

The Tech Stack Study of news publishers

Tools and techniques used by French publishers
to produce, distribute and monetize news

2023 survey results

Note: This document was originally written in French. It has automatically been translated to American English by DeepL. The original version can be found [here](#).

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I. Introduction

What tools do French press publishers use to produce and distribute their digital content?

The "Tech Stack 2023" survey is based on responses from press publishers, and in particular from professionals using these tools: CTOs, editorial managers, product managers, marketing managers, etc.

Between their "in-house" tools and those supplied by an external service provider, they all manage a rapidly evolving technical panoply, with licenses, developments, plug-ins, customizations and, of course, updates. In fact, the jargon "stack" aptly describes the spontaneous, iterative addition of solutions demanded by the evolution of technology and usage.

Producing content therefore involves a constant choice of resources. This study bears witness to the complexity of the task, given the immense range of possibilities.

In 2023, the Tech Stack will be held for the third time. It was created in 2021 by Marion Wyss, an online media professional specializing in subscriber acquisition strategies.

In 2022, Sciences Po joined in, perpetuating the study with an annual update. Its content is of interest to both the School of Journalism, where students are trained in the use of digital tools, and Executive Education, where continuing education professionals - in the "Digital Media Management" Executive Master's program - learn to think strategically in the right technological environment.

The very principle of the Tech Stack remains unchanged: to consolidate all practices in order to present a complete overview, while guaranteeing each respondent the confidentiality of the solutions with which they are seeking a competitive advantage.

This study would not have been possible without the instinct, eye and confidence of Jean-François Fogel, a professor affiliated with the Sciences Po School of Journalism and Executive Education. An "encyclopedist" of the press and a great transformer of journalistic practices in the digital age, Jean-François died on March 19, 2023. We dedicate this issue to him.

A survey of publishers

The "Tech Stack 2023" study is based on an online questionnaire, accessible to respondents from September 11 to October 27, 2023.

All editors or technical, marketing, and editorial team managers who wished to do so could answer the questions directly on this form (see the complete questionnaire in the Appendix).

The first phase of analysis consisted of removing responses that did not describe Tech Stacks from media sites. We were then able to analyze the responses, to provide a dual approach to each tool cited: their market share among respondents (or coverage rate) and an assessment of their quality.

Each tool is rated by its user on a satisfaction scale from 1 to 10, according to the following grid:

Grade 1: tool used for want of a better solution (for reasons of cost, lead time, availability, technical compatibility, etc.) but replacement by another solution is ardently desired by the respondent.

Grade 10: a reliable tool whose functionality fully meets the needs of the user, who is not considering replacing it.

It goes without saying that, from one medium to another, the scores attributed to the same tool vary according to a number of factors: nature of needs and level of requirement, size of site, overall consistency of solutions, and so on. On the other hand, aggregating the scores of all the tools performing the same function allows us to determine whether, in France, we feel well served by our CMS, data lake or mapping tool.

The questionnaire also included a free comment field to accompany the note. Some of these comments are quoted to enrich the study, while respecting the anonymity of the respondents.

With the year 2023 being marked by the emergence of generative artificial intelligence, the survey also polled respondents on their use of so-called "AI" tools.

At the end of the survey, a single score was requested in response to this question: how would you rate the Tech Stack you use, from 1 to 10, in relation to your strategic objectives?

The participants

As the questionnaire was open-access, participants could answer as a group, with several titles, or as a single medium. Twenty responses were received from groups. They present solutions used on over a hundred sites. In order to better situate these groups without going into an enumeration, only the logos of their sites appearing among the hundred most visited press sites according to the ranking established by the *Alliance pour les chiffres de la presse et des médias (ACPM)* for the month of December 2023 are reproduced in this document. Responses describing only one site (whether or not ranked by ACPM) have expanded this return.

This study is particularly relevant for describing the stacks of French market leaders, since 15 media in the ACPM TOP 25 responded.

Respondent profiles are varied, both in terms of media size and press family. Survey participants include :

- the majority of national daily press titles,
- some audiovisual media brands (radio, TV),
- magazine titles: general, business and entertainment weeklies,
- regional press groups: daily and weekly,
- pure-players (websites without print versions),
- some trade press groups.

If we add up the audiences of each participating title, this study describes the Tech Stack behind 5.3 billion monthly page views. Just imagine!

In accordance with the commitment to confidentiality made to respondents, all responses have been consolidated and processed anonymously. Specifically, we have analyzed the answers given, having previously masked the respondents' identities.

Respondents can only be identified in the logo wall below.

2023 survey respondents



Survey limits

This study does not compare sites, but Tech Stacks. Each respondent described a set of tools they use to produce, distribute and monetize information (their Tech Stack). This set applies to a single site or to several sites, or even dozens of sites, depending on whether it's a one-off project or, on the contrary, an industrialized version. We were able to collect the number of page views served by each Tech Stack (declared by the respondent directly), but not the number of sites, mini-sites and other sub-domains involved. We are therefore unable to specify the number of sites described here.

The equipment rate indicated for each tool corresponds to the presence of the tool, expressed as a percentage, among all the Tech Stacks described. Our calculations are based on the number of users, and therefore reflect the choices of professionals rather than actual market penetration (a tool may only have been mentioned once, but if it equips all the sites of a huge media group, then its market penetration would be gigantic!) In the end, what interests us is the human choice behind the solutions.

For a given tool category, if few media outlets have equipped themselves, the total number of solutions in the category may be less than 100%. Conversely, in cases where many media have chosen to use several tools in the same category, the total equipment rate may be higher than 100%.

The rating out of 10 is the average rating given by users of each tool. When a tool is not widely used, its name is mentioned, without indicating the rating of its user(s).

This survey does not establish a hit parade or a ranking of tools. Rather, it lists references that are usually kept confidential, but which content producers have agreed to reveal. Tools are cited in the order that seems most relevant, sometimes by focusing on their coverage rate, sometimes by noting the ratings given to them by users. Of course, it must be remembered that some respondents chose to leave questions unanswered.

Knowing which solutions are most widely used is relative information. Much more than a simple inventory of the most widely used or best-rated tools, the study offers the possibility of placing the choices made by a given medium in a wider context. Only a group photograph enables each individual to judge whether, in his or her field, he or she is moving forward with the others, or whether he or she is on the sidelines, with options that belong to him or her alone.

A contradictory dynamic is added, which makes it impossible to consider any of the solutions used by a respondent as a fixed block:

- On the one hand, each of the teams (technical, marketing, and editorial) working on a platform has its own activity, which leads it to seek solutions based solely on its own needs;
- On the other hand, tools and techniques, once installed in the digital world, tend, version after version, to expand their functionalities in order to better market their solutions by satisfying the demands of all teams.

This explains why some respondents have joined forces to fill in a single questionnaire, while some sites or groups have submitted several responses, each covering only one of the fields: technical, marketing or editorial.

Technical note

In the (almost) silo-free digital business world, it's impossible to believe that a technique or tool is used exclusively by one team. The study does, however, classify tools into three major areas: Marketing, Editorial and Technical.

Categorizing professional qualifications into these fields is therefore not a definitive or stable breakdown of what are in any case changing names, but the authors of the study have prejudged it as follows:

Marketing: analyst, data scientist, subscription manager, partnership manager, digital advertising manager, UX path manager, etc.

Editorial: journalist, publisher, editor-in-chief, proofreader, editorial secretary, community manager, graphic designer, motion designer, editorial development manager, etc.

Technical: CTO, back and front-end developer, mobile developer, system and infrastructure administrator, project manager, architecture manager, SEO, cloud engineer, etc.

Responsibilities

The "Tech Stack 2023" study was conducted and processed under the responsibility of Marion Wyss, the initiator of its first edition, and Florence Voirin Larosa, Program Manager at Sciences Po Executive Education, accompanied by three industry professionals who each analyzed, cross-referenced and analyzed the results for each field:

Sophie Cassam Chenai, Digital Director of the daily Le Parisien, was in charge of the "Marketing tools" area.

Sacha Morard, then CTO/CIO of Le Monde Group, was in charge of the "Technical tools" chapter.

Laurent Suply, Product & Operations Director at Le Figaro, covered the "Tools for the editorial team" section.

Please note: these three professionals only had access to the anonymized results of the questionnaire, and were unable to link the answers they processed to the identity of the respondents.

II. Needs and tensions

As in previous years, the first finding of this study is the considerable fragmentation of the sector. Competition is intense. Few tools hold firm leadership positions. In addition, many groups or sites create their own "in-house solutions" for reasons of cost, control of their environment, or to have exactly what they need. In short, while there is a certain ebullience, it does not compensate for the existence of areas where resources appear modest, and clearly insufficient (as shown by the rate of tool-by-tool equipment).

A wide variety of tools are available to provide core business functions: e-mailing/CRM, subscription management, CMS, editorial planning, analytics. In these areas, some fifteen different tools are cited by respondents. Conversely, five or fewer tools are named when dealing with certain domains such as Consent Management Platforms, A/B testing, contribution manager, datalake, Text to speech or its inverse: Speech to text.

The most popular tools

In all, eleven tools are cited by more than a third of respondents as being part of their Tech Stack, a sign of their vendors' solid penetration of the French market.

The "nominees" on this list are :

- **Google Ad Manager** (Adserver) - used by **57%** of respondents
- **Didomi** (Consent Management Platform) - **57%**
- **Pool Access** (Paywall) - **49%**
- **Piano Analytics** (Analytics) - **46%**
- **Youtube** (Video player) - **43%**
- **Adobe Premiere Pro** (Video Lives) - **38%**
- **Google Data Studio** (Dataviz) - **37%**
- **Datawrapper** (Editorial infographics) - **35%**
- **Brevo / Sendinblue** (Emailing/CRM) - **35%**
- **Batch** (Push notifications) - **33%**
- **Google Workspace** (Editorial planning) - **33%**

The power of Google and its parent company Alphabet can be seen in the responses, where the Mountain View company's tools appear in 9 categories of the study:

- Google Analytics
- Google Ad Manager
- Google Datastudio
- Google Optimize
- Google Big Query
- Google Workspace
- Google Maps
- Google Cloud
- Youtube

Rough remarks at times make it clear that some respondents deplore this power and, above all, this extensive presence.

Some deserted categories

For the past two years, the authors of the survey have been asking media groups to tell us which facial recognition, image authentication and reverse image search tools they use.

For these three categories of tools, respondents were almost unanimous in stating that they had no need. Quite logically, the rate of non-equipment is overwhelming. The potential for *deepfakes*, which is growing with the release of new versions of Midjourney or Dall-E, doesn't seem to worry them too much: they're not looking. And many of them feel secure in the knowledge that they are supplied with images by well-established agencies. But whether it's a question of tools or, more simply, journalist training, the tide is likely to turn quickly if the first French publisher were to publish a *deepfake* with harmful consequences.

In-house solutions

In almost every field, content producers are moving away from off-the-shelf tools to produce their own technology in-house. Only in four areas, however, does this option rank as the most widely used solution:

- CMS
- Live text tools
- Contribution managers (comments, debates)
- Firewalls

In 2022, in-house solutions topped the podium in 5 categories:

- Marketing: A/B testing and Paywall
- Copywriting: Editorial planning and CMS
- Technical: Firewall

On the other hand, we note the absence of in-house solutions in the following categories:

- Analytics
- Data visualization tools
- Editorial graphics
- Speech to text
- Live video cutting

Tools in trouble

As in previous years, some tool categories show a very low satisfaction rate:

- **Subscription managers** score an average of 5.8/10, the lowest score.
- **Contribution tools** (comments, debates) don't do much better, with an average of 6/10.
- **DMP/CDP**, finally, peak at 6.3/10.

On the other hand, a number of tools that boasted a significant market share in 2022 no longer appear in the 2023 results. While some have simply disappeared, others seem to have lost interest as publishers have opted for competitors.

Missing tools

At the end of the questionnaire, we asked respondents to name the tools they felt were missing from their technical stack. The responses were extremely varied.

Some seem to suffer complete and painful absences:

"We're missing EVERYTHING (editorial CMS, CRM, AT Internet, Ownpage, DMP, DAM...).

"Many tools are missing"

For others, the need is for tools to be interconnected:

"The problem lies rather in the way all these tools can communicate to have complete and exhaustive knowledge and analysis enabling good decisions and activations."

"We need a tool to gather views across all platforms".

Finally, it is often said that tools alone are nothing without the people who use them:

"There are 3 things missing: more user-friendly tools that work, but also serious and available customer support, and above all people in-house to operate all these tools!"

"Rather than looking for a complementary tool, I would optimize the use of existing tools ;-)"

And AI?

After the explosion of ChatGPT in December 2022, we couldn't avoid the question of the use of so-called "AI" tools among press publishers. So we did, with an open-ended question worded precisely as follows: *"How do you use AI tools in your organization? Can you name some AI tools and their associated use cases at editorial, marketing or technical level?"*

Of course, there are those who - for the time being - haven't taken the plunge:

"Not used. Not used. Nothing."

"No use of AI".

Those who don't want to reveal anything:

"No comment" "No answer to give"

"A team is working on this internally, I can't say anything more."

Those who use it for internal purposes only:

"For devs and easy coding"

"We don't use it in workflows, but at the employee level there are uses for ChatGPT as well as benchmarks and new tools."

"To translate HTML code, for example, or to translate technical documentation into a simpler language".

Those in the test phase:

"For POCS, non-public (non-editorial content writing, data analysis, illustration creation...)"

"I could name many. We're in the discovery/choice phase. Too early to shortlist the winners."

"Under consideration"

And finally, those who have already deployed a complete AI stack :

"We have algorithms that can help editors find archive content relevant to what they're writing (to propose recirculation in the article). We're looking at the possibilities with genAI, but we don't have a precise, already-defined project, and above all we're keeping to the red line of not producing content published by these tools without human editorial input.

We also use AI-enabled translation tools (DeepL), but again only as pre-translation tools, with many manual proofreading and rewriting steps later in the publication workflow on our English pages.

On the marketing side, we use machine learning algorithms to identify potential subscribers and churners.

On the tech side, we use generative AI to help developers be more efficient (github copilot) for those who want it. We also use AI to detect anomalies in business statistics that could reveal bugs in our digital products."

"Amazon Bedrock, ChatGPT used in our BO or for weather articles".

"ChatGPT4, proofreading articles to identify spelling and grammar errors."

"Content recommendation on our sites, solution/response recommendation within customer support (Salesforce solution), use of ChatGPT for article translation within editorial departments".

"Newsbridge, Trint and AWS solution for speech to text, Adobe Firefly for ldesign, OpenAI and others to create summaries."

"ChatGPT, Github Copilot, Adobe Firefly, Microsoft Speech Azure..."

"Midjourney for illustration images, ChatGPT for content classification during technical migration".

"For sound and video transcription

"OpenIA, Bard, Midjourney (mainly to test optimizations) and Marfeel Copilot AI to suggest alternative titles and content."

"ChatGPT for subscriber acquisition & retention marketing wordings".

"Dall-E, Adobe Stock (images IA) "

"Canva AI for writing RS posts"

"Via the Contentside solution: automatic content categorization".

"Subtitle generation, data analysis, image retouching..."

"Only chatGPT PRO for marketing copywriting, article translation, brainstorming, code validation or suggestions".

"Bard and ChatGPT to generate page tags

"ChatGPT: only for content qualification in our CMS".

"CMS: tag suggestion / location / folder."

"ChatGPT, Lexica.art, Midjourney... we test a bit of everything. For texts, it allows us to summarize large reports to get an initial idea, for example."

III. Tools and techniques

A. Marketing tools

Analytics

- Average rating: **6.7/10**

Data monitoring and analysis are of central importance to the media. A wide range of tools is used, combining site-centric audience analysis and real-time monitoring, which is essential for editorial departments. The CNIL's questioning of Google Analytics at European level has benefited the other solutions that are developing.

Media companies are looking for analytics tools that are intuitive, easy to use, generate dashboards to track key indicators, scalable and enable in-depth analysis. Adapting to confidentiality concerns and the question of cost play a crucial role in the choice of these solutions.

Solutions

Solution	Equipment rate	Rating
AT Internet / Piano Analytics	46%	7.2/10
Google analytics (free version)	30%	5.8/10
Chartbeat	13%	7.9/10
Matomo	13%	5.6/10
Also listed: Wyszstat, Marfeel, Google Analytics 360, Adobe, Piwik, Taboola, Squarespaces, Parsely, Amplitude, Fathom, Smartprofile	Total: 40% of sales	-

Please note

- 43% of respondents use at least 2 analytics solutions, often complementary.
- If we add up the 2 versions of Google (free and premium), the rate of equipment originating from Google has dropped to 38% vs. 51% in 2022. This drop can be explained by the considerable legal uncertainty linked to the company's nationality and its multiple activities.
- Analytics expectations are growing: funnel analysis, navigation sequence analysis, loyalty analysis, creation of advanced segments...

A few comments

"Combining several tools provides a good complementarity between site-centric and real-time audiences".

"Good management of privacy issues required".

"The downside: we don't own our data".

"UX notions like scrollviews are missing".

Subscription manager

- Average rating: **5.8/10**

With subscription at the heart of many publishers' business models, it's vital that they equip themselves with the right tools. Many players are present in this market, where expectations are high, but satisfaction is not always forthcoming.

Faced with this lack of an effective solution, a number of publishers have developed their own in-house solution, enabling them to control the subscription process internally, but they are only moderately satisfied with it.

Solutions

Solution	Equipment rate	Rating
Ediis (GLI)	24%	5.1/10
 In-house solution	19%	6.1/10
TBS Mahalo	17%	5.5/10
Pool Subscribe	6%	8.3/10
Salesforce	6%	6/10
Also mentioned: Chargebee, Stripe, Zuora, Majorel, Darwin, Compere, Brevio, Maxio, Aboweb, Zoho, MPP, Protec shipo, Magellan	Total: 29	-

Please note

- The sector is subject to strong external competition: 17 suppliers are cited.
- Ratings for these tools are not very good: half of respondents gave their subscription management solution a rating of 5 or less.

A few comments

"Print-first solutions no longer meet the needs of digital subscriptions."

"Our subscription management solutions are unfortunately not very scalable, and require major efforts to integrate with other systems in the stack."

"The in-house solution lacks full in-house control!"

CMP

- Average rating: **7.3/10**

The 2018 Data Protection Act, which now requires users' consent to deposit their cookies on browsers for advertising purposes, has accelerated the adoption of consent management tools among publishers.

Expectations are for a tool that is easy to use, scalable, allowing several versions to be tested to optimize the consent rate, and compatible with current regulations while respecting the site's web performance.

Solutions

Solution	Equipment rate	Rating
Didomi	57%	7.2/10
 in-house solution	11%	6.6/10
Sirdata	6%	8/10
Also mentioned: Onetrust, Sourcepoint, FastCMP, SFBX, Axeptio, Tarte au Citron	Total: 16	-

Please note

- CMP is the top-rated marketing tool.
- Some solutions are free, which is a recognized advantage.

A few comments

"The tools are solid but there are webperf optimizations to deal with".

"Our in-house solution allows us to perform A/B tests".

"Plug & play + easy to update as legislation evolves".

E-mailing / CRM

- Average rating: **6.7/10**

Regular communication with its audience, particularly through newsletters, is an essential pillar for content publishers. It fosters a personalized relationship with readers in an increasingly competitive environment. Newsletters play a central role in engagement strategies, subscriber loyalty and churn reduction. The success of these newsletters depends on the use of high-performance CRM/email tools. Expectations include simple editing for editors, optimal deliverability, advanced audience segmentation, in-depth performance analysis, interoperability with other tools in the stack, and technical support adapted to frequent mailings. A wide range of suppliers offer solutions to meet these needs.

Solutions

Solution	Equipment rate	Rating
Brevo (Sendinblue)	35%	6.4/10
Selligent	22%	6.4/10
Ownpage	22%	6.6/10
Mailchimp / Mandrill	13%	6.8/10
Actito	6%	7/10
Mailjet	6%	6.8/10
Adobe campaign	6%	5.8/10
Also mentioned: Mediego, Sendgrid, Sarbacane, Imagino, Vero, Zoho, Emarsys, NP6, Insider, 🏠 solution	Total: 23	-

Please note

- More than one respondent in three uses several solutions at the same time, as they address different needs: newsletter editing, targeting and routing of editorial emails, marketing emails...
- In terms of expectations, deliverability is key, the tool must manage unsubscribing, an essential point for the RGPD. Perfect mobile compatibility is essential.
- Respondents believe that solutions could be more powerful by making greater use of AI, which is little used today.

A few comments

"The editorial team has really got to grips with the solution, and it saves us an enormous amount of time in administering all our newsletters".

"The tool gives us a high degree of autonomy when it comes to animating marketing campaigns".

"2 tools are one too many".

"Robust but expensive" "Works quite well, but increasingly expensive".

Paywall

- Average rating: **6.9/10**

The choice of a paywall and its configuration with dynamic, scalable versions play a crucial role in the development of an effective subscription strategy. A balanced approach is required, combining robust technical solutions (fast display, non-bypassable paywall, no negative impact on webperf) that guarantee an optimal user experience and promote improved conversion.

Solutions

Solution	Equipment rate	Rating
Pool Access	49%	7.2/10
 In-house solution	27%	7.1/10
Qiota	13%	6.3/10
Restrict content pro (wordpress plugin)	3%	5/10

Please note

- Several publishers have now added a <3dynamic parameter-setting tool to their in-house solutions.
- In-house solutions are rated very highly, and publishers talk about reliable, fast, secure and high-performance paywalls.
- External solutions provide dynamization, personalization and A/B testing.

A few comments

"Total control, overall efficiency and safety. Will ask to become more flexible/agile."

"Technical performance and webperf to work on: CLS..."

"Needs more features. Undergoing evolution to make it more "intelligent"."

"Our tool allows us to set up a number of interesting scenarios that encourage newsletter sign-ups and subscriptions."

PDF reader

- Average rating: **6.7/10**

Consulting digital versions of newspapers remains a widespread practice, often integrated into publishers' subscription offers. In general, the digital version is published before the newspaper hits the newsstands. This proactive approach, announced to readers by push notification and e-mail, provides them with privileged access to information and encourages a regular rendezvous that maintains their commitment. A great deal of progress has been made to improve the comfort of reading a newspaper on screen.

Solutions

Solution	Equipment rate	Rating
Milibris	25%	6.4/10
 In-house solution	14%	8/10
Twipe	10%	6.7/10
Immanens	10%	7.3/10
Also mentioned: My Mozzo, Melody, Calameo, Flipbook, easybook, Paddix, Issuu, Pvla, Pagesuite	Total: 15% of sales	-

Please note

- 20% of publishers do not use a PDF reader solution.
- The proportion of in-house solutions is high, and satisfaction is high: 8/10.
- Protection of the digital newspaper is a strong expectation, especially when it is reserved for subscribers. Some publishers choose to restrict downloading or sharing.
- The integration of advertising within digital newspapers is a new opportunity for which publishers are looking for solutions.

A few comments

"A suitable but not very innovative solution".

"Our subscribers are adamant about being able to download PDFs of the issues. This opens the door to their distribution in the wild, but we don't have much choice..."

"No pdf, it's so 20th century"

Adserver

- Average rating: **6.6/10**

The Adserver plays a central role in the digital advertising ecosystem, enabling the efficient management, delivery and tracking of advertisements. It is often chosen and operated by publishers' advertising agencies. Two players dominate the market.

Solutions

Solution	Equipment rate	Rating
Google Ad Manager	57%	6.6/10
Equativ (Smart adserver)	24%	7/10
 In-house solution	5%	5.7/10
Also mentioned: Freewheel, Yieldlove	Total: 4% of sales	-

Please note

- 20% of publishers use two adservers.
- With the RGPD, the ability to monetize non-consensual inventory has become an expectation.
- The tool is also used to broadcast self-promotions, including on media that don't carry advertising.

A few comments

"An effective tool but lacking in transparency".

"Ads load too slowly"

"The lack of competition in the market doesn't help. A third player would be welcome".

Contribution Manager

- Average rating: **6/10**

Commenting on an article creates a zone of discussion and debate between readers, offering a valuable opportunity for interactivity. With the advent of social networking, this practice has become widespread, offering readers a space to share their opinions and interact with other members of the community. Managing the flow of comments can become a challenge, with reactions of varying quality enriching the debate, but effective moderation is essential to maintain a constructive level of discussion.

Solutions

Solution	Equipment rate	Rating
 In-house solution	19%	5.4/10
Logora	14%	6.2/10
Netino	6%	6.3/10
Also cited: Facebook comments, Vukkle, Contribly, Spip, Coral, Discourse	Total: 11	-

Please note

- 1 out of 2 publishers does not use a contribution moderation solution.
- The quality/price ratio is an important factor in your choice, as the volume of comments can be considerable, and you need to keep these costs under control.
- In-house solutions are still in the majority, but don't score very highly. They are often old solutions that have not evolved and are time-consuming to maintain.
- Many publishers have chosen to restrict comments to subscribers.

A few comments

"Comments are now reserved for subscribers. From a cost center to a loyalty lever "

"No moderation is perfect, and we believe value for money is important".

"No budget, other priority

"There's no time to be wasted with the outpouring of insults from conspiracists and other climate skeptics."

Push notifications

- Average rating: **7.1/10**

Push notifications are an effective way of informing users of a mobile application or site in real time, providing information and encouraging reader engagement. They are audience generators, but it's crucial to control their use so that they remain a value-added service and don't annoy readers.

Solutions

Solution	Equipment rate	Rating
Batch	33%	8.3/10
OneSignal	11%	6.3/10
Wonderpush	8%	5.8/10
 In-house solution	5%	4.7/10
Also mentioned: Airship, Accengage, Selligent, Mymozzo, Adrenaleads, Omerto	Total: 14	-

Please note

- 22% are not equipped with a push notification tool because they don't have a mobile app.
- It's important to find the right mix of push notifications to keep them relevant and interesting without being perceived as intrusive.
- Publishers expect a tool that is easy for editors to use, with good deliverability and a dashboard to measure readership results.
- In addition to push Apps, the tools are becoming multi-channel and offer web pushes.

A few comments

"Very good tool, which can be taken in hand by the editorial staff. The only difficulties may be in implementation on the application and testing."

"Functionally rich, fast pushes but difficulties with tracking".

"No possibility of exchange between different user bases".

Data visualization

- Average rating: **7/10**

Data visualization simplifies the visual presentation of complex data, making it easier to understand, analyze and make decisions. Its usefulness extends to all levels of the enterprise, which is reflected in the high rate of data visualization deployment.

Solutions

Solution	Equipment rate	Rating
Google Datastudio	37%	7/10
AT Internet/Piano Dashboard	29%	6.7/10
Looker	25%	6.8/10
Table	13%	7.3/10
Microsoft Power BI	11%	7/10
Also mentioned: Qlik, Solution maison, Amplitude, Metabase, Infogram, Forestadmin, Woopra, Superset, Jupiter-dash, Streamlit	Total: 29	-

Please note

- Please note: Datastudio became Looker studio during the year and no longer exists under its previous name.
- 1 in 2 publishers has several data visualization tools.
- There are many contributors, and overall scores are good on all tools.
- An important criterion for respondents: successfully connecting all data sources and reading them correctly in the various tools.
- The tool is not enough. Recruiting good data analysts is essential to ensuring impeccable data quality and implementing the most effective dashboards for the business.

A few comments

"Each tool has its usefulness, but the multiplicity of tools and sources is sometimes complicated to manage when it comes to cross-referencing data and aggregating it all."

"The complexity remains the structure and quality of the data."

"Works well, but only with a good data analyst, capable of creating effective data visualizations".

A/B testing

- Average rating: **6.8/10**

Marketing, product and editorial teams are constantly thinking about how to optimize sites for readers. A/B testing tools make it possible to submit different versions of pages to the public in order to identify the one that performs best. The advantage is often that this can be done autonomously, without adding to the workload of technical teams.

Solutions

Solution	Equipment rate	Rating
AB Tasty	14%	7.4/10
Google Optimize	8%	5.5/10
Kameleoon	6%	6/10
 In-house solution	6%	7.3/10
Also mentioned: Optimizely, Brevio, Qiota, Convert, Pool	Total: 10% of sales	-

Please note

- The equipment rate is still moderate: 1 publisher in 2 is equipped.
- Respondents' expectations are: ease of implementation, cost and webperf compliance.
- A/B testing is useful in subscription and paywall campaigns.
- Solutions generally cover A/B testing on site, but not yet on mobile applications.
- Publishers are aware that teams are needed to set up the tool and implement a real testing strategy.
- The Google Optimize tool was shut down in September, which probably explains the exodus to other solutions.

A few comments

"The tool allows you to push the development of new features very far. Quite a few widgets are available natively, and data tracking enables precise analysis.

"No budget, no team".

"Only works on the web, not on apps"

DMP/CDP

- Average rating: **6.3/10**

A DMP (Data Management Platform) and a CDP (Customer Data Platform) are tools used to collect, organize and activate data from audiences or customers. They are generally used to target recipients in advertising campaigns and improve personalization and engagement in the customer experience.

Solutions

Solution	Equipment rate	Rating
Mediarithmics	8%	6.6/10
 in-house solution	8%	6.2/10
Adobe	5%	6.7/10
Weborama	5%	6/10
1 plus X	5%	5.5/10
Also mentioned: Imagino, Zoho, Quintessence, CommanderAct, cXense	Total: 13	-

Please note

- 60% of respondents are not yet equipped with a DMP/CDP. But over 10% of respondents say they have identified this as a project under consideration or in the process of being initiated.
- Marketing teams expect CDP to centralize customer data, personalize the experience and automate marketing campaigns.
- What ad network teams expect from a DMP is third-party data aggregation, audience segmentation, integration with advertising platforms and performance analysis.

A few comments

"Does the job for the ad. Not yet used by publisher."

"Wish for a harmonized PQR solution".

"Satisfied as long as we can use 3rd party cookies".

Datalake

- Average rating: **7/10**

The datalake is the centralized tool for storing massive volumes of data of all types in a centralized storage repository. In the race for data, editor teams can then explore and analyze this goldmine to better understand users and target their expectations.

Solutions

Solution	Equipment rate	Rating
Google Big Query	21%	7.9/10
Amazon S3 / Redshift	14%	7.3/10
Microsoft Azure SQL / Synapse	6%	6.5/10
In-house solution 	6%	7.5/10
Also mentioned: Snowflake, Postgre SQL, Imagino	Total: 9% of sales	-

Please note

- The equipment rate is low: only half of respondents are equipped with a Datalake.
- Publishers who use a datalake are quite satisfied, as the scores are quite high.

A few comments

"What's a datalake?"

"Not mature enough in data" "Still very small DB" "We are at the beginning, no hindsight".

"Efficient. Easy connection with Looker and Data studio."

"Reasonably priced, easy to use"

B. Editorial team tools

Editorial planning

- Average rating: **7/10**

Whether it's a question of orchestrating publication throughout the day to better reach target readers or tame algorithms, or thinking in terms of 360° variations of the same subject, or sharing information across the widest possible editorial teams, planning needs are growing all the time.

Solutions

Solution	Equipment rate	Rating
Google Workspace tools (Sheets, Calendar, Docs)	33.3%	6.6/10
 In-house solution	23.3%	7.6/10
Trello	13.3%	7/10
Also mentioned: Notion, Excel, Desknet, Monday, Swing	Total: 15.1% of sales	-

Please note

- 15% of respondents are not equipped, but some are in the process of choosing.
- The protean tools of office automation (Google Sheets, Excel) or project management (Notion, Trello, Monday) seem to adapt more easily to each editorial project, to the detriment of a direct connection with the production flow.
- In-house solutions are gaining in maturity (7.6/10 vs. 6.9/10 for the previous edition).

A few comments

"Editorial planning is included in our in-house CMS, and is designed with the editorial team to best meet their needs.

"The tool is not linked to our database".

"The editorial team seems to be getting away with its non-tooling on the subject. Information is fairly open and transparent. We all know what's coming out during the day and the week.

CMS

- Average rating: **6.9/10**

Media groups have increasingly high expectations of CMS (Content Management System), the indispensable heart of the editorial reactor. They expect it to be able to react quickly to their new challenges, and to adapt fully to their own context. They are also counting on their CMS to transform internal practices and, in some cases, organizations.

Technologically speaking, setups with a strong interweaving of back-end (CMS) and front-end web applications are on the decline, echoing the challenges of multi-use content.

Solutions

Solution	Equipment rate	Rating
 In-house solution	25%	7.4/10
Wordpress	20%	6.6/10
Drupal	8.3%	6/10
Also listed: Arc Publishing, Trias, Cue, Eidos, Sirius, Strapi, Melody	Total: 46.7% of sales	-

Please note

- The generation of open-source CMS (Drupal, Joomla, EZPublish) is hemorrhaging (26.3% of equipment in the previous study for Drupal, for example). And several media still using this type of solution are in the process of exiting the market.
- As a general rule, media companies undergoing change are moving towards in-house solutions. They are therefore ready to make technological investments in this area to gain in agility. Those who have already taken this step say they are satisfied with their choice.

A few comments

"Versatile, configurable, and designed with and for editorial staff".

"Does the job, but doesn't allow you to get productivity reports, to push the editorial team to write differently, to mutualize print and web".

Live text tool

- Average rating: **7.5/10**

Live text tools are still a luxury, since beyond the technological investment, they require a very high level of editorial commitment for highly competitive events.

Solutions

Solution	Equipment rate	Rating
 In-house solution	20%	8.7/10
Arena	5%	6/10
LiveBlog	5%	5.7/10
Also mentioned: Sirius, ScribbleLive, CUE Live	Total: 11.7% of sales	-

Please note

- Beyond the ability to publish quickly and well, respondents are more demanding when it comes to technical qualities (SEO, integration into native apps).
- The disappearance of ScribbleLive from this market has led even more media outlets to create or consider in-house solutions.

A few comments

"In-house development integrated into our CMS. 10 times easier for editorial staff."

"No live yet. When we do, we update an article by adding the times."

Publishing on social media

- Average rating: **7/10**

At a time when social traffic to media sites is contracting sharply, posting tools are essentially used as a commodity to animate accounts at lower cost, especially at weekends.

Solutions

Solution	Equipment rate	Rating
Echobox	21.7%	6.7/10
Nonli	16.7%	8/10
Hootsuite	8.3%	7/10
Also mentioned: TweetDeck, AgoraPulse, 🏠 in-house solution (5%)	Total: 31.6%	-

Please note

- The in-house approach to social posting tools is not breaking through. Media companies prefer to leave it to others to absorb the sometimes chaotic evolution of social platform APIs and support for new channels (WhatsApp channel, Threads, BlueSky).
- The category includes one of the few examples of French Tech aimed at media and brands, namely Nonli.

A few comments

"A good tool, but some social networks are less and less compatible with this kind of tool. We need to ask ourselves about the future of these tools and see if there are other solutions available to us for managing our publications."

Producing maps

- Average rating: **6.7/10**

The production of maps remains highly restricted by production costs, and the difficulty of market tools to produce satisfactory multi-device experiences. Unlike video and podcasts, cartography has no SEO boost or business model of its own, and remains a niche format.

Solutions

Solution	Equipment rate	Rating
 In-house solution	18.3%	7.1/10
Google Maps API	11.7%	6.1/10
Datawrapper	3.3%	6/10
Also listed: Wemap, Imap builder, OpenStreetMap	Total: 12	-

Please note

- In-house solutions are emerging, but are often based on third-party backgrounds. They are generally dedicated to specialized teams rather than multi-skilled editors.
- Media wishing to internalize technological capacity may have difficulty finding subject-matter experts

A few comments

"No budget"

"Not enough in-house resources to produce more cards and equip ourselves with a dedicated tool".

"Lack of skills to deal with the subject in-house".

Editorial graphics

- Average rating: **7.3/10**

In contrast to maps, computer graphics production tools enjoy a fairly high level of overall satisfaction, with tools judged to be simple and functional. The category is also marked by frequent multi-equipment.

Solutions

Solution	Equipment rate	Rating
Datawrapper	35%	7,3/10
Flourish	31.6%	7.9/10
Illustrator	20%	6.4/10
Also listed: Infogram, Genial.ly, Highchart	Total: 11.2%	-

Please note

- As with lives and maps, points of frustration were expressed regarding referencing, integration into native applications and the ability to customize the design.

A few comments

"The graphic designers/layout artists manage from a print-first perspective, and eventually adapt for the site in post-prod."

"Easy and well adopted"

"Integration for the reader is not fluid, especially on the app, and the DA does not mirror that of the site and app."

Live video cutting

- Average rating: **7.4/10**

The ability to quickly cut video from a live feed (either from TV channels or from the publisher's own content) is important for publishers with a vocation for live news and images. Of these publishers (60%), most rely on Adobe Premiere Pro, described as the "market standard" and already equipping their dedicated teams for standard editing.

Solutions

Solution	Equipment rate	Rating
Adobe Premiere Pro	38.3%	7.5/10
Wildmoka	3.4%	9.5/10
Yuzzit	3.4%	7.5/10
Also mentioned: PlayPlay, Sportall, iMovie, Wevideo	Total: 15.2%	-

Please note

- The proportion of respondents unaware of their video equipment is higher than for other questions. Is this a sign of widespread autonomy or even distance from video services?

A few comments

"We use the entire Adobe image and video suite, which seems to satisfy all the teams involved.

"Market-standard tool not challenged by our videographer".

Moderating comments

- Average rating: **6.7/10**

Comments and their moderation divide: most respondents seem to see them as a necessary or imposed evil, with moderation delegated to a specialized service provider with its own tools. A minority indicate that they devote editorial resources to this task, using in-house tools.

Solutions

Solution	Equipment rate	Rating
Netino	23.3%	6.8/10
 In-house solution	8.3%	6/10
Bodyguard	3.3%	8/10
Also mentioned: Discourse, Viafoura, AgoraPulse, CoralTalk, Spip	Total: 8.3%	-

Please note

- In Netino's case, it's more the quality of the service than the performance of the tools that is judged.

A few comments

"Real human moderation that manages and discusses with the community. An in-house BO to help them manage alerts".

"Allowed trolls to be excluded at low cost".

"We've cut off reader comments"

Speech to text

- Average rating: **6.9/10**

Automatic transcription of an audio stream into text is an emerging category, with few established players and a fairly low equipment rate. But many respondents indicate that they are in the research phase in this field.

Solutions

Solution	Equipment rate	Rating
Trint	11.7%	7.4/10
Sonix	3.3%	7/10
Also mentioned: Newsbridge, Amazon, Dalet, Wildmoka, Odia, Google Pinpoint	8.3%	-

A few comments

"Random use of certain market tools"

"Works well but is expensive"

Text to speech

- Average rating: **6.5/10**

The provision of an audio version created automatically from the text of articles remains a minority use (70% of non-equipped users), but is developing, with many publishers in the study phase here too. However, average scores are relatively low in this sector.

Solutions

Solution	Equipment rate	Rating
ETX	10%	7/10
Microsoft Azure Speech	6.7%	6/10
 In-house solution	3.3%	6.5/10
Also mentioned: Audio. Saooti, AWS Polly, Vox, Podle, Veed.io	Total: 11.2%	-

Please note

- Editors point to the performance gap between certain solutions, which are efficient in English but far from so for French rendering.
- Some respondents are still very attached to a reading by voice actors, and see it as a distinguishing factor.

A few comments

"No convincing solution, and how to monetize it? But it's possible that we'll be legally forced to implement one..."

"Actors and actresses who read our articles, unrivaled quality today with an AI, but that doesn't cover all our production".

"AI works well, but few readers actually use it".

C. Tech team tools

Video player

- Average rating: **7.4/10**

Video hosting is crucial for media companies because of its specific storage and delivery requirements. Unlike other types of content, videos require significant storage space and a dedicated video player for delivery. Popular solutions include YouTube, Dailymotion and Vimeo, among others. These platforms offer not only storage space for videos, but also embeddable players, making them easy to distribute across a variety of websites.

Solutions

Solution	Equipment rate	Rating
Youtube	42.5%	7.5/10
Dailymotion	22.5%	7.2/10
Digiteka	12.5%	6.9/10
Vimeo	7.5%	7.8/10
Also mentioned: Brightcove, Viously, JW Player, 🏠 in-house solution	Total: 11.2%	-

Please note

- 3.75% of respondents say they do not use video hosting technology.
- For all respondents, the choice of an external provider for video hosting means using the provider's player.
- 23% of respondents use several video hosting solutions.
- Two points seem to stand out when choosing a video hosting partner: the monetization criteria for videos, and the free nature of the solution.
- A publisher changes technology depending on whether the video is free or not.

A few comments

"Ease of use and integration, no storage costs"

"Pitfall: Recommendations at the end of videos that drive the reader away from our site "

"Still concerned about their use and privacy policy"

Audio player

- Average rating: **6.7/10**

With the rise in popularity of podcasts, the choice of an audio player has become important for the media. Audio players enable the efficient distribution of podcasts, with considerations for audio quality, data access and monetization. Solutions such as Ausha, Acast, Spotify and Audiomeans are frequently used. Users choose these solutions according to their specific needs in terms of ease of use, storage costs, and features offered.

Solutions

Solution	Equipment rate	Rating
Ausha	20.6%	6.2/10
Acast	17.6%	6.9/10
Spotify	10.3%	5.8/10
Saooti	8.8%	7.1/10
Audiomeans	7.3%	6.2/10
Also mentioned: Soundcloud, Edisound, Bababam, JW Player, ETX, Podcastics, 🏠 in-house solution	Total: 19.1%	-

Please note

- In contrast to last year, several respondents justified their ratings on the basis of monetization criteria.
- Audio quality and data access are often cited as reasons for low scores.
- 16.2% of respondents say they don't need an audio player, and 5.8% say they use a player despite their low podcast production or limited audience.

A few comments

"The changeover is very recent, so we haven't had any constructive feedback yet, but on the face of it their platform met all our tech/advertising expectations."

"Problems with background playback, choppy sound and, above all, a lack of metadata for the publisher (duration, speakers), the player being a kind of black box embedded on the site or app."

"Solutions for paid audio content still in their infancy."

CDN

- Average rating: **8.1/10**

A CDN is essential to ensure that media content can be accessed quickly and efficiently from anywhere in the world. CDNs improve website performance by distributing content across geographically dispersed servers, thereby reducing loading times for users. Security, cost and technical performance are key criteria when choosing a CDN.

Solutions

Solution	Equipment rate	Rating
Cloudflare	23.1%	8.3/10
Akamai	12.3%	8.1/10
Amazon Cloudfront	12.3%	8.1/10
Fastly	7.7%	8.4/10
Also mentioned: Google Cloud CDN, FileRobot, Azure CDN, Wordpress VIP 🏠 In-house solution	Total: 12.3%	-

Please note

- 32.3% of respondents said they were not equipped with a CDN, either because these solutions seem too expensive, or because they don't need them.
- 7.7% of respondents say they use several CDNs, obviously for different purposes.
- Safety is a key criterion in respondents' ratings .

A few comments

"Very flexible, very reliable, protection for effective attacks, and very affordable. Discounted rate for non-profit organizations like our media."

"Ultra high-performance and very easy to customize. Also allows for edge computing in addition to CDN functions, which really allows tech teams to do what they want with it (Routing, token decryption, etc)."

Firewall

- Average rating: **8/10**

The firewall is a crucial tool for securing websites against malicious traffic and cyber attacks. Decisions about firewalls vary between in-house and external solutions, with considerations such as cost and management complexity. Options such as Cloudflare and Botscorner are mentioned, in addition to customized solutions. Media companies have to balance their decisions between the need for protection and budgetary constraints.

Solutions

Solution	Equipment rate	Rating
 In-house solution	18.6%	8.3/10
Cloudflare	8.5%	8.6/10
Botscorner	6.8%	7/10
Also mentioned: Google Cloud Armor, Signal Sciences, AWS WAF, Checkpoint, Datadome, Akamai, Cisco ASA, Fortigate, AWS Firewall	Total: 20.3%	-

Please note

- Almost half of all respondents say they are not equipped with a firewall.
- Several respondents point to the high cost of security solutions, implying that these solutions have a business model that is not compatible with that of the media.
- Some make a distinction between tools to protect against cyber-attacks (Signal Sciences, AWS WAF...), and tools to protect against crawlers (Datadome, Botscorner).

A few comments

"A brick grafted onto the CDN. Practical and efficient."

"No time to deal with it and very costly solutions"

"No budget"

Hosting

- Average rating: **7.7/10**

Hosting is a fundamental element of any digital medium, providing the necessary foundation for storing and distributing content online. With the advent of the cloud, players such as AWS, OVH, and Google Cloud dominate the market. Hosting selection criteria include reliability, speed, scalability, as well as cost and digital sovereignty considerations.

Solutions

Solution	Equipment rate	Rating
AWS	27.8%	7.9/10
OVH	22.2%	7.1/10
Google Cloud	12.5%	8.9/10
 In-house solution	9.7%	6.7/10
Microsoft Azure	5.6%	9.2/10
Also mentioned: SDV, Infomanial, Alterway, Vultr, Orange, Hexanet, Wordpress VIP, Les infogéreurs, Gandi, Digital Ocean, Platform.sh, Kinsta	Total: 22.2%	-

Please note

- 12.5% of respondents use several hosting solutions.
- Most publishers with French solutions claim that they can guarantee sovereignty.
- On the other hand, those who have opted for a U.S.-based solution point to its robustness and rapid implementation.

A few comments

"Scalability, resilience, security, cost control, easy to set up a poc, support, architecture and cost review with the hosting provider".

"We use all cloud providers, to let us choose the best technology for each tech project."

"The hybrid approach between on-premise and cloud is complicated. Full cloud is expensive"

"Cloud lagging behind GAFA clouds in terms of features but also very uncertain service, less stable than GAFA clouds... But on principle, we're with an independent French cloud".

General summary: what's the Tech Stack worth in France?

Satisfaction still very low

As was the case last year, respondents do not consider their Tech Stack as a whole to be a successful solution. They were asked to rate it on a scale of 1 to 10. The average score given was 6.4/10, while the average score given to the tools by the same respondents was 6.9/10. In the end, it seems that everyone has learned to appreciate what they have mastered, while at the same time judging that their overall solution is not as complete as they would like it to be, and as the technology would allow. Please note: last year's satisfaction average was exactly the same.

The study reveals the predominance of certain "in-house" solutions, and the widespread use of a dozen or so tools that are unavoidable in the French landscape. It highlights Google's strong presence, covering all areas: marketing, editorial and technical.

Some tools are struggling: publishers express mixed opinions on the satisfaction provided by subscription managers and contribution tools (comments, debates), which receive relatively low satisfaction ratings, suggesting a great need for improvement in the market.

The study also looks at the use of artificial intelligence (AI) tools in the industry, with a particular focus on tools like ChatGPT and applications everywhere: in editorial as well as marketing and technical teams. This section reflects the emergence of AI as a crucial, if not yet widespread, element in media technology strategy.

Rating trends

This table summarizes the scores of the main tools in each category over the last two editions of this study.

	Tech Stack 2022		Tech Stack 2023	
	Equipment rate	Average rating	Equipment rate	Average rating
Marketing team tools				
Analytics	Average category rating in 2022 7.1/10		Average category rating in 2023 6.7/10	
AT Internet / Piano analytics	53%	7.4/10	46%	7.2/10
Google analytics (free version)	42%	7/10	30%	5.8/10
Chartbeat	21%	7.6/10	13%	7.9/10
Matomo	11%	5.7/10	13%	5.6/10
Manager subscriptions	Average category rating in 2022 5.6/10		Average category rating in 2023 5.8/10	
Ediis (GLI)	22.8%	4.4/10	24%	5.1/10
in-house solution	16%	5.8/10	19%	6.1/10
TBS Mahalo	15.8%	5.7/10	17%	5.5/10
Pool Subscribe	Not yet launched		6%	8.3/10
Salesforce	5.3%	6.5/10	6%	6/10
CMP	Average category rating in 2022 7.3/10		Average category rating in 2023 7.3/10	
Didomi	47.4%	7.8/10	57%	7.2/10
in-house solution	12.3%	7.1/10	11%	6.6/10
Sirdata	7%	7.7/10	6%	8/10

Emailing /CRM	Average rating for the category in 2022 6.7/10		Average category rating in 2023 6.7/10	
Brevo (Sendinblue)	28%	7/10	35%	6.4/10
Selligent	23%	6.2/10	22%	6.4/10
Ownpage	19%	7/10	22%	6.6/10
Mailchimp / Mandrill	12%	7/10	13%	6.8/10
Actito	Does not appear in 2022		6%	7/10
Mailjet	Does not appear in 2022		6%	6.8/10
Adobe campaign	Does not appear in 2022		6%	5.8/10
Mediego	7%	7.8/10	Does not appear in 2023	
Cheetah (Marigold)	7%	5.8/10	Does not appear in 2023	
Paywall	Average category rating in 2022 7.1/10		Average category rating in 2023 6.9/10	
Pool Access	35.1%	7.3/10	49%	7.2/10
in-house solution	24.6%	7.8/10	27%	7.1/10
Qiota	12.3%	5.8/10	13%	6.3/10
Restrict content pro (wordpress plugin)	Does not appear in 2022		3%	5/10
PDF reader	Average rating for the category in 2022 6.5/10		Average category rating in 2023 6.7/10	
Milibris	28.1%	6.7/10	25%	6.4/10
In-house solution	10.5%	6.3/10	14%	8/10
Twipe	10.5%	6.3/10	10%	6.7/10
Immanens	7%	6.5/10	10%	7.3/10
Adservers	Average category rating in 2022 6.6/10		Average category rating in 2023 6.6/10	

Google Ad Manager	61%	6.5/10	57%	6.6/10
Equativ (Smart adserver)	21%	6.6/10	24%	7/10
 in-house solution	4%	7.5/10	5%	5.7/10
Manager contributions	Average rating for the category in 2022 7.5/10		Average category rating in 2023 6/10	
In-house solution 	14%	5.5/10	19%	5.4/10
Logora	14.1%	7.7/10	14%	6.2/10
Netino	29.8%	7/10	6%	6.3/10
Discourse	3.5%	7.5/10	Does not appear in 2023	
Atchik	3.5%	5.5/10	Does not appear in 2023	
Push notifications	Average rating for the category in 2022 7.7/10		Average category rating in 2023 7.1/10	
Batch	35.1%	8.3/10	33%	8.3/10
OneSignal	7%	7/10	11%	6.3/10
Wonderpush	5.3%	5.7/10	8%	5.8/10
 in-house solution	Does not appear in 2022		5%	4.7/10
Airship	12.3%	7.2/10	Does not appear in 2023	
Dataviz	Average category rating in 2022 7/10		Average category rating in 2023 7/10	
Google Datastudio	47.4%	6.8/10	37%*	7/10
AT Internet Piano Dashboard	28%	6.3/10	29%	6.7/10
Looker	Does not appear in 2022		25%* *Google Datastudio became Looker during the year	6.8/10
Table	14%	7.3/10	13%	7.3/10
Microsoft Power BI	10.5%	7.3/10	11%	7/10

A/B testing	Average category rating in 2022 5.9/10		Average category rating in 2023 6.8/10	
AB Tasty	11%	6.8/10	14%	7.4/10
Google Optimize	9%	6/10	8%	5.5/10
Kameleoon	11%	4.8/10	6%	6/10
🏠 in-house solution	5%	7/10	6%	7.3/10
DMP/CDP	Average category rating in 2022 7.1/10		Average category rating in 2023 6.3/10	
Mediarithmics	8.8%	7.2/10	8%	6.6/10
🏠 in-house solution	5.3%	6.5/10	8%	6.2/10
Adobe Audience Manager	5.3%	7.3/10	5%	6.7/10
Weborama	Does not appear in 2022		5%	6/10
1 plus X	5.3%	7/10	5%	5.5/10
Permutive	5.3%	7.3/10	Does not appear in 2023	
Datalake	Average rating for the category in 2022 7.5/10		Average category rating in 2023 7/10	
Google Big Query	19.3%	7.4/10	21%	7.9/10
Amazon S3 / Redshift	7%	8/10	14%	7.3/10
Microsoft Azure SQL / Synapse	5.3%	7/10	6%	6.5/10
In-house solution 🏠	10.5%	7.6/10	6%	7.5/10
Editorial team tools				
Editorial planning	Average rating for the category in 2022 6.8/10		Average category rating in 2023 7/10	
Google Workspace tools	29.8%	6.9/10	33.3%	6.6/10

 In-house solution	33.3%	6.9/10	23.3%	7.6/10
Trello	12.3%	7.2/10	13.3%	7/10
CMS	Average category rating in 2022 7/10		Average category rating in 2023 6.9/10	
 In-house solution	29.8%	7.3/10	25%	7.4/10
Wordpress	19.3%	8.1/10	20%	6.6/10
Drupal	26.3%	5.6/10	8.3%	6/10
Eidos Media	8.8%	7.2/10	Does not appear in 2023	
Live text tools	Category not studied in 2022		Average category rating in 2023 7.5/10	
 In-house solution			20%	8.7/10
Arena			5%	6/10
LiveBlog			5%	5.7/10
RS publication	Average rating for the category in 2022 6.9/10		Average category rating in 2023 7/10	
Echobox	22.8%	6.7/10	21.7%	6.7/10
Nonli	12.3%	8/10	16.7%	8/10
Hootsuite	14%	6.2/10	8.3%	7/10
Tweetdeck	14%	7.1/10	Does not appear in 2023	
Card production	Average category rating in 2022 7.4/10		Average category rating in 2023 6.7/10	
 In-house solution	Does not appear in 2022		18.3%	7.1/10
Google Maps API	8.8%	8/10	11.7%	6.1/10
Datawrapper	Does not appear in 2022		3.3%	6/10
Flourish	5.3%	6.3/10	Does not appear in 2023	
Wemap	5.3%	7.7/10	Does not appear in 2023	
Leaflet	3.5%	7.5/10	Does not appear in 2023	

Editorial graphics	Average rating for the category in 2022 6.8/10		Average category rating in 2023 7.3/10	
Datawrapper	19.3%	7.1/10	35%	7.3/10
Flourish	17.5%	7.5/10	31.6%	7.9/10
Illustrator	14%	6.5/10	20%	6.4/10
Infogram	12.3%	6.2/10	Does not appear in 2023	
Live video cutting	Average rating for the category in 2022 7.5/10		Average category rating in 2023 7.4/10	
Adobe Premiere Pro	38.6%	7.5/10	38.3%	7.5/10
Wildmoka	5.3%	7/10	3.4%	9.5/10
Yuzzit	Does not appear in 2022		3.4%	7.5/10
 In-house solution	3.5%	6.5/10	Does not appear in 2023	
Moderation	Category not studied in 2022		Average category rating in 2023 6.7/10	
Netino			23.3%	6.8/10
 In-house solution			8.3%	6/10
Bodyguard			3.3%	8/10
Speech to text	Average category rating in 2022 7.3/10		Average category rating in 2023 6.9/10	
Trint	7%	7.3/10	11.7%	7.4/10
Sonix	Does not appear in 2022		3.3%	7/10
Text to speech	Average category rating in 2022 7.3/10		Average category rating in 2023 6.5/10	
ETX	5.3%	6.7/10	10%	7/10
Audion	3.5%	8.5/10	Does not appear in 2023	
Microsoft Azure Speech	Does not appear in 2022		6.7%	6/10
 In-house solution	Does not appear in 2022		3.3%	6.5/10
Tech team tools				

Video player	Average category rating in 2022 7.1/10		Average category rating in 2023 7.4/10	
Youtube	31.6%	7.1/10	42.5%	7.5/10
Dailymotion	17.5%	6.4/10	22.5%	7.2/10
Digiteka	14%	6.9/10	12.5%	6.9/10
Vimeo	7%	7.5/10	7.5%	7.8/10
Audio player	Average category rating in 2022 7.1/10		Average category rating in 2023 6.7/10	
Ausha	14%	6.9/10	20.6%	6.2/10
Acast	12.3%	7.3/10	17.6%	6.9/10
Spotify	Does not appear in 2022		10.3%	5.8/10
Saooti	7%	7.5/10	8.8%	7.1/10
Audiomeans	Does not appear in 2022		7.3%	6.2/10
CDN	Average rating for the category in 2022 7.7/10		Average category rating in 2023 8.1/10	
Cloudflare	10.5%	8/10	23.1%	8.3/10
Akamai	12.3%	7.8/10	12.3%	8.1/10
Amazon Cloudfront	8.8%	8/10	12.3%	8.1/10
Fastly	Does not appear in 2022		7.7%	8.4/10
Firewall	Average rating for the category in 2022 7.2/10		Average category rating in 2023 8/10	
 In-house solution	16%	6.8/10	18.6%	8.3/10
Cloudflare	3.5%	-	8.5%	8.6/10
Botscorner	3.5%	6.5/10	6.8%	7/10
Hosting	Average rating for the category in 2022 7.2/10		Average category rating in 2023 7.7/10	
AWS	15.8%	7.4/10	27.8%	7.9/10
OVH	15.8%	8/10	22.2%	7.1/10
Google Cloud	8.8%	6.5/10	12.5%	8.9/10

 In-house solution	5.3%	8/10	9.7%	6.7/10
Microsoft Azure	Does not appear in 2022		5.6%	9.2/10

Lexicon

For ease of reference, this glossary expands on the acronyms and indicates, wherever possible, the term most commonly used.

(The tools, options and languages mentioned in the study are listed here in a single alphabetical order).

A/B testing: Tool for comparing two versions of a page or part of a web page to determine which performs better according to common criteria.

Image authentication: A tool designed to establish that images have not been altered after they have been taken.

Adservers: Software responsible for displaying ads on a site and counting their performance. By extension, all the software involved in the ad programming, bidding, selection and delivery chain.

Analytics: Tool for collecting and analyzing browsing and interaction data on a website or mobile application.

CDN (content delivery network): A set of geographically distributed servers to guarantee efficient content distribution.

CMP (consent management platform): Technology designed to obtain users' consent to the processing of their personal data, in compliance with legislation and with the Transparency and Consent Framework of the IAB (Interactive Advertising Bureau).

CMS (content management system): Software used to create, modify and publish content on a website.

Datalake: A method of centrally storing voluminous data from numerous sources, in raw or minimally processed format.

Live video trimming: Tool for trimming videos from a continuous video stream from a live broadcast or from a hosting platform.

DMP/CDP (Data Management Platform / Customer Data Platform): a platform for centralizing the collection, organization and activation of primary, secondary and tertiary audience data, whatever the source.

E-mailing / CRM (customer relationship management): A tool for managing interactions between a medium, its audience and prospects via various channels, particularly e-mail.

Firewall: Software or hardware ensuring network security against external attacks.

Subscription manager: Platform for managing subscription formulas, maintaining subscriber accounts, regulating access and controlling the revenues generated.

Hosting: Storage device for content and data associated with the running of a site.

Video hosting: Storage device for video content and associated data. The use of this tool is often coupled with the use of a video player.

Editorial graphics: Tool for graphically presenting data within a site's content.

PDF reader: Tool for flipping through a PDF document (in this case, a newspaper or magazine).

Contribution manager: Tool for posting comments, holding online debates or polls.

Paywall: A tool that restricts access to certain content on a site in exchange for a fee: paid subscription, account creation, newsletter subscription, etc.

Editorial planning: A tool for forecasting the work and publications of a digital editorial team that continuously feeds a site and its applications.

Audio player: Tool for listening to sound files on digital media.

Map production: Map production tool associated with a cartographic database.

Posting/social networks: Tool for managing postings and advertisements on social networks, with tracking of audience engagement data.

Push notifications: Device for sending short messages to users who have subscribed to the service, notably when the application is not opened or the website not consulted. There are two main models: push web (via a browser) and push mobile (via native iOS and Android applications).

Reverse image search: A search engine that uses an image as a query and provides information in response: URL displaying this image, relative contents, modified versions of the image, etc.

Speech to text (transcription): Tool for written transcription of spoken language.

Text to speech: Device for oral reading of digital text.

Data/strategy visualization (dataviz): A tool that translates the implementation of a digital strategy into visual presentations.

Thanks

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- FNPS

See you next year

Thank you to all those who shared their knowledge and experience by completing the questionnaire. And thank you to all those who read the data. The "Tech Stack" looks forward to seeing you all again in 2024.

Appendix: the questionnaire

We reproduce below the full questionnaire submitted to the participants.

Introduction: your publisher profile

- How many FTEs does your marketing team have?
- How many FTEs are on your editorial team?
- What is the number of FTEs in your technical team?
- How many page views per month does the Tech Stack you're about to describe generate?
- Is your Tech Stack manager represented in :
 - Board of Directors
 - Inter-service steering committee
 - No particular representation

Part 1: Marketing tools

1/13 - As an analytics tool, you use *(multiple answers possible)*

- Adobe Analytics
- AT Internet / Piano Analytics
- Chartbeat
- Google Analytics - Free version
- Google Analytics 360
- Marfeel
- Matomo
- Parsely
- Wysistat
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? - SCORE OUT OF 10 -

Explain why

2/13 - On the subscription manager side, you work with *(several answers possible)*

- Chargebee
- GLI/Ediis
- Majorel
- MPP

- Pool Subscribe
- Salesforce
- Stripe billing
- TBS - Mahalo
- Zuora
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

3/13 - Which CMP do you use (multiple answers possible)?

- Axeptio
- Didomi
- Evidon
- OneTrust
- Quantcast
- Sourcepoint
- Trust Arc
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

4/13 - Which e-mailing/CRM tool(s) do you use (multiple answers possible)?

- Actito
- Adobe Campaigns
- Cheetah
- IBM
- Mailchimp / Mandrill
- Mediego
- Ownpage
- Sendinblue
- Selligent
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

5/13 - To manage access to your content, which paywall solution do you use?

- Piano Composer
- Pool Access
- Qiota
- Smartwall
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

6/13 - To distribute your PDF, you've chosen the e-reader solution (several answers possible)

- Immanens
- Milibris
- New press
- Paddix
- Twipe
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

7/13 - Which adservers display ads on your websites and mobile applications?

- Google Ad Manager
- Smart Adserver
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

8/13 - What tools do you use to collect, manage and moderate contributions? (several answers possible)

- Coral
- Disqus
- Facebook Comments

- Gigya
- Logora
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

9/13 - For your push notifications you work with (several answers possible)

- Accengage
- Airship
- Batch
- OneSignal
- Selligent
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

10/13 - Which data visualization tools do you use to manage your strategy?

- AT Internet/Piano Dashboards
- Cliq
- Google Datastudio
- Looker
- Power BI
- Table
- Toucan Toco
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

11/13 - Which A/B testing tool(s) do you use? (several answers possible)

- AB Tasty
- Google Optimize
- Kameleoon
- Optimizely
- 🏠 In-house solution
- ❌ I'm not equipped

- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

12/13 - Which DMP/CDP have you installed?

- 1 + X
- Adobe
- cXense
- Imagino
- Lytics
- Mediarithmics
- Oracle / Bluekai
- Permutive
- Weborama
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

13/13 - Which datalake do you use to store your data?

- Amazon S3 / Redshift
- Google Big Query
- Microsoft Azure SQL/Synapse
- Snowflake
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

Part 2: Tools for the editorial team

1/13 - Which editorial planning tool do you use? (multiple answers possible)

- Google Calendar
- Google Drive
- Monday
- Trello
- 🏠 In-house solution

- I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

2/13 - Which CMS do you use to manage your content?

- Arc Publishing
- BrightSpot
- Drupal
- Eidos
- Ez Publish
- Melody (Demain un autre jour)
- Paddix
- Sirius
- Swyp
- Trias
- Wordpress
-  In-house solution
- I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

3/13 - Which internal messaging tools do your content producers use?

- Scribble live
- Live Center
- Live Blog
- Arena
-  In-house solution
- I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

4/13 - Which social networking tool do you use? (multiple answers possible)

- Agorapulse
- Echobox
- Hootsuite
- Nonli
- Sproutsocial
- Tweetdeck
-  In-house solution

- I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

5/13 - Which map production tool do you use?

- Imap builder
- BatchGeo
- Google earth pro
- Google maps API
- Qjis
- Vism
- Zeemaps
- 🏠 In-house solution
- I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

6/13 - Which infographic tool do you use? (multiple answers possible)

- Chartblocks
- Datawrapper
- Flourish
- FusionCharts
- GoogleCharts
- Illustrator
- Infogram
- 🏠 In-house solution
- I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

7/13 - Which image authentication tool do you use?

- TinEye
- Yandex
- 🏠 In-house solution
- I'm not equipped
- Other

*Would you say you are satisfied with your solution? NOTE OUT OF 10 -
Explain why*

8/13 - Which reverse image search tool do you use?

- Google Reverse Image search
- TinEye reverse image
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

*Would you say you are satisfied with your solution? NOTE OUT OF 10 -
Explain why*

9/13 - Which live video cutting tool do you use?

- Adobe Premiere pro
- Twitter Media Studio
- Wildmoka
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

*Would you say you are satisfied with your solution? NOTE OUT OF 10 -
Explain why*

10/13 - Which moderation tool/manager do you use?

- Agorapulse
- Bodyguard
- Disqus
- Hive moderation
- Netino
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

*Would you say you are satisfied with your solution? NOTE OUT OF 10 -
Explain why*

11/13 - Which facial recognition tool do you use?

- EgelEye
- Pimeyes
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

12/13 - Which speech-to-text transcription tool do you use (several answers possible)?

- Ava
- Dragon
- Google Gboard
- Oter
- Sonix
- Speechboard
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

13/13 - What text-to-speech tool do you use? (several answers possible)

- Audion
- AWS Polly
- ETX Daily Up
- Google Cloud text to-speech
- iApps
- Microsoft Azure speech
- MURF
- Natural Reader
- Shade
- Odialab
- Remixd
- SpeechKit
- Voxygen
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

Part 3: Technical options

1/6 - To host your videos, you work with... (several answers possible)

- Dailymotion

- Digiteka
- JW Player
- Youtube
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

2/6 - For your audio content, you use the player from... *(several answers possible)*

- Acast
- Art19
- Ausha
- Audiomeans
- Edisound
- Saooti
- Soundcloud
- Spotify
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

3/6 - To broadcast your videos, you have chosen the player of... *(several answers possible)*

- Dailymotion
- Digiteka
- JW Player
- Youtube
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

4/6 - Which CDN do you use? *(several answers possible)*

- Akamai
- Amazon CloudFront
- AzureCDN

- CacheFly
- Cloudflare
- Fastly
- Google CloudCDN
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

5/6 - Which firewall solution have you chosen?

- Botscorner
- Datadome
- Perimeterix
- Signal Science
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

6/6 - Which hosting solution have you chosen?

- AWS
- Google Cloud
- Microsoft Azure
- OVH
- 🏠 In-house solution
- ❌ I'm not equipped
- Other

Would you say you are satisfied with your solution? NOTE OUT OF 10 - Explain why

Penultimate question: how do you use AI tools in your organization? Can you name some AI tools and their associated use cases at the editorial, marketing, or technical level?

Finally, would you say you're missing a particular tool, whether for editorial, marketing, or tech?

Finally, how would you describe the fit between your editorial, technological & marketing stack and your strategy? - SCORE OUT OF 10 -