ICFJ SURVEY

The State of Technology in Global Newsrooms
INTRODUCTION

ABOUT THE STUDY

The *State of Technology in Global Newsrooms* was conducted by the International Center for Journalists (ICFJ). ICFJ is at the forefront of the news revolution, offering programs that empower journalists and engage citizens with new technologies and best practices. ICFJ’s networks of reporters and media entrepreneurs are transforming the field. We believe that better journalism leads to better lives. Since 1984, ICFJ has worked with more than 100,000 journalists and media managers from 180 countries.

ICFJ worked with Georgetown University’s Communication, Culture, and Technology (CCT) program to administer and analyze the study, which was conducted using SurveyMonkey. CCT is an interdisciplinary graduate program focusing on challenges posed by new communication technologies in a range of fields, including journalism, government, politics, arts, media, business, health, and medicine. Diana Owen, Associate Professor at CCT, authored the report.

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ARE JOURNALISTS READY FOR THE DIGITAL REVOLUTION?

The State of Technology in Global Newsrooms is the first-ever survey on the adoption of digital technologies in news media worldwide. The International Center for Journalists, working with Georgetown University, conducted the study in 12 languages, and received more than 2,700 responses from journalists and newsroom managers in 130 countries.

As we face a global media landscape rife with uncertainty and excitement, a comprehensive understanding of this new era and what it means for journalists has never been more urgent.

Our survey sought to answer a critical question: Are journalists keeping pace with the digital revolution? Despite great strides in leveraging new technologies, we conclude that the answer is no.
WE DISCOVERED THE FOLLOWING KEY TRENDS:

**NEWSROOMS STILL FACE A DEEP TECHNOLOGY GAP.**

Technologists remain sparse in newsrooms. Just 5% of newsroom staff have technology-related degrees, and 2% of newsrooms employ technologists. Only 1% employ analytics editors.

Managers are more skilled in digital media than their employees. Sixty-four percent of newsroom leaders were hired with a background in digital media, compared with 45% of journalists.

Most newsrooms are not redefining roles for the digital era. Eighty-two percent of newsroom jobs remain in established roles (reporters, editors, editorial writers). About 18% are new digital roles (social media editor, digital content producer, analytics editor).

Journalists use a limited range of digital skills. Of the 23 digital skills we surveyed, most newsrooms primarily use four: posting/commenting on social media (72%), taking digital photos (61%), engaging audiences on social media (58%), and distributing content across multiple platforms (56%).

**DIGITAL JOURNALISM HAS MADE SOME SUBSTANTIAL GAINS.**

Digital-only and hybrid newsrooms are outpacing traditional ones in seven of the eight regions surveyed.

The leader in digital is Eurasia/former USSR, with the highest percentage of digital-only newsrooms (55%) compared to anywhere else in the world.

The laggard in digital is South Asia, the only region where legacy media remain dominant. Nearly half of all outlets (43%) are traditional newsrooms.
IN AN ERA WHEN FAKE NEWS AND HACKING HAVE PROLIFERATED, TOO FEW JOURNALISTS ARE TAKING THE PROPER PRECAUTIONS.

Only 11% of journalists use social media verification tools, though most (71%) use social media to find new story ideas.

More than half of journalists (54%) and newsrooms (52%) fail to secure their communications.

WHILE MOST NEWSROOMS FIND IT CHALLENGING TO GAIN TRUST WITH THEIR AUDIENCES, THERE ARE TWO MAJOR EXCEPTIONS.

A mere 21% in Eurasia/former USSR identify building trust as a major concern.

Surprisingly, just 29% of North American newsrooms say trust is a pressing issue, bucking the global trend.

NEW REVENUE MODELS ARE EMERGING, BUT NOT FAST ENOUGH.

The most important revenue generator, after advertising (70%), is sponsored content (44%).

Digital-only organizations are twice as likely to generate revenue from alternative sources (philanthropic contributions and individual donations) as traditional or hybrid newsrooms.

Newsrooms in developing countries report greater urgency to create new revenue streams. About 70% of newsrooms in sub-Saharan Africa, Latin America, and Middle East/North Africa identify this as a major challenge compared with 44% of North American ones.
NEWSROOMS HAVE YET TO FULLY EMBRACE ANALYTICS DATA TO MAKE DECISIONS.

Less than half of newsrooms (45%) consult analytics daily.

Newsrooms primarily use analytics data to drive traffic to their websites.

Pageviews is the metric that gets the most attention from newsrooms (73%). Much less attention is given to engagement metrics: social shares (46%), conversion rate (18%), and scroll depth (16%).

JOURNALISM IS A YOUNG PERSON’S PROFESSION.

The largest number of employees in digital newsrooms range in age from 25 to 29 and between 30 and 35 for hybrid and traditional newsrooms.

THE DIGITAL TRAINING JOURNALISTS WANT IS NOT WHAT THEIR NEWSROOMS THINK THEY NEED.

Journalists (52%) want data journalism training, but only 40% of newsrooms offer it.

46% of newsrooms provide training in social media research and verification, while only 22% of journalists identify it as helpful.

Only 9% of journalists identified collaboration across newsroom departments as a priority, but 28% of newsrooms offer training in it.

ICFJ’s vast reach took us into newsrooms across eight regions – Eurasia/former USSR, Europe, Latin America, Middle East/North Africa, North America, sub-Saharan Africa, South Asia, and East/Southeast Asia.

We found, surprisingly, that newsrooms are more alike than different. With some exceptions, all eight regions are adapting to the digital age in similar ways. They share common processes, tools, skills and training.

This report is rich in insights about key aspects of technology in newsrooms, and the people taking journalism into the future. We urge you to explore it, and we welcome your feedback.
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I. NEWSROOMS IN THE DIGITAL AGE

QUESTIONS WE ADDRESS IN THIS SECTION:

What types of newsrooms currently dominate? What are they using to distribute their content?

Newsrooms worldwide are undergoing a historic transition, thanks to rapid advancements in digital technology. Technology has also spawned a host of new media outlets and, with them, more competition for audiences (van der Haak, Parks, and Castells, 2012).

To reach those audiences, many media outlets are expanding their digital distribution. In this study, ICFJ identified three newsroom types based on their primary distribution platforms:

- **Traditional news organizations** disseminate information primarily in the legacy formats of newspaper, television, print magazines, and radio. Though these organizations may have a website or some digital presence, their primary platform is a traditional format.
- **Digital-only news organizations** exclusively publish in an online format.
- **Hybrid news organizations** use a combination of traditional and digital formats. Many hybrid organizations have transitioned from being traditional news outlets.

KEY FINDINGS

Digital-only and hybrid newsrooms are outpacing traditional media in most of the world.

Eurasia/former USSR is the global leader in digital-only news outlets, while print media still reign in South Asia.

Most newsrooms rely heavily on social media sites to push out their content. Facebook and Twitter dominate everywhere – with YouTube a strong third.
DIGITAL-ONLY AND HYBRID NEWSROOMS ARE OUTPACING TRADITIONAL MEDIA IN MOST OF THE WORLD.

News organizations that disseminate content primarily in traditional print, television, and radio formats are disappearing from the global media landscape. Overall, the majority of journalists surveyed work for news organizations that are either fully digital (33%) or a hybrid of traditional and online (40%). About one-quarter are employed by traditional news organizations.

News Organizations’ Age and Size

Digital-only newsrooms, not surprisingly, are the newest organizations. Perhaps more unexpectedly, organizations that transitioned into hybrid newsrooms are older than those that have remained traditional. It is not the oldest of legacy newsrooms that are the most resistant to change, but those that are a bit younger.

Median Age by Newsroom Type:
- Hybrid newsrooms: 16 – 20 years
- Traditional newsrooms: 11 – 15 years
- Digital newsrooms: 6 – 10 years

As indicated in Figure 1 (page 11), hybrid newsrooms have spent more time than their traditional and digital-only counterparts building a branded presence on the web and on social media. Digital-only newsrooms are newer to brand building on social media most likely simply because they are newer organizations.
EURASIA/FORMER USSR IS THE GLOBAL LEADER IN DIGITAL NEWS OUTLETS, WHILE PRINT MEDIA STILL REIGN IN SOUTH ASIA.

Newsrooms in South Asia defy an otherwise global trend of newsrooms transitioning to digital. As demonstrated in Figure 2, most newsrooms in the region identify as traditional (43%), compared to digital-only (22%). On the opposite end of the spectrum Eurasia/former USSR leads in digital-only newsrooms (55%).
**Additional Platforms**

With an abundance of new tools and resources, newsrooms no longer need to rely on a single platform to disseminate their work.

ICFJ surveyed journalists and newsroom managers on the primary means they use to disseminate content. As indicated in Figure 3, websites lead in this category – accounting for at least 40% of primary news formats. Print newspapers are a distant second, followed by television, radio, and print magazines.

**Additional Platforms by Region**

Figure 4 shows the primary distribution platforms media outlets use by region. Again, Eurasia/former USSR is the leader in digital, and South Asia is the laggard. More than half of newsrooms in Eurasia/former USSR (56%) use websites as a primary distribution vehicle, compared to only 24% in South Asia.

Conversely, South Asia leads globally in print newspaper dissemination (35%), followed by sub-Saharan Africa (29%). Figure 4 also reveals that other traditional formats, such as radio and television, remain significant in some regions. For example, 19% of newsrooms in sub-Saharan Africa rely on radio as a primary news format, and 26% of newsrooms in East/Southeast Asia rely on television.

1. The "other" category consists largely of organizations that do not use a single primary platform. Many of these are hybrid organizations that disseminate news with equal frequency through a website and a print newspaper, magazine, or newsletter.
FACEBOOK AND TWITTER DOMINATE EVERYWHERE – WITH YOUTUBE A STRONG THIRD.

Today, newsrooms have access to a host of new platforms and formats, from social media to mobile apps to virtual reality, which they use to distribute their stories and reach wider audiences. Though the range of tools has expanded, the news industry relies heavily on the two social media giants – Facebook and Twitter (Figure 5).

Facebook is used by over three-quarters of journalists. Twitter closely follows, with over 65% of journalists and newsroom managers saying they use the platform to distribute stories.

YouTube is the third most popular tool for content distribution, ahead of other social media platforms and mobile app/web alerts. Nearly 50% of newsrooms and 40% of journalists identified YouTube as a key tool for disseminating content.
Social Media by Newsroom Type

Though digital-only and hybrid newsrooms are more likely to use Facebook, traditional organizations (which use digital but not as a primary distribution format) are not very far behind. Three-quarters of traditional newsrooms reported using the social media site to push out content, compared to 93% of digital-only and 91% of hybrid.

The gaps between newsroom types are wider with Twitter and YouTube (Figure 6). A little more than half of traditional newsrooms use Twitter, compared to 85% digital-only and 81% hybrid. With YouTube, the difference is doubled – fewer than one-third of traditional newsrooms use the site compared to 65% digital-only and 59% hybrid.
**Additional Formats by Region**

Facebook prevails as an additional platform among newsrooms worldwide, with few variances across regions (Figure 7).

North America leads in the use of all three platforms, significantly outpacing other regions in the use of Twitter, with 97% of newsrooms using it, followed by Latin America (86%). Twitter is less popular in Eurasia/former USSR, with 54% of newsrooms using it to further push out their content.

North America (69%) is again followed by Latin America (66%) in the use of YouTube as an additional news format. The video-sharing site is least popular in sub-Saharan Africa (43%).
II. NEWSROOM ROLES: NEW AND OLD

For more than a decade, traditional newsrooms have been downsizing their staffs. Meanwhile, digital news media have created new employment opportunities. A study by the Pew Research Center found that digital-only news outlets in the United States are compensating for the decline in new reporting, writing, editorial, and editing positions in the traditional sector (Jurkowitz, 2014). Other evidence indicates that digital-only opportunities may have peaked and are now declining (Williams, 2016).

Providing a constant stream of news and information to distribute to audiences is essential for media organizations in an era of nonstop news cycles. The expanding skill set required to perform newsroom jobs is redefining and expanding the role of journalists. Technology has made journalism a more difficult profession (Picard, 2015). Journalists are required not only to research and write stories, but to promote their own content and engage audiences.

ICFJ identified two types of roles that newsrooms rely on to meet this growing demand:

- **Established roles** that have long been the backbone of the news industry, such as reporter or correspondent, news writer, editorial writer, and news editor.
- **New roles** created to keep pace with the digital era, such as digital content producer, social media editor, and analytics editor.

**KEY FINDINGS**

Journalism is a young person’s profession in all newsrooms – not just digital-only ones.

Digital-only newsrooms are small, but they are much more likely to grow their staffs than others.

Technologists remain sparse in newsrooms, even digital-only ones. Meanwhile, established roles continue to dominate.
JOURNALISM IS A YOUNG PERSON’S PROFESSION IN ALL NEWSROOMS – NOT JUST DIGITAL-ONLY ONES.

The age of newsroom personnel skews young, with a median 30-35 years old globally. Though it is generally believed that digital-only newsrooms hire younger staff, our study shows little difference. As indicated in Figure 8, the largest number of employees in digital-only newsrooms range in age from 25 to 29. For hybrid and traditional newsrooms, the largest number is between 30 and 35.

In fact, digital-only newsrooms are also more likely to have older personnel – in the 51-55 age group – than both their traditional and hybrid counterparts. Traditional newsrooms also have a higher percentage of staff in the 25-29 age group than hybrid ones, following digital-only newsrooms in this category.²

Figure 8

Average Age of Employees by Newsroom Type

² Please see methodology section for information on the average age of survey respondents.
DIGITAL NEWSROOMS ARE SMALL – BUT THEY ARE MUCH MORE LIKELY TO GROW THEIR STAFFS THAN OTHERS.

Organization Size by Newsroom Type

Hybrid organizations are the most likely to cut their newsroom staffs, with 41% reporting that their staff size has decreased in the past year. Traditional newsrooms are a close second, at 38%. Digital-only newsrooms are at the opposite end of the spectrum, with only 17% reporting that their staff size has decreased, compared to the 50% that reported adding more staff members.

The discrepancy in staff fluctuation between digital-only newsrooms and others is likely due to their small size and young age. Digital-only newsrooms are relative newcomers to the news industry and, on average, have smaller staffs than other organizations. Conversely, hybrid newsrooms have larger staffs with more full-time employees (median range of 51-100) compared to traditional (median range of 26-50) and digital-only (median range of 11-25).

It may be that as digital organizations move from startups to established brands, they increase the size of their staffs. Digital organizations are more likely than traditional or hybrid newsrooms to create new positions, such as analytics editor, to remain competitive and meet the new demands of digital journalism.
Organization Size by Region

South Asia (47%) is second only to North America (48%) in the percentage of newsrooms that have increased their staff size over the past year. Meanwhile, about one-third of South Asian newsrooms report a reduced staff size, and only 19% report no change over the same period.

As noted above, South Asia is also an outlier in a global transition toward digital-only and hybrid news models, with print continuing to dominate. Until now, at least, the prevalence of traditional formats has not hampered newsroom growth in the South Asian media market.

Newsrooms in the Middle East/North Africa have also experienced significant fluctuation in size over the past year, with only 15% remaining stable. Slightly more (45%) report increasing their staff size than those who report decreasing it (40%).

![Newsroom Staff Size Over the Past Year by Region](image)
TECHNOLOGISTS REMAIN SPARSE IN NEWSROOMS, EVEN DIGITAL-ONLY ONES.

Newsrooms worldwide have been slow to embrace new roles that keep pace with the digital era. Professionals such as digital content producer, social media editor, and analytics editor account for 18% of newsroom positions. Meanwhile, established roles continue to dominate, representing 82% of positions in newsrooms worldwide.

Figure 11 presents the percentage of people in established and new roles by newsroom type. The position of reporter or correspondent is the most prominent across all types of newsrooms. However, there is a significantly higher percentage of reporters in traditional (42%) than in hybrid (35%) or digital-only (28%) newsrooms.

Hybrid and digital-only newsrooms are more likely than traditional newsrooms to have digital content producers/editors and tech professionals on staff, though the number of these positions remains small compared to established roles.
Digital content producers/editors are present in:
- 8% of digital newsrooms
- 7% of hybrid newsrooms
- 3% of traditional newsrooms

Tech professionals are present in:
- 7% of digital newsrooms
- 3% of hybrid newsrooms
- <1% of traditional newsrooms

Overall:
- Tech professionals are present in only 2% of all newsrooms, and concentrated in digital newsrooms.
- Analytics editors are present in only 1% of all newsrooms, and concentrated in digital newsrooms.
- Digital-only outlets (28%) have a lower proportion of reporters than do hybrid.

In keeping with previous studies, the results show that the vast majority of newsroom personnel today have a traditional educational background:
- 75% have a college degree.
- More than half have a degree in journalism or communications.
- Only 5% have a degree in a technology-related field.

Newsroom professionals who hold new roles are somewhat less likely to have a traditional educational background:
- Only 9% of technology professionals working in newsrooms have a degree in journalism or communications.
- 29% of analytics editors have a degree in journalism or communications.
III. DIGITAL SKILLS IN THE NEWSROOM

QUESTIONS WE ADDRESS IN THIS SECTION:

What digital experience and skills do journalists bring into their organizations? And what digital skills are regularly used?

While the classic traits of good journalism, such as research, writing, and reporting skills, are still highly valued in the newsroom, previous studies indicate that journalists today are expected to bring a versatile set of skills to their newsroom (Saltzis, 2009). News organizations view employees’ digital skills as essential to their ability to keep up with the ever-changing media environment (Fineman, 2014).

The results of our survey, however, point to a different reality on the ground.

KEY FINDINGS

More than half of journalists worldwide had no experience in digital media when hired.

More newsroom leaders have digital media experience than the journalists they oversee.

Most journalists regularly use a narrow range of digital skills. Less than one-third of newsrooms are using advanced digital skills.
MORE THAN HALF OF JOURNALISTS WORLDWIDE HAD NO EXPERIENCE IN DIGITAL MEDIA WHEN HIRED.

Forty-six percent of journalists were hired with no background in digital media. Among those hired with digital experience, most had basic skills, such as publishing across platforms, compared to advanced skills, such as creating data visualizations.

Digital Skills by Region

The digital experience and skills that journalists bring to their newsrooms at the time of their hiring differs by region, as demonstrated in Figure 13.

The graph shows that newsrooms across Asia – particularly East, Southeast, and South Asia – are hiring fewer journalists with digital skills than in any other region. Notably, news organizations in these regions are hiring a significantly smaller number of journalists with mobile and audio/video production skills compared to other regions.

Prevalence of basic digital skills among newsroom hires:
- Publishing and distributing stories across platforms (42%)
- Using mobile technology for investigating and reporting stories (35%)
- Audio/video production skills (33%)

Prevalence of advanced digital skills among newsroom hires:
- Using content management systems (20%)
- Understanding and using analytics data (20%)
- Creating data visualizations (17%)
**Digital Skills by Newsroom Type**

Overall, digital-only and hybrid newsrooms are more likely than their traditional counterparts to hire journalists with any digital experience. Not surprisingly, journalists working for digital-only (47%) and hybrid (43%) organizations have more experience publishing across platforms than those in traditional newsrooms (37%).

However, as Figure 14 indicates, journalists across all newsroom types are more likely to have experience with basic digital skills, such as publishing across platforms and using mobile technology, than advanced skills, such as using analytics.

![Figure 14: Journalists' Technical Skills at Hiring by Newsroom Type](image)

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**MORE NEWSROOM LEADERS HAVE DIGITAL MEDIA EXPERIENCE THAN THE JOURNALISTS THEY OVERSEE.**

**Digital Skills by Newsroom Role**

As illustrated in Figure 15, digital skills and experience are important attributes for those seeking top newsroom positions. Newsroom leaders were more likely to possess core digital skills at the time of their hiring compared to the journalists on their staffs.

Most newsrooms leaders (59%) brought experience with publishing across platforms at the time of their hiring, but less than half of reporters, news writers, editorial writers, and news editors had this background. Newsroom leaders are also more likely to have skills in using mobile technology and audio/video production than most journalists.

Sixty-four percent of newsroom managers say they were hired with experience in digital media, but only half or fewer of journalists say they had that background.
New Roles

While more newsroom leaders are coming into their jobs with a background in core digital skills, a relative few have advanced digital experience. The same holds true for journalists in established positions. As illustrated in Figure 15, advanced digital expertise such as analytics and using content management systems are concentrated among staff in new roles.

Newsroom staff in new roles are more likely to possess advanced skills when hired than their established peers and, in some cases, than the top leadership – especially in using data analytics. Social media editors outpace their established peers in both the basic and advanced digital skills they bring to their organizations at the time of their hiring.

Still, less than half of the media professionals in new roles bring more advanced digital skills when hired.

Figure 15
MOST JOURNALISTS REGULARLY USE A NARROW RANGE OF DIGITAL SKILLS. LESS THAN ONE-THIRD OF NEWSROOMS USE ADVANCED DIGITAL SKILLS.

While journalists routinely use digital skills to produce news stories, the range of these skills is limited. Figure 16 demonstrates the types of digital skills that newsroom leaders/managers and personnel in established and new roles use regularly.

Overall more staff in new roles (69%) regularly use skills related to digital news production than those in established roles (63%), though not by a lot. However, newsroom managers are more likely to use these skills regularly than staff in both new and established roles.

There are only a few skills that are used more regularly by staff in new roles than by newsroom leaders. They include using data journalism, audience analytics, and digital tools to verify information.
ICFJ categorized all digital skills in the study into three tiers, based on the frequency of their use (Table 1). Of the 23 skills surveyed in the study, only five are used to produce stories in half or more of newsrooms. The most advanced skills, such as data journalism, live video, and cybersecurity were used by less than one-third of newsrooms.

### Table 1: Digital Media Skills Used Regularly in the Newsroom

<table>
<thead>
<tr>
<th>Tier</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>FIRST-TIER SKILLS</strong></td>
<td><em>used by at least half of newsrooms worldwide</em></td>
</tr>
<tr>
<td></td>
<td>• Posting stories and comments on social media (72%)</td>
</tr>
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<td></td>
<td>• Digital photography (61%)</td>
</tr>
<tr>
<td></td>
<td>• Engaging audiences on social media (58%)</td>
</tr>
<tr>
<td></td>
<td>• Producing and distributing stories across multiple platforms (56%)</td>
</tr>
<tr>
<td></td>
<td>• Using analytics and web statistics to measure audience engagement (50%)</td>
</tr>
<tr>
<td><strong>SECOND-TIER SKILLS</strong></td>
<td><em>used by at least one-third of newsrooms worldwide</em></td>
</tr>
<tr>
<td></td>
<td>• Multimedia reporting and editing (49%)</td>
</tr>
<tr>
<td></td>
<td>• Video production and editing (47%)</td>
</tr>
<tr>
<td></td>
<td>• Website design, development, and management (47%)</td>
</tr>
<tr>
<td></td>
<td>• Using digital tools to validate and verify information (47%)</td>
</tr>
<tr>
<td></td>
<td>• Working with graphics (44%)</td>
</tr>
<tr>
<td></td>
<td>• Audio production and editing (42%)</td>
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<td></td>
<td>• CMS management and coding (35%)</td>
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<td></td>
<td>• Mobile and backpack reporting (34%)</td>
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<tr>
<td></td>
<td>• Data visualization/production of infographics (33%)</td>
</tr>
<tr>
<td><strong>THIRD-TIER SKILLS</strong></td>
<td><em>used by less than one-third of newsrooms worldwide</em></td>
</tr>
<tr>
<td></td>
<td>• Data journalism (32%)</td>
</tr>
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<td></td>
<td>• Working with live video (32%)</td>
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<td></td>
<td>• Using analytics and web statistics to drive the news agenda (31%)</td>
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<tr>
<td></td>
<td>• Cybersecurity (29%)</td>
</tr>
<tr>
<td></td>
<td>• Blogging (26%)</td>
</tr>
<tr>
<td></td>
<td>• Building or adapting digital tools/apps for newsroom use (26%)</td>
</tr>
<tr>
<td></td>
<td>• Podcast production (21%)</td>
</tr>
<tr>
<td></td>
<td>• Working with VR/360 (21%)</td>
</tr>
</tbody>
</table>
First-tier Skills by Region

Social Media

While newsrooms everywhere distribute content on social media, South Asia leads in this category with 86% of news organizations using social media to post stories and engage audiences. The percentage of newsrooms using social media to post stories remains high in the Middle East and North Africa, at 68%. However, only 41% of newsrooms in the region regularly use social media to engage audiences. A similar trend is evident in Eurasia and former USSR, with 66% of newsrooms posting stories and only 42% engaging audiences on social media.

Posting Stories Across Multiple Platforms

Sixty percent or more of newsrooms in seven of the eight regions routinely distribute their stories on multiple platforms. The Middle East/ North Africa region is a major outlier, with only 29% of newsrooms regularly using multiple platforms.

Figure 17

First-Tier Digital Skills by Region

- Posting on social media
- Engaging audiences on social media
- Digital photography
- Multi-platform production
- Audience analytics
IV. NEWSROOM TRAINING

QUESTIONS WE ADDRESS IN THIS SECTION:

- Are journalists receiving on-the-job training? What type of skills training do newsrooms offer? What type of training do journalists find most beneficial?

Journalists today must adapt to a continuously evolving digital environment. The realm of expertise necessary even for journalists in traditional roles has expanded. As our study shows, many journalists are hired into their positions without experience working in digital media or significant digital skills.

On-the-job technical training is essential in the modern newsroom. At the same time, both newsrooms and journalists find it difficult to keep pace with the constantly changing training requirements of the digital era (Fine-man, 2014).

KEY FINDINGS

Journalists and managers agree that on-the-job training is important, but they differ on the type of training they believe is necessary.

Hybrid newsrooms are more likely than others to offer training to their employees.
JOURNALISTS AND NEWSROOM MANAGERS AGREE THAT ON-THE-JOB TRAINING IS IMPORTANT, BUT THEY Differ ON THE TYPE OF TRAINING THEY BELIEVE IS NECESSARY.

There is a near-universal agreement among news professionals that training is important to help them meet the demands of their job, with only 1% saying otherwise.

Journalists worldwide receive digital training to meet the demands of their job, but some more than others:

- North American journalists (50%) are the most likely to receive on-the-job training, followed by the Middle East/North Africa (46%) and Europe (45%).
- South Asian journalists (27%) are the least likely to receive on-the-job training.

Figure 18

![Journalists Who Received Technical Training by Region](image-url)
Where Availability Meets Demand

More newsrooms (61%) offer training on digital news production than any other skill. Nearly half of journalists agree it is a useful skill to build. There is also a strong correlation between high demand and availability in training on photojournalism, multimedia reporting and editing, and using digital tools to validate and verify information.

Some training areas, particularly those that focus on more advanced newsroom tools and skills, are not popular among either managers or their staffs. Few organizations invest in training on practices such as using analytics, search engine optimization, and building or adapting digital tools for newsroom use. Likewise, most journalists do not find instruction in these areas to be useful.

Where Demand Outpaces Availability

Journalists want more training than they are getting from newsrooms in some specialized reporting skills. For example, data journalism is the most sought-after training, with over half of journalists wanting it. However, it is offered by only 40% of newsrooms. This is also true for web coding and development, and cybersecurity, all of which require advanced skills instruction.

Where Availability Outpaces Demand

On the other hand, fewer journalists find training on softer skills to be important, though more newsrooms offer it. For example, only 9% of journalists rank training on collaboration across departments as a priority, while 28% of newsrooms offer that kind of instruction. Training in posting stories and comments on social media is offered in 39% of newsrooms, but only 22% of journalists say it is helpful.
# TABLE 2: JOURNALISTS’ DEMAND FOR TRAINING AND NEWSROOM AVAILABILITY

<table>
<thead>
<tr>
<th>HIGH JOURNALIST DEMAND, HIGH NEWSROOM AVAILABILITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Digital news production</td>
<td></td>
</tr>
<tr>
<td>• Photojournalism</td>
<td></td>
</tr>
<tr>
<td>• Multimedia reporting and editing</td>
<td></td>
</tr>
<tr>
<td>• Using digital tools to validate and verify information</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JOURNALIST DEMAND GREATER THAN NEWSROOM AVAILABILITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Data journalism</td>
<td></td>
</tr>
<tr>
<td>• Cybersecurity</td>
<td></td>
</tr>
<tr>
<td>• Web coding, design, and development</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JOURNALIST DEMAND LOWER THAN NEWSROOM AVAILABILITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Social media research and verification</td>
<td></td>
</tr>
<tr>
<td>• Posting stories and comments on social media</td>
<td></td>
</tr>
<tr>
<td>• Producing and distributing stories across multiple platforms</td>
<td></td>
</tr>
<tr>
<td>• Real-time reporting, such as live-tweeting and blogging</td>
<td></td>
</tr>
<tr>
<td>• Mobile and backpack reporting</td>
<td></td>
</tr>
<tr>
<td>• Collaborating across newsroom departments</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOW JOURNALIST DEMAND, LOW NEWSROOM AVAILABILITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Building or adapting digital tools and apps for newsroom use</td>
<td></td>
</tr>
<tr>
<td>• Search engine optimization</td>
<td></td>
</tr>
<tr>
<td>• Crowdsourcing</td>
<td></td>
</tr>
<tr>
<td>• Graphics</td>
<td></td>
</tr>
<tr>
<td>• Podcast production</td>
<td></td>
</tr>
<tr>
<td>• Blogging</td>
<td></td>
</tr>
<tr>
<td>• Understanding and using newsroom analytics</td>
<td></td>
</tr>
</tbody>
</table>
HYBRID NEWSROOMS ARE MORE LIKELY THAN OTHERS TO OFFER TRAINING TO THEIR EMPLOYEES.

As Figure 19 shows, hybrid newsrooms are more inclined to train their staffs on digital skills than their traditional and digital-only counterparts. Digital-only newsrooms offer more training than hybrid ones in just a few areas including using analytics; web coding, design, and development; and using digital tools to verify information.

Hybrid newsrooms (41%) are much more likely to offer training on collaboration across departments than their digital-only (18%) or traditional (18%) counterparts. This could be because the structure of hybrid newsrooms calls for journalists to collaborate more frequently across legacy and digital platforms.

Figure 19

Technology Training Offered by Newsroom Type

- Podcast
- Web coding, design, development
- Building digital tools/apps
- Blogging
- Using analytics
- Collaboration across newsroom
- Mobile and backpack reporting
- Using digital tools for verification
- Posting stories on social media
- Social media research
- Multi-platform production
- Multimedia reporting
- Photojournalism

[Bar chart showing training distribution by newsroom type]
V. NEWSROOM TECHNOLOGY TEAMS

QUESTIONS WE ADDRESS IN THIS SECTION:

How prevalent are dedicated technology teams in global newsrooms? What functions do tech teams perform?

News organizations are establishing technology teams to meet the increased demands of creating and disseminating digital media products (Royal, 2016). These teams not only oversee the digital aspects of developing and distributing content, they also must consider the commercial viability, efficiency, functionality, and value of news from a business perspective (Sonderman, 2016).

KEY FINDING

Two-thirds of newsrooms worldwide have a dedicated social media and audience engagement team.
**Tech Team Functions**

The prevalence of social media and engagement teams clearly indicates the growing importance that news outlets place on reaching audiences on the platforms where they spend the most time. Even traditional newsrooms are catching up to this trend, with 61% reporting they have social media teams – though fewer than digital-only (72%) and hybrid (77%) organizations.

Multimedia (46%) and analytics (32%) teams are also prevalent in newsrooms. Overall, digital-only and hybrid newsrooms are more likely to have these teams, with traditional newsrooms trailing. Much less widespread are teams dedicated to product/app development and UX design.

**Figure 20**

Technology Team Functions by Newsroom Type
Collaboration With Newsroom Tech Teams

Technology teams do not work in isolation in today’s newsrooms. As Figure 21 demonstrates, in many newsrooms, tech staff regularly collaborate with other journalists. In at least half of newsrooms with a dedicated tech staff, journalists regularly collaborate with social media and audience engagement teams. This further underscores the importance of social media to news operations.

ICFJ asked journalists how they are interacting with tech staff to better understand newsroom operations:
- 30% interact through formal or informal in-person meetings
- 29% interact through email
- 12% interact through instant messaging apps such as WhatsApp
- 4% interact through office communication tools, such as Slack

In nearly 40% of newsrooms, journalists regularly collaborate with multimedia staff, and in more than half, they at least sometimes work with data analytics staff. This level of collaboration indicates that newsroom staff are becoming increasingly reliant on technology professionals in their work.

Figure 21

Journalists' Collaboration with Tech Teams

- UX design
- Product/app development
- Data analytics
- IT/website maintenance
- Multimedia
- Social media and audience engagement

Legend:
- Never
- Rarely
- Sometimes
- Regularly
**Technology Teams by Region**

As indicated in Figure 22, South Asia and the Middle East/North Africa lead in the percentage of newsrooms that have technology teams. These are mostly dedicated to IT and website maintenance and social media and audience engagement functions.

South Asia and the Middle East, however, lose their lead with more advanced functions, such as multimedia, data analytics, and product/app development. Conversely, more than half of newsrooms in North America have teams dedicated to multimedia and data analytics.

![Figure 22: Technology Team Functions by Region](image-url)
VI. SOCIAL MEDIA

QUESTIONS WE ADDRESS IN THIS SECTION:

In what ways are social media used for researching and reporting the news compared to other sources?

How important are social media sites for audience engagement? What impact do journalists feel social media have on their work?

Journalists today have expansive digital options, most notably social media, for reporting and sharing stories. They are able to collect new data, identify sources, verify information, post and share stories, and track and engage with audiences. Social media also makes it easy for journalists to discern their followers’ preferences and opinions. These tools can help journalists foster relationships that generate loyalty, especially when audience members feel they are getting to know journalists more personally. Engaging with audiences can have an impact on how stories are received, and can also enhance transparency about how journalists practice their craft and manage information (Revers, 2014).

KEY FINDINGS

Journalists use social media to share and discover news, but few use social media verification tools.

North American journalists lag in using instant messaging apps such as WhatsApp.

Journalists are overwhelmingly more likely to use social media to engage and grow their audiences than any other tool.

Despite a near-universal consensus among journalists that social media tools have influenced their work, only a small majority agree that it improves their credibility.
JOURNALISTS USE SOCIAL MEDIA TO SHARE AND DISCOVER NEWS, BUT FEW USE SOCIAL MEDIA VERIFICATION TOOLS.

ICFJ surveyed journalists on their use of 21 resources to gather information for their work. Facebook and Twitter emerge as the clear leaders in this area, with 84% of journalists saying they use Facebook and 74% saying they use Twitter to gather information. This is true, regardless of newsroom type.

Figure 23 illustrates the information resources used by traditional, hybrid, and digital-only newsrooms, revealing a somewhat uniform reliance on Facebook. Even with Twitter, the differences are not stark. Nearly 67% of journalists in traditional newsrooms say they rely on Twitter, compared with 75% in digital-only newsrooms and 76% in hybrid newsrooms.

Instant messaging apps (43%) are also among the most popular information resources for journalists. The use of Instagram (33%) is also notable.

While most journalists use social media to find information and ideas for stories, only 11% say they use social media verification tools.
**Breakdown by region**

**NORTH AMERICAN JOURNALISTS LAG IN USING INSTANT MESSAGING APPS, SUCH AS WHATSAPP.**

Instant messaging apps such as WhatsApp, WeChat and Facebook Messenger are popular resources in many regions (Figure 24), and among all types of newsrooms. They are especially popular in East/Southeast Asia (57%) and Latin America (53%). The one outlier: North America. Only 34% of journalists say they use these tools.

![Instant Messaging by Region](image)

**JOURNALISTS ARE OVERWHELMINGLY MORE LIKELY TO USE SOCIAL MEDIA TO ENGAGE AND GROW THEIR AUDIENCES THAN ANY OTHER TOOL.**

Interacting with and growing audiences has become a mainstream practice among journalists, even among those in established roles and in traditional newsrooms. In today’s fast-paced and competitive media environment, journalists view audience engagement as critical to establishing a loyal following and advancing their careers.

The importance of audience engagement in the profession is further underscored by the development of specialized platforms, such as Hearken and the Coral Project, that facilitate audience interaction with journalists.
Yet these platforms are the least popular among journalists looking to build and engage their audiences. Only 2% say they use these specialized platforms, while a vast majority (86%) use social media. In fact, as Figure 25 demonstrates, no other tool for engaging audiences is as widely used as social media.

Figure 25

<table>
<thead>
<tr>
<th>Tools for Engaging and Growing Audiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tools used</td>
</tr>
</tbody>
</table>

Breakdown by Region

Figure 26 illustrates the popularity of various audience engagement techniques by region. The data reinforce social media’s dominance, with an average of 90% of journalists across all regions saying they use these sites to interact with their audiences.

Instant messaging apps also emerge as an especially popular means to engage audiences in a few regions. In East/Southeast Asia, 42% of journalists use tools such as WhatsApp and WeChat to reach out to their followers. Eurasia/former USSR is a close second, with 39% of journalists reporting that they rely on instant messaging. North America emerges as a straggler again in using instant messaging/chat apps, with only 10% of journalists using these tools to engage audiences.
DESPITE A NEAR-UNIVERSAL CONSENSUS AMONG JOURNALISTS THAT SOCIAL MEDIA TOOLS HAVE INFLUENCED THEIR WORK, ONLY A SMALL MAJORITY AGREE THAT IT IMPROVES THEIR CREDIBILITY.

Our study demonstrates the extent to which journalists rely on social media tools in almost every aspect of their work. To better understand the impact of these ubiquitous platforms, ICFJ asked journalists to report on how social media is affecting their day-to-day work and careers.

The vast majority of journalists (89%) believe that social media benefits their work, compared to only 4% who say it has a negative effect. Figure 27 demonstrates the degree to which journalists agree on the various effects that social media has had on their ability to do their jobs. Overall, journalists are in agreement – social media makes a difference, and it is a good one.
A very strong majority of journalists say that social media enables them to network better (94%), promote themselves and their work (93%), and better engage their audiences (92%). Most also believe that social media broadens access to information (86%) and helps them cover a wider range of stories (80%).

Yet, surprisingly, a relatively small majority (56%) of journalists agree that social media improves their credibility, with only 30% reporting that they strongly agree.

Also of note: Only 34% of journalists believe that social media is decreasing their workload. Given the range of social media activities explored in this section, it is likely that many journalists feel they have to do more in order to be competitive.

Figure 27
Social Media as Information Resource

We asked journalists how often they use social media to perform a range of activities. The results shed light on how they rely on these sites to gather information for stories:

- 83% regularly use social media to check for breaking news
- 71% regularly use social media to find ideas for stories
- 69% regularly use social media to find sources
- 45% regularly use social media to interview sources

Figure 28

Journalists' Regular Social Media Activities
Social Media and Audience Engagement

We asked journalists how regularly they use eight social media tools to engage and grow their audience. The results:

- 81% – social media sites like Facebook
- 61% – microblogs like Twitter
- 48% – instant messaging apps like WhatsApp and WeChat
- 32% – audiovisual social media sites like YouTube
- 22% – professional networking sites like LinkedIn

Figure 29: Social Media Used Regularly to Engage Audiences
VII. NEWSROOM ANALYTICS

QUESTIONS WE ADDRESS IN THIS SECTION:

- How is analytics data used to track audience behavior?
- How important do journalists feel analytics are for their work?
- How frequently are particular data metrics used?

Audience analytics allow newsrooms to use quantitative data to analyze a wide range of user behaviors. They inform daily decisions and long-term goals. Newsrooms use analytics to guide news production, content distribution, audience engagement, newsroom workflows, and business strategies. Increasingly journalists are becoming more receptive to using analytics, and playing a greater role in the development of relevant measures (Cherubini and Nielsen, 2016).

KEY FINDINGS

A vast majority of newsrooms use analytics data, but only select newsroom staff and leadership consult them regularly.

Most newsrooms use only basic analytics data to make decisions.

Newsrooms do not focus heavily on engagement metrics.

Newsrooms use analytics primarily to drive traffic to their websites.
A vast majority of newsrooms use analytics data, but only select newsroom staff and leadership consult them regularly.

Nearly half of newsrooms (45%) consult analytics daily, with 24% checking them in real time. Still, 19% of newsrooms consult them rarely or never. Among individual journalists, the percentage who rarely or never consult analytics climbs even higher, to 34% – a clear indication that only a select number of staff are using them.

ICFJ asked managers who in their newsrooms regularly checks analytics.*

The results:
- 64% say senior editors
- 45% say news editors
- 37% say employees who work on the business side
- 24% say other journalists in the newsroom

*Respondents could select more than one option.

Figure 30

How Often Analytics Are Consulted
Breakdown by Newsroom Type

Figure 31 illustrates the data by newsroom type, showing that journalists in traditional newsrooms (22%) are less likely to refer to analytics than those in digital-only (34%) or hybrid (31%) ones.

Figure 31

How Often Analytics Consulted by Newsroom Type

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Traditional</th>
<th>Digital</th>
<th>Hybrid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>20%</td>
<td>30%</td>
<td>25%</td>
</tr>
<tr>
<td>Weekly-monthly</td>
<td>40%</td>
<td>50%</td>
<td>30%</td>
</tr>
<tr>
<td>Rarely-never</td>
<td>40%</td>
<td>20%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Most Newsrooms use only basic analytics data to make decisions.

News professionals today have a wealth of metrics available to them. However, many do not yet tap into the full range of their analytic potential. This theme is consistent throughout our study – journalists have greater options, but many continue to rely on a limited range of tools.

Table 3 categorizes 21 metrics into three tiers based on regularity of use. The top metric is pageviews, with 73% of newsrooms saying they reference this data regularly.

These metrics influence the way newsrooms operate. Of the 21 metrics we identified in our study, only five are used regularly by the majority of newsrooms.
NEWSROOMS DO NOT FOCUS HEAVILY ON ENGAGEMENT METRICS.

The results indicate that newsrooms are more interested in tracking the number of clicks than they are in measuring audiences' interaction with their content. Newsrooms are much less likely to track metrics related to audience engagement, such as engaged time (36%), conversion rates (18%), recirculation (16%) and scroll depth (16%).

TABLE 3: THREE TIERS OF AUDIENCE METRICS

<table>
<thead>
<tr>
<th>TIER-ONE METRIC – USED BY AT LEAST 40%</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Pageviews</td>
</tr>
<tr>
<td>• Reach (number of people exposed to a piece of content)</td>
</tr>
<tr>
<td>• Visitors (number of new users, returning users, and loyal users)</td>
</tr>
<tr>
<td>• Unique Visitors (number of people who have visited a website)</td>
</tr>
<tr>
<td>• Time Spent (amount of time visitors have spent on a site)</td>
</tr>
<tr>
<td>• Audience Demographics</td>
</tr>
<tr>
<td>• Social Shares (number of times a piece of content has been shared via social media)</td>
</tr>
<tr>
<td>• Bounce Rate (users who land on a site and leave immediately)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TIER-TWO METRICS – USED BY AT LEAST 20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Direct Traffic (traffic that comes directly to the site)</td>
</tr>
<tr>
<td>• Time of Day (when users are accessing content)</td>
</tr>
<tr>
<td>• Engaged Time (amount of time users spend actively interacting with a story)</td>
</tr>
<tr>
<td>• Platform (where users are accessing content)</td>
</tr>
<tr>
<td>• Referred Traffic (traffic that comes from an external source)</td>
</tr>
<tr>
<td>• Access Places (from what places users are accessing content)</td>
</tr>
<tr>
<td>• Concurrent Visits (total number of people on a site at a time)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TIER-THREE METRICS – USED BY UP TO 20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Conversion Rate (percentage of users who take a desired action, such as subscribing or registering)</td>
</tr>
<tr>
<td>• Scroll Depth (how far users scroll down on a page)</td>
</tr>
<tr>
<td>• Entry Rate (percentage of visits starting on a particular page)</td>
</tr>
<tr>
<td>• Recirculation (percentage of the audience that engages with more than one piece of content)</td>
</tr>
<tr>
<td>• Exit Page (last page accessed before a user leaves a site)</td>
</tr>
</tbody>
</table>
NEWSROOMS USE ANALYTICS PRIMARILY TO DRIVE TRAFFIC TO THEIR WEBSITES.

Analytics are used for a variety of purposes in the newsroom, such as informing editorial decisions and newsroom operations. Figure 33 sheds light on the decisions newsrooms make using analytics data.

Unsurprisingly, half of newsrooms worldwide use analytics to drive traffic to their websites. This reinforces the importance of pageviews as a metric, and indicates that newsroom managers are eager to increase that number.
Nearly half of newsrooms (47%) say they use analytics regularly to better engage audiences. However, as demonstrated above, most don’t regularly consult metrics related to audience engagement, including social shares, scroll depth, conversion rates, and engaged time.

With a few exceptions, hybrid newsrooms are either keeping pace with or slightly ahead of digital-only newsrooms in their use of analytics across all functions. For instance, 39% of hybrid newsrooms use analytics to attract advertisers compared to 29% of digital-only organizations.

**Figure 33**

How Analytics Are Used Regularly in the Newsroom by Newsroom Type

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hybrid</th>
<th>Digital</th>
<th>Traditional</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create content for 3rd-party platforms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Track audience demands for products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schedule notifications</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Track number of articles by journalists</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engage users across platforms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target specific users</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Align editorial/business priorities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attract advertisers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inform technical decisions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitor referrals/sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Make workflow recommendations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inform strategies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promote home page</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inform editorial decisions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engage audience members</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drive traffic to website</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend: Hybrid, Digital, Traditional, Total
VIII. AUDIENCE TARGETING

QUESTIONS WE ADDRESS IN THIS SECTION:
What strategies do news organizations use to target audiences? To what extent do news organizations target particular groups?

As news platforms proliferate, news organizations seek to differentiate their product. There is no single strategy: Some attempt to appeal to a broad audience or to focus on audience segments based on demographic characteristics, political orientation, consumer proclivities, or other factors (Stroud, 2012).

KEY FINDINGS

A majority of newsrooms do not target specific audience segments, even though they have the tools to do so.

Younger adults are the most sought-out market for newsrooms worldwide.
A MAJORITY OF NEWSROOMS DO NOT TARGET SPECIFIC AUDIENCE SEGMENTS, EVEN THOUGH THEY HAVE THE TOOLS TO DO SO.

Our results demonstrate that newsrooms are less likely to use analytics to target specific audiences than they are to drive more traffic to their websites. Consistent with this finding, 65% of newsroom managers say that it is more important to reach the widest audience possible than to target specific audience segments.

Digital-only newsrooms are the most likely to use tools, such as analytics data, to target specific audience segments.
YOUNGER ADULTS ARE THE MOST SOUGHT-OUT MARKET FOR NEWSROOMS WORLDWIDE.

Overall, age is the most important basis for audience targeting. Most newsrooms say they are interested in appealing to younger adults in the 31-45 age group. The other most targeted groups are millennials (18-30) and adults over 45 (Figure 35).

Hyperlocal audiences are the least popular demographic (19%) for newsrooms after children and teens (an age group that is not typically associated with news media).

Figure 35
IX. NEWSROOM WORKFLOW

QUESTION WE ADDRESS IN THIS SECTION:
To what extent do journalists work independently or collaboratively?

Newsrooms in the digital age are fundamentally changing their workflows and physical configurations. Looking to incorporate opportunities for collaboration, many newsroom spaces are being reimagined. At the same time, financial realities have forced many organizations to downsize and create common working spaces, rather than individual offices (Usher, 2016). A growing number of journalists work independently, entirely outside of a physical newsroom, doing their job from home or a local coffee shop.

KEY FINDING

Journalists in hybrid newsrooms are more likely to work collaboratively, while those in digital-only newsrooms are more inclined to work independently.
Though new digital tools can improve collaboration across newsrooms, nearly half of journalists say they still mostly work independently. Journalists in hybrid organizations (61%) are the most likely to collaborate in their newsrooms. This is in keeping with our findings on newsroom training, which indicate hybrid organizations are the most likely to provide training on collaboration.

Journalists in digital-only newsrooms, on the other hand, are the least likely to collaborate with their colleagues. One explanation could be that some of these newsrooms are entirely virtual, with no shared space for the journalists, giving them fewer opportunities to collaborate.

Figure 36
The complexity of digital journalism and ever-evolving technology requires publishing systems that are flexible, adaptable, and easy to use. Content management systems (CMS) influence newsroom workflows, and can either enhance or inhibit productivity. An effective CMS should provide an integrated set of specialized tools that work efficiently. It should have low technical barriers and an easy-to-use back-end that is accessible to journalists who don’t code. A newsroom’s CMS should be adaptable to rapid changes in the digital environment (Reveal, 2016). Organizations must decide whether to use a custom CMS designed specifically for their newsroom or to adopt a commercial product, freeware, or an open-source tool.

KEY FINDING

Almost 40% of newsrooms use a custom CMS.
**CMS Used by Newsrooms**

Most media organizations around the world (85%) employ some kind of CMS in their newsrooms. Some newsroom managers we surveyed also indicated that their newsrooms use more than one CMS tool. The largest number (almost 40%) use a custom CMS, specifically designed for their organization.

**Figure 37**

Content Management System Used in Newsrooms

Digital (31%) and hybrid (39%) media organizations are more likely to have a custom CMS than traditional (16%) newsrooms.

**Figure 38**

Content Management System by Newsroom Type
XI. SECURING COMMUNICATIONS

QUESTION WE ADDRESS IN THIS SECTION:
What measures are both newsrooms and individual journalists taking to secure their communications?

Information security has become a vital, if often sidelined, requirement of the modern newsroom. Journalists can fall prey to tracking, surveillance, spoofing, phishing, and data breaches. This is especially a concern as journalists seek to protect confidential sources. While recognizing the importance of securing their communications, journalists may be unaware of the options available or how to use them (Mahoney, 2015).

KEY FINDINGS

More than half of newsrooms and journalists fail to secure their communications.

Journalists and newsrooms who do secure their communications use email encryption more frequently than other techniques.
MORE THAN HALF OF NEWSROOMS AND JOURNALISTS FAIL TO SECURE THEIR COMMUNICATIONS.

As our study demonstrates, journalists increasingly use digital tools to research and report stories, find and interview sources, and engage their audiences. Yet as these digital communication tools become more fundamental to their work, few newsrooms and journalists are taking the appropriate measures to protect their information. More than half of newsrooms (53%) and journalists (54%) fail to secure their communication in any way.

JOURNALISTS AND NEWSROOMS WHO DO SECURE THEIR COMMUNICATIONS USE EMAIL ENCRYPTION MORE FREQUENTLY THAN OTHER TECHNIQUES.

Despite the proliferation of cybersecurity tools and methods, email encryption is the most popular among journalists (45%) and newsrooms (44%) worldwide.

Although instant messaging and chat apps are more prevalent today, few journalists (23%) and newsrooms (28%) report using those platforms, which offer end-to-end encryption, as security tools.

Figure 39
A higher percentage of newsrooms in North America report using chat apps specifically for security purposes, compared to other regions, even though on average they use those apps less than journalists elsewhere. Video conference encryption and phone call encryption tools are also more popular in North America than in other regions.

Overall, newsrooms in Europe, where privacy is a key concern, are taking more steps to secure their communication than in any other region.

Digital security measures by region – leaders and laggards
- Europe leads in the percentage of newsrooms taking security measures (61%)
- Latin America lags in the percentage of newsrooms taking security measures (38%)

Figure 40
XII. NEWSROOM REVENUE STREAMS

QUESTIONS WE ADDRESS IN THIS SECTION:

What types of revenue streams do newsrooms depend on in the digital age?
What new sources of revenue are being developed?

Developing profitable and consistent revenue streams is a major challenge for digital-age newsrooms. Modern organizations need to develop diverse revenue streams that can be adapted to changing market conditions and technological innovations. News organizations are retooling traditional methods of generating revenue, such as advertising and new subscription fees. Media organizations also are innovating with novel approaches to generating revenue, such as through sponsored content, soliciting audience donations, and content sales and licensing. Some organizations have tried aggressive techniques, such as holding events and selling niche newsletters on topics (Carroll, 2017).

KEY FINDINGS

Second only to advertising, sponsored content is the leading source of revenue for all newsrooms.

Digital-only newsrooms are twice as likely to generate revenue from alternative sources than traditional or hybrid newsrooms.
SECOND ONLY TO ADVERTISING, SPONSORED CONTENT IS THE LEADING SOURCE OF REVENUE FOR ALL NEWSROOMS.

While newsrooms still depend on advertising, new revenue sources are emerging. More newsrooms today are generating revenue through sponsored content (44%) than they are through paid subscriptions (31%).

Advertising remains a key revenue driver, with 70% of newsrooms reporting that it is their main revenue stream.

Figure 41

Revenue Streams

- Other
- Venture capital
- Audience donations/crowdsourcing
- Government funding
- Philanthropic contributions
- Content sales/licensing
- Subscriptions
- Sponsored content
- Advertising

3. Sponsored content is material that has a similar format and qualities of the content that is typically published on a platform, but is paid for by a third party.
Digital-only newsrooms are twice as likely to generate revenue from alternative sources than traditional or hybrid newsrooms.

Overall, digital-only newsrooms are turning to new and diverse sources of funding more frequently than traditional and hybrid organizations. Slightly fewer digital-only (45%) newsrooms use sponsored content than hybrid (47%) organizations, though they lead in philanthropic contributions, crowdsourcing, and venture capital.

Figure 42
XIII. WHAT’S NEXT: NEWSROOM CHALLENGES

**QUESTION WE ADDRESS IN THIS SECTION:**

What major challenges do news organizations face in the digital age?

The scope of challenges facing newsrooms keeps broadening. In addition to perennial concerns about generating revenue, attracting advertisers, and creating a steady flow of content, news organizations must jump hurdles that are specific to digital technology. These include attracting and keeping diverse audiences, managing content across platforms, and improving the digital experience for audience members.

**KEY FINDINGS**

Newsrooms in developing countries report greater urgency to create new revenue streams.

Few newsrooms in Eurasia/former USSR say attracting loyal audiences is a major challenge.

While most newsrooms find it challenging to gain trust with their audiences, there are two major exceptions: Eurasia/former USSR and North America.
NEWSROOMS IN DEVELOPING COUNTRIES REPORT GREATER URGENCY TO CREATE NEW REVENUE STREAMS.

The digital era is forcing newsrooms to readjust in a constantly evolving space. They face an array of major challenges, including shifting revenue models, attracting loyal advertisers, engaging audiences, and developing new storytelling formats. As illustrated in Figure 43, these challenges vary by region.

**Figure 43**

<table>
<thead>
<tr>
<th>Major Newsroom Challenges by Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorporating virtual reality</td>
</tr>
<tr>
<td>Using mobile design</td>
</tr>
<tr>
<td>Improving digital platforms</td>
</tr>
<tr>
<td>Engaging diverse audiences</td>
</tr>
<tr>
<td>Building audiences’ trust</td>
</tr>
<tr>
<td>New storytelling formats</td>
</tr>
<tr>
<td>Attracting loyal audiences</td>
</tr>
<tr>
<td>Attracting advertisers</td>
</tr>
<tr>
<td>Creating quality content</td>
</tr>
<tr>
<td>Shifting revenue streams</td>
</tr>
</tbody>
</table>

![Bar chart showing challenges by region](image)
FEW NEWSROOMS IN EURASIA/FORMER USSR SAY ATTRACTING LOYAL AUDIENCES IS A MAJOR CHALLENGE.

Attracting loyal audiences is another salient concern in most regions, with the exception of Eurasia/former USSR. Only 18% of newsrooms in Eurasia/former USSR find attracting loyal audiences to be a major challenge. The number is identical for both independent and government-funded news organizations in the region. In contrast, at least 45% of independent newsrooms across seven regions identify this as a major challenge – up to 74% in the Middle East/ North Africa.

Newsrooms in the developing world struggle the most in shifting their business models and identifying new revenue streams, with more than 70% of organizations in sub-Saharan Africa and Latin America/Caribbean identifying this as a major challenge. Most newsrooms in East/Southeast Asia (61%) also find this challenging. Of the eight regions we surveyed, North American newsrooms are the least concerned about finding revenue streams, with only 44% citing it as a major challenge.
WHILE MOST NEWSROOMS FIND IT CHALLENGING TO GAIN TRUST WITH THEIR AUDIENCES, THERE ARE TWO MAJOR EXCEPTIONS: EURASIA/FORMER USSR AND NORTH AMERICA.

In the post-truth era, many journalists and newsrooms grapple with the viral spread of “fake news” and struggle to establish trust with their audiences. In six of our eight regions, 35% to 56% of newsrooms cite building trust as a major concern in their work. The clear outliers: Eurasia/former USSR (21%) and, perhaps surprisingly, only 29% of North American newsrooms identify building trust as a major challenge.

Figure 45

Building Trust as a Major Challenge by Region
METHODOLOGY

Surveys of journalists and newsroom managers were conducted in twelve languages and 130 countries. Separate surveys were developed for journalists and newsroom managers. Before the surveys were fielded, the items were vetted by the project’s advisory board and other professionals. The surveys were pretested and revised before being administered. The journalist and newsroom survey instruments were translated into twelve languages—Arabic, Chinese, English, French, German, Indonesian, Japanese, Korean, Portuguese, Russian, Spanish, and Turkish. The translated surveys were reviewed by people proficient in each language prior to being fielded.

The surveys were disseminated online using the SurveyMonkey platform from February 15 to April 15, 2017. The study was promoted widely through a variety of digital methods. ICFJ sent e-blasts to its extensive network of industry contacts and publicized the survey through the IJNet Bulletin. Facebook ads were run in each language. A large number of associations and organizations promoted the surveys.

A total of 2,781 respondents—2,053 journalists and 728 newsroom managers—completed the surveys. (See Table 4.) 3,136 respondents entered the survey by clicking on the initial question asking whether they are a news manager/executive or a journalist, which then directed them to the appropriate survey. 266 respondents to the journalist survey and 89 respondents to the newsroom survey left the study. Some of these respondents answered the initial question asking if they were a journalist or a newsroom manager and did not go any further. Others answered questions at the beginning of the survey and then quit. It is likely that some of these respondents returned to the survey and completed it later. Thus, the actual sample attrition is likely lower than 355 cases as we are unable to determine whether or not a respondent returned to complete the survey at another time.
### TABLE 4: NUMBER OF RESPONDENTS

<table>
<thead>
<tr>
<th></th>
<th>Journalist</th>
<th>Newsroom</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of respondents who entered the journalist and newsroom surveys</td>
<td>2,319</td>
<td>817</td>
<td>3,136</td>
</tr>
<tr>
<td>Number of usable surveys</td>
<td>2,053</td>
<td>728</td>
<td>2,781</td>
</tr>
</tbody>
</table>

The average age of journalists in the study is 39 years. Journalists in traditional and hybrid newsrooms were slightly older (mean 40 years) than those working in digital newsrooms (mean 38 years). The average age of newsroom managers is 43 years. Managers in hybrid newsrooms averaged 44 years, traditional newsrooms 43 years, and digital newsrooms 41 years of age. (See Table 5.) The mean age of the journalists is our study skews slightly younger, which may be a consequence of the survey being administered online. Recent studies indicate that the average age of journalists in legacy newsrooms is 47 years (Willnat and Weaver, 2014), and it is slightly younger in digital newsrooms. However, there is also evidence of senior journalists, especially those working for traditional and hybrid organizations, leaving the profession as newsrooms cut costs or leveraging freelance positions where they can place their stories with multiple outlets (Mararidge, 2016).

### TABLE 5: AVERAGE AGE OF JOURNALISTS IN THE STUDY

<table>
<thead>
<tr>
<th></th>
<th>Total Sample</th>
<th>Traditional Newsroom</th>
<th>Digital Newsroom</th>
<th>Hybrid Newsroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journalists</td>
<td>39</td>
<td>40</td>
<td>38</td>
<td>40</td>
</tr>
<tr>
<td>Newsroom Manager</td>
<td>43</td>
<td>43</td>
<td>41</td>
<td>44</td>
</tr>
</tbody>
</table>

The respondents to the journalist survey are 42% female and 58% male. An even higher percentage of males (67%) than females (33%) participated in the newsroom manager survey. The gender composition of the journalist and newsroom survey respondents is consistent with the well-established gender gap in the journalism profession, especially among higher-level employees, such as newsroom managers (Wihbey, 2015).

The 130 countries represented in the study were coded into eight regions—Latin America and the Caribbean, the Middle East and North Africa, sub-Saharan Africa, East and Southeast Asia, South Asia, Europe, Eurasia and the former USSR, and North America. The regions and associated countries appear in Table 6. The percentage and number of respondents from each region is presented in Table 7. The large sample size allows us to achieve statistically significant comparisons across regions.
<table>
<thead>
<tr>
<th>Latin America and the Caribbean</th>
<th>Middle East and North Africa</th>
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</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>Algeria</td>
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<tr>
<td>Bolivia</td>
<td>Bahrain</td>
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<tr>
<td>Brazil</td>
<td>Egypt</td>
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<tr>
<td>Chile</td>
<td>Iran</td>
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<td>Colombia</td>
<td>Iraq</td>
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<tr>
<td>Costa Rica</td>
<td>Israel</td>
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<td>Cuba</td>
<td>Jordan</td>
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<td>Mexico</td>
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<td>Palestinian Territories</td>
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<td>South Sudan</td>
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<td>Suriname</td>
<td>Sudan</td>
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<tr>
<td>Trinidad and Tobago</td>
<td>Syria</td>
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<tr>
<td>Uruguay</td>
<td>Tunisia</td>
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<tr>
<td>Venezuela</td>
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<td>Yemen</td>
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<table>
<thead>
<tr>
<th>South Asia</th>
<th>East and Southeast Asia</th>
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<tr>
<td>Afghanistan</td>
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<td>Europe</td>
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<td>Zimbabwe</td>
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<table>
<thead>
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<th>Eurasia/Former USSR</th>
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<td>Azerbaijan</td>
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<td>Ukraine</td>
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<td>Uzbekistan</td>
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<tr>
<td>Region</td>
<td>Journalist Survey</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Latin America/Caribbean</td>
<td>21% 427</td>
</tr>
<tr>
<td>Middle East/North Africa</td>
<td>13% 264</td>
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<td>Sub-Saharan Africa</td>
<td>24% 488</td>
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<td>East/Southeast Asia</td>
<td>6% 122</td>
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<td>12% 244</td>
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<td>8% 162</td>
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<td>6% 123</td>
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<td>North America</td>
<td>11% 223</td>
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REFERENCES


