of taxonomists that collaborate with editors to define the right set of tags for each piece of content. The

number of tags per piece of content can be in the hundreds, and tags range from basic descriptors (i.e., demographics, location, and genre) to psychographic, predicting reader emotion with tags such as "tear jerker." Machine learning is now being explored to automate what has historically been a largely manual process.

## Four steps to activation

Activate this use case after you have properly developed your data foundations. Depending on your level of maturity, you may have mastered certain steps and should focus efforts on perfecting activities further along the journey.



### Key teams to activate:

Business intelligence

Data engineering

Audience insights

Editorial

### 1 Set recirculation objectives

**What objective are you trying to achieve with content recommendations?** This is a significant decision that requires alignment across multiple teams, including editorial, product, reader experience, and others. The most common objective among advertising-focused news and media companies is to increase session length for readers. In contrast, companies driving subscriptions might prioritize content that most often converts free users to paid users.

### 2 Create actionable content tags

Determine and document a process by which your data and editorial teams will collaborate to **identify relevant tags and classify content to make it searchable for future activation** in your Content Management System. Beyond content recommendations, effective tagging has many benefits such as enhancing content planning, audience-based advertising, and subscription strategy. So keep alternative use cases in mind as you design your processes and supporting technology infrastructure.

### 3 Build segments and recommendation rules

As a first step, **define recommendation rules** by identifying related content, then focus on personalization using your audience insights from specific segments. The aim is to infer the right piece of content to recommend to a given reader based on other articles he or she has read (i.e., browsing history), on which device (i.e., mobile, tablet, desktop), and on which occasion (i.e., time of day, location). A sound **data collection and management approach is critical** here. Having users logged in is also a significant advantage in building a longitudinal data set to support recommendations.

#### KEY QUESTIONS TO ANSWER:

- 1 Are you looking to optimize advertising revenue or subscriber conversion?
- 2 What other applications of content classification can you leverage?
- 3 How do you wish to prioritize content: based on promoted stories, other similar content, or historical reader habits?

### 4 Test and refine recommendations

**Run frequent A/B tests** to refine assumptions built into the recommendation engine and optimize the reader experience. Combining content analytics with your segmentation is critical in maintaining a picture of how different segments interact with your recommendations and whether **the recommendations are effective at achieving your overall objectives**.

# Reader experience

Deliver a great reader experience that improves engagement and propensity to pay by optimizing the look, feel, and navigation of the on-site or in-app experience.

76%

of companies in the study scored themselves as **nascent** or **developing** in reader experience.

A willingness to continuously test new UI / UX features is a key characteristic that separates leading companies from others. While experimentation is important, ensuring that each test is tied to specific KPIs that align with your organization's goals (e.g., increased session time, unique visits) is critical as well.

## Master these data foundations

Leading companies who excel in reader experience exhibit common characteristics that enable them to succeed.



### Culture

Top-down advocacy for the use of audience data and experimentation permeates the organization and aligns efforts to seek an optimal reader experience.



### Skills

UX / UI designers use a test-and-learn approach that makes design decisions more seamless and efficient.



### Tech

A flexible Content Management System used to dynamically test layouts and designs without disruption to the overall reader experience.



### Data

Robust collection and organization of on-site audience engagement data (i.e., scroll length, time on site, and bounce rates) to infer effective design cues.

## Maturity scale (extended version in the [Diagnostic tool](#))

### Nascent

**Limited understanding of readers, periodically reviewed:** Understanding of reader needs and preferences is limited to periodic focus groups.

### Developing

**Basic understanding of readers:** Aggregate view of readers' needs and preferences, which helps to optimize UX / UI.

### Mature

**Detailed understanding of readers:** Sophisticated analysis of reader behavior to understand needs and preferences.

**Partially personalized experience:** The UI, content, and off-site touchpoints are tailored at the segment level. Limited capability to test site or app features.

### Leading

**Dynamic understanding of audience:** Near real-time analysis of reader behavior to understand needs in the moment.

**Fully personalized experience:** UI, content, and off-site touchpoints are personalized. A/B testing is routine.

## Case study

### US news publisher

A news publisher demonstrated its **leading maturity** by developing proprietary technology to support A/B testing, machine learning (ML) and artificial intelligence (AI) capabilities. The publisher used its technology to develop

audience control groups and conduct multiple tests on different content layouts and design configurations. ML and AI were used to further enhance the level of personalization to ultimately create individual experiences for each reader.

## Four steps to activation

Activate this use case after you have properly developed your data foundations. Depending on your level of maturity, you may have mastered certain steps and should focus efforts on perfecting activities further along the journey.



### Key teams to activate:

Business intelligence

Data engineering

Editorial

Audience insights

UX / UI design

Advertising

### 1 Design content modules

Collaborate with editorial teams through content planning efforts to **develop multiple configurations of headlines, photo thumbnails, video thumbnails, written content, and advertisement placements**. Depending on UX / UI (cross-platform) design decisions, create multiple variants of the content module in the page builder section of your Content Management System (CMS) based on defined reader experience hypotheses.

### 2 Publish modules and analyze trends

Generate control groups for live testing, and publish the content modules in an A/B or multivariate test designed to deliver engagement measurement insights such as differences in click-through rate, scroll length, or length of stay. The **analysis of content performance across module variants will reveal trends** that can inform UX / UI design decisions leading to insights for future layouts.

#### ADVERTISING CONSIDERATIONS

A critical UX / UI design decision involves the advertising sales and marketing team. Optimizing for reader LTV may result in dynamic user experiences designed to suppress advertising loads in an effort to increase the length of stay for readers who may otherwise be driven away by an overexposure to advertisements.

**Close collaboration** between UX / UI, editorial, and the advertising sales and marketing team is critical in finding the equilibrium for a company's readership.

### 3 Tailor for audiences

Layering your content module tests by audience segments will lead to a more tailored reader experience. Structuring tests to compare predetermined audience groups such as "subscribers" or by referral source can reveal audience insights that will **define common design rules at a segment level**, creating an even more tailored feel for your readership.

### 4 Test, learn, and adjust

**Refining reader experience is an iterative process.** Develop experiments, test on your readers, analyze the output, make design changes, and record updated design rules to guide the ongoing UX / UI direction in the future. Doing this effectively requires a set of tools to make changes and measure the impact, but also requires leadership to encourage and reward experimentation (see **Building Data Foundations** - Culture and ways of working).

## Case study

### EMEA news publisher

A digital-native publisher based in the Middle East says that it is a real challenge finding the balance between monetization and reader experience. The publisher is ad-funded and has started using data to help optimize the ad density

on its website. Individual advertisements have been shown to perform better when there is a lower ad density because they stand out, plus it improves the reader experience, indicated by session length.

# Subscription pricing and promotion

Use audience insights to inform subscription pricing and promotional decisions, including price points, discounts, and paywall meter, to improve overall conversion rate and increase revenue per subscriber.

67%

of companies in the study scored themselves as either or **nascent** or **developing** in subscription pricing and promotion.

News and media companies across the globe are only scratching the surface when it comes to implementing advanced subscription pricing strategies. While there is no one-size-fits-all methodology to master this use case, leading companies test every aspect of their strategy and paywall. One company found that simply adding a personalized greeting to certain landing pages **improved conversion by 25%**.

## Master these data foundations

Leading companies who excel in subscription pricing and promotion exhibit common characteristics that enable them to succeed with this use case.

 <b>Culture</b>	KPIs designed to align behavior with increasing subscription revenue, including emphasis on subscriber engagement.	 <b>Skills</b>	Cross-functional teams that design and implement frequent A/B testing and multivariate tests to validate decisions.
 <b>Tech</b>	Strong technology foundation supports content and reader engagement reporting to feed into product development.	 <b>Data</b>	Single data warehouse that integrates data sources such as web analytics, subscription data, advertising data, and email data.

## Maturity scale (extended version in the [Diagnostic tool](#))

Nascent	Developing	Mature	Leading
<p><b>Limited Segmentation:</b> Little to no segmentation beyond registered users versus subscribers.</p> <p><b>Universal pricing:</b> All readers receive the same price.</p> <p><b>Limited subscription marketing:</b> Low emphasis on marketing and promotional content.</p>	<p><b>Basic segmentation:</b> Segmentation uses standard reader characteristics (e.g., gender, geography), but limited understanding of the reader funnel.</p> <p><b>Periodic pricing adjustments:</b> Periodic analysis of pricing.</p> <p><b>Broad marketing:</b> Promotions are offered to all readers, and marketing content is the same for all readers.</p>	<p><b>Detailed segmentation:</b> Segmentation uses personal and behavioral data to move subscriber segments up the funnel.</p> <p><b>Advanced pricing strategy:</b> Regular review of pricing, paywall strategies, and discounts across subscriber segments.</p> <p><b>Tailored marketing:</b> Marketing and promotions somewhat tailored.</p>	<p><b>Dynamic Segmentation:</b> Near real-time segmentation, using behavioral patterns and advanced characteristics, to automatically serve tailored pricing and paywalls.</p> <p><b>Dynamic pricing strategy:</b> Automated processes to inform pricing and promotions.</p> <p><b>Targeted marketing and promotions:</b> Marketing content and promotions are tailored in near real-time.</p>

### Case study

## US news publisher

A news publisher increased its maturity from **mature to leading** by focusing on driving subscription revenue. From dynamic paywalls that meter articles to pricing and promotional considerations, the publisher segments and targets readers based on reader LTV predictions.

Content is analyzed to understand the types of content most likely to convert readers, as well as readers' content preferences. The journey took **several years**, but it has delivered **double-digit percentage growth in digital subscriptions** over the same period.



## Five steps to activation

Activate this use case after you have properly developed your data foundations. Depending on your level of maturity, you may have mastered certain steps and should focus efforts on perfecting activities further along the journey.



### Key teams to activate:

Business intelligence

Data engineering

Pricing

Audience insights

Marketing

Product Development

### 1 Collect data

Identify data elements provided by your readers on your owned and operated properties. **Develop and document a data strategy** that helps you build a picture of how subscribers and non-subscribers behave, and what drives them to subscribe and maintain their subscriptions. This should help you focus your data collection and management efforts and communicate the value of collecting additional data on readers, if required.

### 2 Build segments

Analyze your data to reveal audience insights. Initially, pursue basic segments derived from your subscriber base to **identify relevant characteristics that may signal a new reader's propensity to subscribe**.

#### EXAMPLE SUBSCRIBER CHARACTERISTICS

When building segments, there are some key things to look out for:

1. Common characteristics in existing subscriber base (e.g., age, income, location, gender, interests, profession)
2. Typical behaviors in the lead up to conversion (e.g., content engagement, frequency of visits, time of day, discounts)
3. The characteristics and behaviors of long-term subscribers (e.g., subscription type, ancillary engagement)

### 3 Analyze segments and conduct tests

**Monitor behavioral patterns from different segments to inform the set of tactics you will use** to elicit desired behaviors in your existing subscriber base (to drive retention) or target subscriber base (to drive acquisition). This might include universal changes in reader experience (e.g., platform or user interface changes) or reader-specific promotions (e.g., dropping the paywall for certain content, promotions, or other incentives). Conduct A/B testing and **measure the impact of your tactics**.

### 4 Define pricing strategy

4a There are **multiple right answers for setting your pricing strategy**, but your best answer will stem from your strategic choices. Some companies choose a flat rate for all subscribers, while others choose to present dynamic subscription prices or promotions. Regardless of your choice, you should test pricing approaches against control segments to validate assumptions and **optimize price for overall revenue**.

4b Not all readers are valued the same. In leveraging your existing segments, **understand reader LTV by determining the relative propensity to subscribe and total LTV** of certain segments. Then, based on that analysis, **define rules for free article limits** per segment to target readers you are more likely to not just convert, but retain, on a subscription.

### 5 Continually test, learn, and adjust

Once your segmentation, pricing, promotion, and paywall infrastructure is in place and operational, test these elements frequently to **unlock new insights and drive higher subscription revenue**. Best-in-class companies scan their platforms for signals and patterns to uncover insights on propensity to subscribe and price optimization. The changes they make to the reader experience are always informed by the predicted impact on reader LTV.

# Design for reader LTV

Use audience engagement data to understand and track the value of a reader across the reader's entire relationship with the company (including acquisition, support, and retention) and make business decisions by taking a full view of the reader's value as opposed to at a point in time.





77%

of companies in the study scored themselves as either **nascent** or **developing** in designing for reader LTV.

While many news and media companies are interested in using reader LTV, some are wary of the investment required to aggregate data and design an algorithm to determine a reader LTV score. Mature companies in the study started small, using only a few variables to predict reader behavior and focusing on only the most valuable audience segments. One company was able to **predict reader churn with more than 90% accuracy**. The company then focused marketing messages and offers on those readers predicted to likely churn, which resulted in a double-digit increase in retention rates.

## Master these data foundations

Leading companies who excel in designing for reader LTV exhibit common characteristics that enable them to succeed.

 <p><b>Culture</b></p>	<p>Shared organizational objectives around reader LTV incentivize teams to prioritize LTV over short-term revenue targets to make appropriate trade-offs.</p>	 <p><b>Skills</b></p>	<p>Economic and predictive modeling creates informative reader LTV estimates and can be based on real-time behavioral signals from readers.</p>
 <p><b>Tech</b></p>	<p>An integrated warehouse of all data facilitates holistic modeling of reader LTV over time.</p>	 <p><b>Data</b></p>	<p>Near real-time updates to reader data facilitate a frequently refreshed LTV estimate for each identified reader.</p>

## Maturity scale (extended version in the [Diagnostic tool](#))

Nascent	Developing	Mature	Leading
<p><b>Limited segmentation:</b> Little to no reader segmentation.</p> <p><b>Limited reader analysis:</b> Limited understanding of reader LTV.</p>	<p><b>Basic segmentation:</b> Segmentation uses standard characteristics.</p> <p><b>Basic reader analysis:</b> High-level modeling of LTV, but limited actions taken based on LTV analysis.</p>	<p><b>Detailed segmentation:</b> Segmentation uses both personal and behavioral data to inform marketing and sales campaigns, as well as long-term product and platform decisions.</p> <p><b>Advanced reader analysis:</b> Analysis of segments includes subscriber acquisition costs and churn predictions; LTV outputs are shared with teams to drive decision-making.</p>	<p><b>Dynamic segmentation:</b> Near real-time segmentation uses detailed characteristics and behavioral patterns and supports scenario analysis for key decisions.</p> <p><b>Total reader analysis:</b> A reader's perceived value to advertisers is incorporated into subscriber LTV analysis; LTV outputs are frequently updated and used to drive decisions across the business.</p>

### Case study

## APAC news publisher

A news publisher in APAC went from **mature to leading** by developing an 'engagement score' for each reader based on breadth (i.e., number of sections read), frequency (i.e., number of visits over past 30 days), and recency (i.e., number of visits in past week). The publisher uses

the engagement score to create targeted content for newsletters and marketing communications. Since introducing the engagement score approach, the publisher has seen a **7% improvement in retention rates** and is now considering incorporating price as a lever to further help retention.

## Four steps to activation

Activate this use case after you have properly developed your data foundations. Depending on your level of maturity, you may have mastered certain steps and should focus efforts on perfecting activities further along the journey.



### Key teams to activate:

Business intelligence

Data engineering

Marketing

Audience insights

Pricing

Advertising

Editorial

Non-core product

### 1 Structure reader data

Develop and document a data strategy that defines the governing principles for storing and updating reader data (i.e., unidentified, registered, and subscribers), including personally identifiable information (PII). Develop data collection and management efforts that result in **a trusted, up-to-date, single-source of truth for individual profiles**.

### 2 Define drivers and assign value

Reader LTV management requires a thorough understanding of **revenue value drivers tied to reader behavior**. Value drivers are related to either direct reader monetization or advertising functions. Common value drivers include subscription pricing and ad impressions. These are influenced by metrics such as subscriber type, page views, and time on-site. Analysis of the economic impact associated with these value drivers helps companies **determine a reader's LTV based on certain behaviors and identify the most effective monetization techniques**.

### 3 Analyze behaviors

Track engagement as well as other descriptive data (e.g., demographic) to better understand signals that suggest alternative monetization techniques (e.g., one-off payments versus subscriptions) or a subscriber event such as acquisition, renewal, or cancellation. **These audience insights will guide decision-making around monetization strategy, promotion strategies, and other customer support offerings.**

### 4 Design customer support efforts

Design systems by which you may react to behaviors exhibited by a certain subset of subscribers. Segmentation efforts will help cluster and prioritize subscribers for more effective deployment of marketing and other customer support initiatives. The most advanced instances of this involve using machine learning models to **uncover new subscriber behavior patterns and suggest the best response** based on the success of previous support initiatives.

#### ADVERTISING CONSIDERATIONS

Reader LTV is not just a measurement of subscriber revenue potential. Many news and media companies can track reader LTV for either individual readers or audience segments, based on descriptive data that may be correlated with high-value advertising opportunities.

While it is difficult to maintain a persistent view of a given reader without the authentication of transaction data and sign-in, companies can tailor efforts to serve readers based on their perceived value to advertisers.

#### EDITORIAL CONSIDERATIONS

News and media companies that are particularly successful in leveraging reader LTV analysis also use the metric in content planning to both serve the preferences of high-value readers, as well as tag types of content that may signal a subscriber event.

For instance, if long-form political stories are more frequently followed by a subscription sign-up than other types of articles, that may inform recommendations of free political articles in advance of any paywall restrictions.

# Revenue diversification

Develop and target non-core products and services to readers based on their interests and behavior to drive additional revenue beyond traditional content and advertising products.

78%

of companies in the study scored themselves as **nascent** or **developing** in revenue diversification.

While activating this use case can vary substantially from one company to the next, leading news and media companies in the study reported success with these revenue diversification opportunities:

**Events:** Hosting conferences, seminars, or workshops to increase brand awareness and create sponsorship opportunities





**E-commerce:** Developing product lines that complement the interests of high-value reader segments (e.g., cookware for food connoisseurs) to generate sales revenue

**Affiliates:** Supporting sponsored links to relevant goods and services (e.g., link to purchase recently reviewed products) to create new sales revenue

**Memberships:** Charging for exclusive perks and premium content serve as brand extensions that drive additional revenue and can provide a more engaging reader experience

## Master these data foundations

Leading companies who excel in revenue diversification exhibit common characteristics that enable them to succeed with this use case.

 <b>Culture</b>	<p>Shared objectives for reader LTV that incentivize core business areas to support revenue diversification.</p>	 <b>Skills</b>	<p>Integration between business development, marketing, and data teams to develop and promote new products to audience segments.</p>
 <b>Tech</b>	<p>Intuitive analytics and reporting tools democratize access to audience insights, as well as help identify and assess revenue diversification opportunities.</p>	 <b>Data</b>	<p>A single view of the reader enables tracking of a reader across multiple owned properties (e.g. e-commerce, news, classifieds).</p>

## Maturity scale (extended version in the [Diagnostic tool](#))

Nascent	Developing	Mature	Leading
<p><b>Universal approach:</b> All readers are treated the same.</p> <p><b>Generic product strategy:</b> Products are rarely promoted as packaged offerings.</p> <p><b>Limited insight sharing:</b> Non-core products are developed independently, and data is not shared with the core business.</p>	<p><b>Basic segmentation:</b> Audience segmentation uses standard characteristics.</p> <p><b>Basic product strategy:</b> Ancillary product offers decided periodically and served to all readers; limited use of data to make these decisions.</p> <p><b>Basic insight sharing:</b> Key reader and product insights are shared across functions.</p>	<p><b>Detailed segmentation:</b> Segmentation uses personal and behavioral data and incorporates analysis on propensity to buy.</p> <p><b>Tailored product strategy:</b> Ancillary products offered in cross-brand packages; good view of readers across platforms and synergies between business units are well understood.</p> <p><b>Advanced insight sharing:</b> Key reader and product insights influence business decisions across functions.</p>	<p><b>Dynamic segmentation and propensity modeling:</b> Near real-time segmentation using advanced characteristics and behavioral patterns, with detailed propensity modeling used across business units.</p> <p><b>Advanced product strategy:</b> Readers with high cross-sell potential are auto-flagged, and all new product opportunities are supported or driven by reader insights.</p> <p><b>Advanced insight sharing:</b> Key reader and product insights influence business decisions across functions.</p>

### Case study

## APAC news publisher

A large national publisher increased its maturity from **developing to leading** as it sought new revenue streams to support its digital business. The publisher was advancing its digital footprint by expanding into ancillary products and services such as classifieds, music streaming, gaming and e-commerce. The publisher developed an in-house advertising technology platform

that created a single reader identity across all digital properties (i.e., more than 40 in total). This created value for the publisher in two ways. First, it helped the publisher target higher value readers to drive **higher reader LTV**. Second, it **reduced acquisition costs** as readers acquired on one platform were monetized multiple times across other digital properties.

## Four steps to activation

Revenue diversification is a unique use case because there are many factors (unrelated to the use of data) that news and media companies need to consider. Broadly speaking, downward pressure on advertising revenue and challenges associated with creating substantial subscription revenue have pushed news and media companies to look beyond their core product of journalism to drive revenue growth. These decisions are multidimensional, but an adept use of audience data has shown to mitigate risks and reveal new opportunities to pursue adjacent businesses. These steps should append broad strategic, financial, and operational decision processes in pursuing new revenue opportunities.



### Key teams to activate:

Business intelligence

Data engineering

Audience insights

Product development

Non-core product team(s)

### 1 Analyze the audience to inform strategy

Analyze your data to reveal audience insights. Focus segmentation efforts on **inferring interests** of particular segments and **identifying areas of high reader engagement**. You can define interest-based segments (e.g., technology, entertainment, automotive) based on the content that your audience reads or identify patterns within highly engaged audience groups that might seek other ways to engage with you. Traffic source may also reveal groups seeking products and services beyond the core news product.

### 2 Develop and test concepts

Bring cross-functional teams such as editorial, sales and marketing, and business development together to **identify and evaluate product extensions and new business opportunities** that may satisfy unmet demand from target segments. Test these concepts directly with your readers through focus groups, surveys, or other direct research tactics.

### 3 Build a minimum viable product

Once your team has aligned on a new concept to test, develop a minimum viable product and conduct an in-market pilot. Through content planning and marketing efforts, **use existing platform strengths to drive awareness and engagement**. Where possible, develop control groups within your target audience and conduct A/B and multivariate tests to isolate product attributes and measure performance accordingly.

#### IDENTIFYING NEW REVENUE STREAMS

In recent years, news and media companies have branched into a number of new products and services, including events and newsletters, as well as less traditional markets such as second-hand car sales and e-commerce. Deciding what ancillary services to offer can depend on brand association, consumer needs, and company capabilities.

One company experienced considerable success in publishing stylistic content on its food vertical. The content popularity led to an opportunity to develop branded cookware with a captive audience at critical mass and broad brand awareness. The company used its platform to market its physical products through other digital and traditional retail channels.

### 4 Continually test, learn, and adjust

After the initial piloting of a new product or service, it is critical to **continually adjust and improve the offering** (even after launch). Whether a repackaged news product or a net new physical product line, the company should leverage its existing data collection and management capabilities to better inform pricing strategy, promotion strategy, execution, and other important product management considerations.

# Audience-based advertising

Use audience data to serve the most appropriate advertisements to readers based on contextual and behavioral data. The objective is to increase the relevance of the advertising to the reader and attract greater digital advertising spend.





47%

of companies in the study scored themselves as **mature** or **leading** in audience-based advertising.

Mature companies have established basic segmentation capabilities and are looking to implement advanced targeting using first-party behavioral and contextual data. One leading publisher saw advertising revenue improve up to 20% driven primarily by higher CPM for audience-based advertisements.

## Master these data foundations

Leading companies who excel in audience-based advertising exhibit common characteristics that enable them to succeed with this use case.

 <b>Culture</b>	Tight collaboration between data and sales teams to craft and articulate the value proposition of unique segments to advertisers.	 <b>Skills</b>	Access to data analysts who can create and maintain unique audience segments that are valuable to advertisers.
 <b>Tech</b>	Sophisticated reporting and analytics tools that provide timely performance feedback on all campaigns.	 <b>Data</b>	Effective use of a Data Management Platform (DMP) to collect, curate, and activate first-, second-, and third-party data.

## Maturity scale (extended version in the [Diagnostic tool](#))

Nascent	Developing	Mature	Leading
<p><b>Limited segmentation:</b> No reader or content segmentation and no targeting of ads served, as a result.</p> <p><b>Limited sign-in:</b> Limited sign-in (or otherwise identifiable) information captured for readers.</p>	<p><b>Basic segmentation:</b> Some segmentation using standard reader characteristics (e.g., gender, location); basic knowledge of the link between segments and content consumption. Most revenue-generating readers are signed in or identifiable.</p> <p><b>Basic ad segmentation:</b> Static rules that dictate the types of content sent (not dynamically) to different groups of readers.</p>	<p><b>Detailed segmentation:</b> Readers are segmented using both personal (e.g., demo) and behavioral (e.g., clicks) characteristics. Segments are updated regularly, and all revenue-generating readers are identifiable.</p> <p><b>Ad targeting:</b> Advertisements are served to readers based on interest, historical behavior, and other editorial or commercial rules.</p>	<p><b>Dynamic segmentation:</b> Near real-time segmentation using advanced characteristics and behavioral patterns (e.g., behavior at different times of day). All revenue-generating readers are identifiable and perceived reader value is analyzed.</p> <p><b>Dynamic ad targeting:</b> Recognize content (including images and videos) and augment first-party data with a limited number of trusted third-party data sources to serve the most effective advertisements to the most appropriate readers.</p>

### Case study

## US news publisher

A digital-native publisher transformed itself from **nascent to mature** over a five-year period. The company made a strategic pivot to become more data-informed in its advertising efforts and reduced its reliance on third-party data. The publisher incrementally improved its collection of first-party data and segmentation capabilities. At first, segmentation was

based on content consumption, but it expanded to include segmentation based on content engagement, e-commerce, and affiliate marketing. As first-party segments became more robust, the publisher pivoted its external value proposition from “reach” to “high quality engagement and performance”, driving **increased advertising revenue through higher CPM.**

## Five steps to activation

Activate this use case after you have properly developed your data foundations. Depending on your level of maturity, you may have mastered certain steps and should focus efforts on perfecting activities further along the journey.



### Key teams to activate:

Business intelligence / Ad insight

Ad operations

Editorial

Data engineering / Tech

Ad sales / Marketing

### 1 Collect data

Identify data elements provided by your readers (i.e., unidentified or logged-in readers) on your owned and operated properties. **Develop and document a data strategy that defines the uniqueness of your first-party data** and sets integration goals for data collection and management efforts. Evaluate DMPs and third-party data providers to fill gaps and augment your internal capabilities to ensure you have a complete data set.



Many news and media companies struggle with vetting DMPs and third-party data providers. Successful companies evaluate DMPs on existing scale, reputation, accessibility, support, and knowledge of the company's business model. Leading companies tend to limit their use of third-party data and vet such data thoroughly for compliance with data privacy regulations. Validating third-party data elements against ground truth first-party data mitigates data accuracy risks.

### 2 Build segments

Analyze your data to reveal audience insights. **Group audience segments based on common characteristics.** Initially, pursue basic segments such as demographics (e.g., gender, age, location, income) interest-based content (e.g., technology, entertainment, automotive), and traffic source. Increasing the proportion of your readers that log in while browsing will improve the accuracy and completeness of your data and strengthen your ability to generate meaningful audience segments.

### 3 Articulate the value of your segments

Prepare advertising sales and marketing teams to **articulate the value of your segments.** What makes your segments unique? Can you show advertisers something they did not know about their target audiences? Offer advertisers the option to dedicate a portion of their media buy to initiatives powered by your data, and run A/B testing between basic segments and your enhanced segments to **build trust in your data's performance.**

### 4 Enhance segments

Leverage existing advertiser relationships to understand their strategic priorities and their demand for certain audience segments. Measure audience engagement and use content analytics to infer the interests and intent in your segments based on audience behavior. **These insights will help you transition toward selling high-value audiences.**

#### DEVELOPING HIGH-VALUE SEGMENTS

- **Consider your advertisers' needs:** advertisers have their own predefined target segments that you need to satisfy.
- **Think about who your readers are and how they behave:** your readers have interests and needs.
- **Look for similarities:** map your advertisers' needs to your readers' interests to create valuable advertising segments.
- **Tell a narrative:** develop a narrative around your different segments, including what they respond to and how they behave. Consumer personas (e.g., busy moms) can also be great starting points to bring the segments to life.

### 5 Activate campaigns

Create campaigns with **mutually reinforcing relationships between a premium advertising product, relevant content planning, and the right high-value audience segment.** Continually improve campaign development and execution through A/B testing of different advertising formats and against potential segments. Also, perform timely campaign analytics and reporting to help you further refine campaigns with advertisers.

# Advertising pricing strategy

Leverage audience data to support the advertising sales team in yielding higher per unit revenue, regardless of sales channel, by understanding the relative value of different audience segments to advertisers.

72%

of companies in the study scored themselves as **nascent** or **developing** in advertising pricing strategy.

The majority of news and media companies have established reporting capabilities to analyze segment performance and make periodic revisions to their rate cards.

## Master these data foundations

Leading companies who excel in advertising pricing strategy exhibit common characteristics that enable them to succeed with this use case.

<div style="background-color: #00728f; color: white; padding: 5px; text-align: center; margin-bottom: 5px;"> <b>Culture</b> </div> <p>Tight collaboration and transparency between data, sales, and pricing teams ensure timely reaction to price changes.</p>	<div style="background-color: #00728f; color: white; padding: 5px; text-align: center; margin-bottom: 5px;"> <b>Skills</b> </div> <p>Pricing experts that analyze market data and inform rate card decisions can optimize the price and volume of advertisements sold.</p>
<div style="background-color: #00728f; color: white; padding: 5px; text-align: center; margin-bottom: 5px;"> <b>Tech</b> </div> <p>Analytics tools ingest historical rate data and optimize price based on forecasted inventory.</p>	<div style="background-color: #00728f; color: white; padding: 5px; text-align: center; margin-bottom: 5px;"> <b>Data</b> </div> <p>Reliable identification of audience segments builds trust with advertisers and commands commensurate pricing.</p>

## Maturity scale (extended version in the [Diagnostic tool](#))

Nascent	Developing	Mature	Leading
<p><b>Limited audience and advertiser segmentation:</b> Minimal segmentation of either readers or advertisers to inform pricing.</p> <p><b>Static rate card:</b> Periodic updates to rate card based on historical pricing.</p> <p><b>No reporting:</b> Advertisers do not receive performance reporting.</p>	<p><b>Basic audience and advertiser segmentation:</b> Some segmentation using basic characteristics of readers (e.g., demographics) and advertisers (e.g., annual spend).</p> <p><b>Revised rate card:</b> Rate card routinely updated using historical price and expected demand.</p> <p><b>Regular reporting:</b> Performance reports routinely shared with advertisers.</p>	<p><b>Detailed audience and advertiser segmentation:</b> Segmentation using personal (e.g., demographics) and behavioral (e.g., clicks) data of readers and detailed characteristics of advertisers (e.g., annual spend, vertical).</p> <p><b>Advanced pricing strategy:</b> Pricing models and discounts informed by campaign performance and demand forecasts.</p> <p><b>Advanced reporting:</b> Performance reporting is dynamic.</p>	<p><b>Dynamic audience and advertiser segmentation:</b> Near real-time segmentation using detailed reader needs, characteristics, and behavioral patterns and detailed segmentation of advertisers (e.g., annual spend, vertical).</p> <p><b>Dynamic pricing strategy:</b> Pricing models and discounts are dynamically updated.</p> <p><b>Transparent reporting:</b> Near real-time reporting.</p>

### Case study

## US news publisher

A digital-native publisher increased its maturity from **developing to mature** by identifying the value of different audience segments to advertisers so it could revise its rate card accordingly. The publisher developed its audience segments using a combination of first-, second-, and third-party data. By assessing the performance of different segments and collaborating with advertisers, the publisher identified specific segments that were perceived as more valuable to advertisers. Using this information, the publisher created pricing tiers commensurate with the observed value of each segment. The rate card is not yet dynamic, but it is periodically adjusted to reflect market changes.



## Five steps to activation

Activate this use case after you have properly developed your data foundations. Depending on your level of maturity, you may have mastered certain steps and should focus efforts on perfecting activities further along the journey.



### Key teams to activate:

Business intelligence / Ad insight

Ad operations

Data engineering / Tech

Ad sales / Marketing

### 1 Collect data

Identify data elements provided by your readers (i.e., unidentified or logged-in readers) on your owned and operated websites. **Develop and document a data strategy that defines the uniqueness of your first-party data** and sets integration goals for data collection and management efforts. Evaluate Data Management Platforms (DMPs) and third-party data providers to fill gaps and augment your internal capabilities to ensure you have a complete data set.

### 2 Build segments

Analyze your data to reveal audience insights. **Group segments based on common characteristics.** Initially, pursue basic segments such as **demographics** (e.g., gender, age, location, income), **interest-based content** (e.g., technology, entertainment, automotive), and **traffic source**. Increasing the proportion of your readers that log in while browsing will strengthen your audience segments.

### 3 Analyze performance

Leverage **engagement measurement and campaign analytics tools to understand ad performance**. Refine your understanding of individual segment performance through A/B testing. Articulate outcomes and learnings to advertisers via your sales team to **prove the strength and value of high-impact segments**, and assess how you have priced these segments.

### 4 Collect sales intelligence

**Collaborate with the sales team on pricing strategy** to understand which other segments and formats advertisers value, and how they buy segments throughout the year. This will help **identify how audience data can be used to support negotiations**. For example, before experimenting with a premium advertising format, you might need to prove the performance uplift you delivered with a similar segment on another campaign.

**"I know that I have 5% of my inventory that gets \$50 CPM, but I don't know why."**

- Mature news publisher, US



If necessary, engage third-party expertise to increase transparency within your advertising technology stack. You might be able to surface critical insights on the variables that *really* drive your price.

### 5 Adjust rate cards

Analyze reader LTV to **define value ranges associated with all audience segments**. Combine segment performance analysis, reader LTV analysis, and demand forecasts to update rate card. Continue to **update rate cards based on market changes and updates to audience segmentation**.

# Inventory yield management

Use content planning and audience engagement data to forecast future inventory and optimize the mix across direct sales, private marketplaces, and open auctions to maximize advertising revenue.





50%

of companies in the study scored themselves as **mature** or **leading** in inventory yield management.

Many news and media companies have found that the most significant challenge is determining the balance between direct and programmatic, and then whether to create a private marketplace or place inventory on open exchanges. Data can support this decision, however there are a number of other strategic inputs such as advertiser demand.

## Master these data foundations

Leading companies who excel in inventory yield management exhibit common characteristics that enable them to succeed with this use case.

 <b>Culture</b>	<p>Continuous improvement mindset that seeks to optimize price across channels on a regular basis.</p>	 <b>Skills</b>	<p>Yield optimization teams with full visibility over all sales channels, and they can allocate forecasted inventory.</p>
 <b>Tech</b>	<p>Sophisticated forecasting tools to ensure a reliable analysis of future inventory to sell against.</p>	 <b>Data</b>	<p>Effective segments connected to advertising sales platforms that enable execution.</p>

## Maturity scale (extended version in the [Diagnostic tool](#))

Nascent	Developing	Mature	Leading
<p><b>Limited inventory analysis:</b> Inventory management is performed infrequently based on historical reader behavior and the display market.</p>	<p><b>Basic inventory analysis:</b> Basic understanding of historical traffic and advertising volume, with some future volume forecasting.</p> <p><b>Basic channel strategy:</b> High-level understanding of the relative value of ads across different channels (e.g., direct programmatic). Teams occasionally review channel performance.</p>	<p><b>Reader forecasting:</b> Regular review of reader behavior with analytics used to revise inventory forecast.</p> <p><b>Channel optimization:</b> Detailed understanding of how exchanges, networks, and advertising technology are evolving, and the impact of these trends on the value and placement of inventory. Regular review of performance.</p>	<p><b>Advanced reader forecasting:</b> Sophisticated simulation of reader behavior across dynamic segments to predict inventory demand.</p> <p><b>Dynamic channel optimization:</b> Near real-time understanding of value across advertising sales channels to maximize yield and advertising revenue.</p>

### Case study

## EMEA news publisher

A **leading** EMEA publisher uses inventory forecasting to inform future pricing across its different channels (e.g., direct, programmatic). Forecasts are based on historical sales volume, pricing, and inventory performance. By understanding the volume of advertising inventory the publisher expects to sell through each channel, and the resultant inventory

performance, the publisher can optimize its pricing. Knowing the performance of different channels is critical to justifying pricing decisions. For example, the publisher's private marketplace has a **CPM four times greater than the open market**, as the publisher was able to differentiate inventory according to the advertiser's goals.

## Five steps to activation

Activate this use case after you have properly developed your data foundations. Depending on your level of maturity, you may have mastered certain steps and should focus efforts on perfecting activities further along the journey.



### Key teams to activate:

Business intelligence / Ad insights

Ad operations

Data engineering / Tech

Ad sales / Marketing

Content planning

### 1 Align inventory forecasting to other data

Before you start adjusting your channel mix, are your content planning, engagement measurement, and inventory forecasting teams aligned? Sometimes inventory is cleared on open exchanges (for a lower price) because inventory forecasts include incorrect engagement assumptions. These types of mistakes are easily avoided through effective cross-team communication. **Direct sales teams report that one of their barriers to selling premium inventory is simply not knowing how much inventory is available.**

### 2 Enhance forecasting with engagement data

**Leverage engagement measurement tools to better understand the habits and behaviors of different segments**, and feed this into your inventory forecasting. You might uncover more about how and when your most valuable segments consume content, which will allow you to better forecast the number of impressions you can generate.

### 3 Analyze channel performance

**Take stock of the different channels you are using to sell your inventory.** How much of your inventory do you sell via each channel? What price are you realizing for that inventory? Pricing analytics by channel should help you answer this question. Look for parts of your inventory or specific segments that are realized at lower (or higher) rates than expected.

### 4 Re-visit channel mix

**Does your channel mix make sense?** There might be certain channels that perform well for specific types of inventory or segments based on your pricing analytics. There might also be opportunities to introduce new channels as part of your pricing strategy. For example, a private marketplace might be appropriate if advertisers want to buy programmatically and are willing to pay a premium to access inventory before it hits an open exchange.

**“Our private marketplace gets much better CPMs, but we need to educate our buyers on why it is safer and delivers better performance for them”**

- Mature news publisher, US

### 5 Monitor performance

Optimizing your channel mix is not a one-time activity. To reap the most benefits, you need to continue to connect your different data sources and monitor price realization. Few companies have invested in completely automating this process, but leading companies have established a rhythm for reviewing and adjusting their channel mix. **Pricing strategy (including channel mix) should be regularly revisited.**

#### COMMON CHANNEL PRIORITIZATION WATERFALL

Companies typically follow a prioritization waterfall to fill their advertising inventory starting from the channels that provide the highest CPM. While header bidding largely removes the need for a waterfall approach, many companies still use the waterfall approach since it:

- Does not require additional effort to set up and run complex header bidders or server-to-server connections
- Does not suffer from latency issues that are common if you run too many header bidders
- Can be relied upon as a backup to sell remaining impressions

# Appendix

## Maturity scale

Nascent	Developing	Mature	Leading
<p>News and media companies have the <b>basic tools</b> to collect data and some insights, but they often face <b>cultural challenges when embracing data and digital initiatives</b> due to an emphasis on investing in other initiatives by senior leadership. Their technical teams <b>struggle to integrate all back-end data sources</b> into one unified place, which <b>limits access to useable audience data</b> within the organization.</p>	<p>News and media companies have <b>some success deriving insights</b> from data and using those insights to <b>drive value in pockets of their business</b>. Leadership understands that data initiatives are a priority for the business, but is <b>unclear on how to unlock investment</b> or where to invest time and resources to make the best near-term changes.</p>	<p>News and media companies <b>drive action based on data</b>, and <b>data-informed decision making is the standard</b> across much of the business. The <b>technology supports various use cases</b>, but these are mostly on a project basis, not business as usual.</p>	<p>News and media companies <b>see data as an integral part of achieving their strategic objectives</b>, and team members throughout the organization <b>characterize their work as data-informed</b>. The company tests innovative projects and technologies that help drive the industry forward.</p>

We identified four dimensions of data maturity. These dimensions define where news and media companies prioritize data efforts, and their maturity across these dimensions helps distinguish leading companies from nascent companies:

### Strategic direction and ambition for data:

Ensures data is understood consistently at all levels of the business and prioritizes data's critical role in setting broad strategic direction and achieving business objectives.

### Reader engagement:

Reflects the understanding of critical audience segments and emphasizes the dedication of resources in service of satisfying reader preferences.

### Reader revenue:

Represents the approach to drive financial value directly from readers, whether through subscriber acquisition and retention efforts or through net new revenue opportunities.

### Advertising revenue:

Encompasses the use of rich data sets to effectively reach the right audiences and deliver high-impact advertising campaigns that do not diminish the reader experience.

	Nascent	Developing	Mature	Leading
<b>Strategic Direction and Ambition for Data</b>	Limited connection between data and overarching business goals.	Initial articulation of specific and well-defined data initiatives.	Widespread knowledge and respect for the role data plays in achieving the business strategy.	Universal understanding of how data underpins the overarching business strategy, at all levels.
<b>Reader Engagement</b>	<p><b>Audience analysis:</b> Collect basic engagement data (i.e., page views), but do not translate into audience insights.</p> <p><b>Editorial strategy:</b> Content decisions are primarily based on editorial experience.</p>	<p><b>Audience analysis:</b> Know what the broad audience segments are and start to uncover discrete audience insights using basic web analytics tools.</p> <p><b>Editorial strategy:</b> Reader experience and content decisions are still driven by “gut instinct.”</p>	<p><b>Audience analysis:</b> Understand how different segments engage with content and use these insights to improve engagement.</p> <p><b>Editorial strategy:</b> Share engagement insights with the editorial team and actively use data to improve content format (i.e., headlines, length).</p>	<p><b>Audience analysis:</b> Understand the context of the full reader journey and why readers engage.</p> <p><b>Reader experience:</b> Tailor the reader experience for different segments and occasions.</p> <p><b>Editorial strategy:</b> Editorial decisions are data-informed.</p>
<b>Reader Revenue</b>	<p><b>Product strategy:</b> Paid content offerings are one-size-fits-all.</p>	<p><b>Product strategy:</b> Use metrics to develop promotions or price tiers for paid content offerings.</p> <p><b>Reader analysis:</b> Understand conversion drivers such as registration, log-in, and subscription.</p>	<p><b>Product strategy:</b> Use different paid content offerings or products to improve the reader's journey and determine how to bundle these products for different audiences.</p> <p><b>Reader LTV:</b> Start to use reader LTV-focused metrics.</p> <p><b>Reader analysis:</b> Understand conversion and retention drivers, and adjust accordingly.</p>	<p><b>Product strategy:</b> Have differentiated paid content offerings or products that are relevant to readers across their life cycles.</p> <p><b>Reader LTV:</b> The portfolio of products are mutually reinforcing and drive loyalty and reader LTV.</p> <p><b>Reader analysis:</b> Understand the needs and behaviors of readers at different stages in their life cycles.</p>
<b>Advertising revenue</b>	<p><b>Audience segmentation:</b> Conduct standard targeting using basic segments (e.g., demographic, location).</p>	<p><b>Audience segmentation:</b> Use combinations of pre-built segments to assemble campaigns for advertisers.</p> <p><b>Exchange strategy:</b> Use exchanges / private marketplaces in a reactive way, primarily to monetize remnant inventory.</p>	<p><b>Audience segmentation:</b> Use first-, second-, and third-party data to build interest and intent-based segments.</p> <p><b>Sales strategy:</b> Share insights and equip the sales team to clearly communicate the value of different segments to advertisers.</p> <p><b>Exchange strategy:</b> Use exchanges / private marketplaces in a strategic way to optimize yield.</p>	<p><b>Audience segmentation:</b> Build unique segments using enriched first-party data that gets to the heart of reader interest and intent.</p> <p><b>Sales strategy:</b> Collaborate with advertisers and agencies to craft campaigns that incorporate unique audience insights.</p> <p><b>Exchange strategy:</b> Use exchanges / private marketplaces in a strategic way to optimize yield.</p>

## Glossary (1 of 2)

<b>A/B Testing</b>	An experiment in which two or more variants of a page are shown to users at random, and statistical analysis is used to determine which variation performs better for a given goal
<b>Audience Data</b>	First-, second-, and third-party data collected on user characteristics (such as location and demographic), reader engagement (such as page views and click-through rates) and transaction history (as it pertains to paying for content or other ancillary products and services)
<b>Audience Insights</b>	Translating data into an understanding of your readers' needs, preferences, and behaviors, in order to inform business decisions
<b>Audience Segments</b>	Specific subsets of a broad market / population that have common needs and / or behaviors
<b>Behavioral Data</b>	Data elements, like time on-site or scroll length, that are captured from a reader's engagement with a website / app
<b>Content Analytics</b>	Technology that processes how users consume and engage with digital content in order to adjust, enhance, or discontinue content production or marketing
<b>Content Tagging</b>	The system by which a keyword or term is assigned to a piece of content to improve searchability of the content for future use
<b>Contextual Data</b>	Metadata that is used to identify the context (e.g., time of day, platform) in which content is being consumed to provide a deeper understanding of reader behavior
<b>Cross-platform</b>	Ability to analyze and support reader interactions with mobile and web platforms
<b>Reader Lifetime Value Management</b>	Understanding and tracking the value of a reader across their entire relationship with the business (including acquisition, support, and retention) and making business decisions by taking a full view of the reader's value as opposed to at a point in time
<b>Data Element</b>	An atomic unit of data that has precise meaning
<b>Data Governance</b>	The organizational models, policies, procedures, and standards to effectively manage and sustain the quality of enterprise data
<b>Data Maturity</b>	The relative ability of an organization to collect, organize, and convert data into actionable business insights
<b>Data Strategy</b>	A set of choices that defines how data will be used in an organization as well as the systems and processes that will be required to store, maintain, and analyze data

## Glossary (2 of 2)

<b>Digital Transformation</b>	The process by which an organization uses technology to incorporate data into decision-making processes with the intention of driving overall operational improvements, ultimately resulting in higher data maturity
<b>Dynamic Paywall</b>	A mechanism that adjusts the amount of free articles available to a reader prior to requiring a subscription or payment for further access based on a reader's likelihood to subscribe
<b>Engagement Measurement</b>	Analytical capabilities to measure the level of engagement on different channels and platforms
<b>Machine Learning</b>	The process in which a computer distills regularities from training data. An algorithm "learns" to identify patterns, like occurrence of certain elements (e.g. words, images) or combinations of elements, that determine or inform operational decisions
<b>Multivariate Testing</b>	An experiment that compares multiple variables and configurations of variables to reveal information about how individual variables interact with one another in different scenarios
<b>Predictive Modeling</b>	Utilizing data mining and probability to forecast outcomes; ability to create, test, and validate a model to best predict audience-focused outcomes (e.g., articles read, promotions used)
<b>Private Marketplace</b>	An invitation-only auction environment for programmatic advertising that leverages companies' online advertising inventory, typically to a select number of advertisers
<b>Programmatic Advertising</b>	The automated serving of digital ads in real-time based on individual advertising impression opportunities
<b>Propensity Modeling</b>	The statistical practice of predicting the likelihood to purchase a product or service in a predefined time horizon in the future
<b>Reader Engagement</b>	A measurement of how readers interact with a publishing platform, often incorporating the recency, frequency, volume, and session duration for a reader
<b>Recirculation</b>	The percentage of readers who visit another page on a news and media companies' website after reading the first article
<b>Segmentation and Targeting</b>	Dividing a broad market / population into more specific subsets that have common needs and / or behaviors and using these identifiers to serve the most relevant content or message

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