



The Benefits and Risks of Media Data Democratisation

Greg Piechota

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About

About the author



Greg Piechota is a researcher-in-residence at INMA and served as the lead of the association's Smart Data initiative in 2021. An ex-fellow at Oxford and Harvard universities, he studied technology-enabled patterns across industries with a focus on business model innovation in news media. He is a former media executive with 20+ years of industry experience, notably Poland's Gazeta Wyborcza. Piechota has served on the INMA Board of Directors and has been president of the association's European Division.



About the International News Media Association

The **International News Media Association (INMA)** is a global community of market-leading news media companies reinventing how they engage audiences and grow revenue in a multi-platform environment. The INMA community consists of more than 19,000 members at 900+ news media companies in 81 countries, representing tens of thousands of news brands. INMA is the news media industry's foremost ideas-sharing network with members connected via conferences, reports, Webinars, virtual meetings, awards competitions, and an unparalleled archive of best practices. INMA leads the news industry with initiatives dedicated to better understanding digital subscriptions, smart data, product, advertising, and the emerging relationship with Big Tech platforms.



About the Meta Journalism Project

The **Meta Journalism Project** works with publishers around the world to strengthen the connection between journalists and the communities they serve. It also helps address the news industry's core business challenges. Trainings, programmes, and partners work to build community through news, train newsrooms globally, and promote quality through partnerships.

About

Audience Analytics
ACCELERATOR
Latin America 2021

Accelerator participants

Caracol TV,
Colombia

Editora Globo,
Brazil

El Tiempo,
Colombia

El Universal,
Mexico

Gazeta Do Povo,
Brazil

Grupo AM, Mexico

Grupo El
Comercio, Peru

Diario de Nordeste,
Brazil

Grupo Milenio,
Mexico

Grupo OPSA,
Honduras

Grupo Reforma,
Mexico

Los Andes,
Argentina

Página 12,
Argentina

SBT, Brazil

UOL, Brazil

About the Audience Analytics Accelerator Latin America 2021

The **Audience Analytics Accelerator Latin America 2021** was a joint programme by the Meta Journalism Project and the International News Media Association (INMA), in collaboration with the International Center For Journalists (ICFJ).

The goal of this innovative “learning-by-doing” programme was to explore how news media companies can transform their online business by helping them analyse and act on data in new and creative ways.

The eight-months-long accelerator consisted of:

- 30+ hours of bespoke training based on best-in-class case studies from the INMA global network.
- Benchmarking and exchange of ideas among 15 peer publishers in Latin America and Brazil, selected out of 223 applicants from the region.
- 135+ hours of hands-on coaching by a world-renowned faculty of 18 guest experts and practitioners.
- Impactful projects focused on increasing or maintaining revenue or generating savings with data, all accomplishing their goals and delivering measurable results.
- Stipends of US\$16,600 to participants to help execute their projects inspired by the Accelerator.
- Learnings shared at the Audience Analytics Town Hall on November 30, 2021, with a global audience of 1,043 attendees from 94 countries.

The original programme created by INMA Smart Data Initiative Lead Greg Piechota was delivered by a team of 26 staffers of Meta, INMA, and ICFJ to an outstanding class of professionals from across Latin America.

The inspiration behind this report

INMA launched our Smart Data initiative in early 2021 at the same time we agreed to partner with the Meta Journalism Project on the Latin American Audience Analytics Accelerator.

It proved to be a smart partnership.

From Meta's vantage point, its work on helping publishers with digital subscriptions had been strong – yet many companies didn't have the data foundations to fully leverage those efforts. For INMA, working with Meta allowed us to accelerate our knowledge of data for the benefit of all members worldwide.

That fusion is apparent in "The Benefits and Risks of Media Data Democratization."

The Audience Analytics Accelerator 2021 case studies are the heart and soul of this report. As you read, you will soon discover that you are in the trenches with peer publishers. The struggle. The creativity. The ever-present culture. The report "keeps it real." You will walk away from this report inspired and challenged from the journey of these Latin American publishers.

These in-the-trenches data democratization moments are not confined to Latin American media. Our editorial team, led by Dawn McMullan and Paula Felps, have dug deep into previously unpublished accounts from the INMA network worldwide that focus on a similar journey. Some of those intersected with the Latin American Accelerator, and some simply advance the report's narrative.

Yet there is another voice interwoven throughout this report. Greg Piechota launched INMA's Smart Data initiative last year and led the Audience Analytics Accelerator. Anyone who has ever worked with Greg will smile when they say he never does anything halfway. Beyond a master class, summit, meet-ups, blogs, and more than 30 one-on-one sessions with INMA members on data in the past year via the Smart Data initiative, Greg dug deeper for this report by looking into how other industries are embracing data democratisation — with his unique skills honed at Harvard and Oxford in recent years.

Why are these hybrid efforts necessary for a report like this?

While every publisher is drowning in data, only half have a roadmap — and I've yet to find a publisher who is totally happy with their strategy. Data is everywhere and nowhere at the same time. If we only relied on one region or one industry on the subject of democratising data, we might capture the struggle but not the direction.

"The Benefits and Risks of Media Data Democratisation" embraces hybrid storytelling devices through our sourcing of the Latin American Accelerator, the global media best practices around data, and the distillation of the best academic studies.

We hope this report inspires your efforts to transform into a data-positive company that will enhance the value proposition of great journalism.



Earl J. Wilkinson

Executive Director and CEO

International News Media Association (INMA)

January 13, 2022

The data challenge is a cultural challenge

Understanding your audience is key to your success.

To develop a strong digital strategy, it is necessary to understand how you can become more important for your customers and, for that, you need to place data at the centre of your decisions. This means using data to drive discussions, deep dive on insights, and develop and test hypotheses.

Bringing data to the centre of your decision-making is a cultural challenge. The people who work in your organisations need to understand the importance of data and analysis, how it can make their work better, and how they can guide your business toward new opportunities.

The reality is building a data- and analytics-based culture is a process that takes time, focus, commitment, and persistence. It doesn't happen overnight.

The Meta Accelerator programme was born to support this process for publishers. It supports media companies to understand how to find new audiences, engage with the people connected to their brands, and develop new narrative formats to sustain audience loyalty.

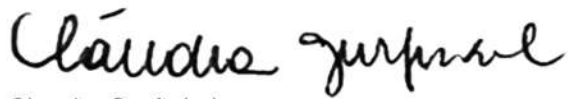
In short, it helps them bring data a little closer to the centre of their culture.

As of today, the Meta Journalism Project has held Accelerators all over the world with local and national media outlets. Since 2018, roughly 330 participating newsrooms have generated US\$75 million in customer lifetime value, [according to statistics provided by publishers participating in the programme](#).

This playbook shares the learning and case studies of one of our newest programmes the 2021 Audience Analytics Accelerator, a joint project by the Meta Journalism Project and the International News Media Association (INMA) in collaboration with the International Center for Journalists (ICFJ).

The goal of this eight-month hands-on programme was to help news media companies transform their online business by encouraging them to analyse and act on data in new and creative ways. The 15 participating publishers from six countries across Latin America executed projects with measurable results and planned further audience analytics initiatives.

We are sure that their learnings, captured in this playbook, will inspire publishers from all around the world to also develop high-impact initiatives and to lead the transformation process in their own organisation.



Claudia Gurfinkel

Director of Latin America News Partnerships

Meta

January 13, 2022

Executive summary

Data democratisation by media companies is part of a broader trend toward evidence-based decision-making driven by new economic pressures on efficiency, management ideas aimed at boosting effectiveness, and advances in technologies.

The overwhelming blocker to democratise data in newsrooms is culture, with a recent INMA meet-up survey revealing 87% saw dismissive culture as the single biggest barrier. This is part of newsroom worries that data will dictate editorial decision-making.

“The Benefits and Risks of Media Data Democratization” fuses together work done in 2021 on a Meta Journalism Project Latin American Audience Analytics Accelerator, findings from Year 1 of the INMA Smart Data initiative, and academic research.

We have learned that the process of data democratisation – notably for media companies – consists of understanding the purpose of data, choosing relevant metrics, developing data products, embracing the scientific method of decision-making, and motivating decision-makers.

A. Case studies

This report breaks down this process with case studies from the Latin American Audience Analytics Accelerator at the heart.

1. Defining benefits of data and metrics

- **Mediahuis** (The Netherlands) discovered the importance of creating a more customer-centric business through data. That means asking the 5 W's of data: Why, why, why, why, and why. By asking that question more often, media companies can get to the bottom of their problems (such as a technology hiccup) and find ways to please the customer. Data is also useful in looking behind goals and finding the appropriate drivers and influencers for each one.
- Television network **SBT News** (Brazil) found that where it positioned embedded elements such as images and video on its Web page made a difference in engagement. Using data acquired through A/B testing, the company was able to increase session interactions, returning visitors, and enjoy growth for three consecutive months.

2. Mitigating the risks of data and metrics abuse

- For **Público** (Portugal), part of developing a data-driven culture included building a strong analytics department to deliver information to its teams. Teaching all departments what to do with the KPIs that were collected through analytics allowed it to maximise engagement, acquire more readers, and reach other goals.
- **UOL** (Brazil) wanted to determine what pieces of content worked best behind a paywall, but it also had some stipulations about what type of content it was not allowed to paywall. To work within those guidelines, it conducted a series of analyses and defined areas to test the implementation of a paywall. By using these analytics, it was able to identify multiple tags and traffic sources that can work within the specified rules – and now it is repeating that process to discover more.

3. Measuring journalism

- **Editora Globo** (Brazil) was looking for ways to enhance its newsroom's decision-making process, so it identified five deliverables that would help do that. Building a dashboard that walks the team through the user's journey has allowed it to see inside the funnel and understand what next steps need to be taken.

- Two of the main objectives at **Caracol TV** (Colombia) were to implement Google Analytics and create a technically advanced dashboard. The dashboard allows it to focus on what to publish, what to promote, and what the audience is doing in terms of consumption and engagements. It has continued to evolve the dashboard and now is working on its sixth version to make it more user-friendly and easier to understand.

4. Choosing metrics

- One of the biggest questions for **Diário do Nordeste** (Brazil) was what users were doing on the site. Even after they were registered, the newspaper didn't have a good way to track users' online activity. So it built an ecosystem to track what readers were consuming and ultimately used the data collected to create a roadmap that tracked user behaviour, created user IDs, and led to building a dashboard with the funnel of user sign-ups and subscriptions.
- **Los Andes** (Argentina) wanted to reinforce its standing as a forward-thinking company by exploring tools for data analysis and learning how to use those to increase subscriptions. In the Accelerator programme, it learned that it didn't have the mechanisms in place to accomplish its goals, and implemented Wyleex analytics to begin identifying reader clusters, which allowed for audience segmentation and an understanding of what content was most relevant for each user group.

5. Developing data products

- For **Grupo Reforma** (Mexico), understanding why users churn is a top priority. It believed that developing both qualitative and quantitative tools to identify reasons for churn would help the company transform content and/or the way it is presented, and discover how relevant its subscription offers are. Although the tools are still in their first version, they helped Grupo Reforma find most of the important reasons users churn and allow them to take actions to improve that churn.
- To improve its click-through rates, **Página 12** (Argentina) wanted to find a way to give editors more information about how specific articles were performing – and learn how to present them in a way that would be more attractive to readers. To make that happen, it created a tool that could

predict the probability of each article's success and now the newspaper uses AI to assist with headlines, which has also improved how readers respond to them.

6. Embracing experiments

- **El Tiempo** (Colombia) launched its subscription model in 2020, and now the company is working toward increasing the conversion rate of its content behind a paywall. Now, by using a machine learning algorithm, the company can estimate the success of certain news content and decide whether it belongs behind a paywall.
- **El Universal** (Mexico) wanted to see if it could recreate the behaviour of its loyal subscribers and get sleepers and registered users to buy subscriptions. The team created an RFV (recency, frequency, volume) model and, by tracking registered users and subscribers in each of those categories, it was able to map user journeys. Then it used the data as a jumping-off point for crafting an e-mail strategy, which it continues to use A/B testing on.

7. Driving change

- When **Die Presse** (Austria) launched its digital strategy in 2019, it focused on four areas: data, technology, people, and product as part of its growth. But eventually it learned it was collecting the wrong data and couldn't make good decisions based on what it was gathering. That led to the creation of a new ecosystem that includes actionable dashboards that track segmentation, engagement, and conversion; monitoring each story's performance; and predictive analytics to perform the takeoff, timing, and technique of each story.
- **Grupo AM** (Mexico) wanted to make the newsroom fall in love with data. So it set out to make data easy to read and understand, easy to cater to the needs and desires of brand lovers, and easy to test so they could learn and improve. After developing the proper tools, it created weekly newsletters ("love letters") to provide insights on user segments, a playbook to help the newsroom leverage A/B testing, and dashboards to better understand the behaviour of key user segments.

B. Conclusion

It does no good to collect data that isn't used. This is why data is fundamental to the news business transformation, making media more customer-centric, impactful, and financially sustainable.

Practically, publishers must overcome newsroom resistance by gaining trust and acceptance by concessions to a newsroom's autonomy. For example, give reporters less raw data and more insights based on data. Create rituals where everyone reflects on data. INMA studies clearly show most publishers believe data should inform decisions but not drive them.

There are some editorial outputs that can be measured and some that cannot. For example, one can look at number and length of articles, time spent researching stories, number of sources, user engagement, willingness to pay, and the like. Yet we can't measure the impact of journalism on individuals and society. Publishers are using data to plug these knowledge gaps and constantly improve.

Choosing the correct metrics to measure editorial output is crucial. As publishers exit the pageview game, much work is being done to measure impact on society and how many people are aware of and trust the news. The shift to reader revenue has brought new metrics and processes to the fore. For example, define editorial and business objectives first, then decide metrics.

Building internal data products is crucial to democratising access to analytics. This report outlines processes and best practices to making this work at a media company: opportunity analysis, ideating what data could improve decisions, and data product metrics of success. Navigating data disillusionment of the CEO, the board, and colleagues is a practical offshoot of this process.

The news industry is drowning in ideas, so how to choose and prioritise? The best answer appears to be experimentation, but even that requires a rigour and structure usually not found at media companies. This involves control groups, variables, and average treatment effects.

Finally, how does one drive change using data? Arm leaders with stories using data. Change is a constant campaign that never ends. Processes explored in the ongoing change game involving data include segmenting employees by how they use data.

sceptics vs. optimists vs. enthusiasts vs. advocates. Getting employees to use data requires understanding motivations, abilities, and triggers – and, as one Austrian publisher shared, creating community around the data.

This report is about data democratisation – not a data dictate. Patience, creativity, and focus are required to make data work for media companies. We saw that repeatedly in the Latin America Audience Analytics Accelerator. Concessions must be made to the human realities of journalism, yet we must identify ways to unleash the full productivity of every newsroom using data. How is it in the newsroom's interest? Much framing must be done to succeed. Are we readers-first? Do we want to improve? Do we want to focus on higher-power stories? What metrics do we really need to follow? ■

The importance of data democratisation

Across the world, news media companies are adopting data and metrics to make the work of journalists, marketers, and product teams more effective and efficient.

A modern newsroom, with blinking screens hanging on the walls, often resembles a spacecraft's bridge rather than a factory floor of the print journalism era. Editors are addicted to real-time charts like they were to their cigarettes and cognac of the past.

News designers and marketers no longer resemble the Mad Men or the creatives from agencies along New York's Madison Avenue in the Golden Age of Television. This is the era of math men (and women) – instead of craving a single brilliant copy or layout, they test dozens of ideas and relentlessly optimise.

As consumers began to expect the user experience on news sites to match the level of Netflix, Spotify, and global tech giants, publishers invested in their products. Teams adopted new agile, data-heavy methods of work. Popular business literature labeled them *growth hackers*.

This change to evidence-based, scientific decision-making and management has been accelerated by

- **Economic pressures on efficiency:** Media firms have seen their business models disrupted, so they cut costs and budgeted carefully.

- **Management ideas, such as customer-centricity, aimed at boosting effectiveness:** Media companies were rebalancing their lost revenues in advertising by focusing on end consumers and doubling down on subscriptions.
- **Advances in technologies** that made the work in newsrooms, marketing, or product easier to measure.

Still, the pace of the change varies due to the managers' and staffs' scepticism, shortage of skills, lack of clarity about the objectives, or insufficient internal processes and resources.

When we asked INMA members at a recent Smart Data initiative meet-up for the three main challenges they see in democratising data in their newsrooms, culture topped the list – 87% identified dismissive culture as the single biggest barrier.

Sceptics sometimes worry that data and metrics will undermine professional judgment and artistic creativity, limit the autonomy of workers, and potentially lead to lower-quality output and less satisfactory work. They worry about the “data dictate.”

In this report, we recommend and describe a process of data democratisation that is aimed at empowering journalists, marketers, and product leaders – and which is opposite of the data dictatorship.

The process of democratisation includes:

- **Understanding the purpose of data and metrics**, their benefits and risks, and considering the limitations of digital behaviour measurement.
- **Choosing the relevant data and metrics** by aligning them with editorial and business objectives and plans, aspiring for greater focus and improvement.
- **Developing data products** – from reports to analyses and tools – relevant to decisions that editors, marketers, and product teams face.

- **Embracing the scientific method of decision-making** that involves careful observation, formulating hypotheses, experimental testing, and refinement of hypotheses based on the findings.
- **Motivating decision-makers** to observe, experiment, discuss, and improve the quality of their decisions based on evidence.

We describe these imperatives of democratisation in the next chapters, and provide examples from the work of mentors and participants of the Meta/ INMA Audience Analytics Accelerator 2021 in Latin America.

Jordan Morrow, in his book *Be Data Literate*, argues that you don't have to be a data scientist or a statistician to use data every day at your job with great effect and satisfaction. He lists three conditions or three Cs of data literacy: curiosity, creativity, and critical thinking:

- **Curiosity** is an imperative to ask questions: What happened? Why? What might happen next?
- **Creativity** helps translate data into insight, pose new hypotheses and find the easiest, fastest, and cheapest ways to validate them.
- **Critical thinking** is a condition of evidence-based decision-making: clear, rational, open-minded. It's necessary to analyse the data, communicate, and act on them.

All three Cs match the skills professionals and creatives cherish. None requires surrendering to the data dictate and limiting journalistic, marketing, or product expertise and experience. The opposite is true.

As Sir Francis Bacon wrote in *Sacred Meditations*: “knowledge itself is power.” It's yours to take now. ■

Defining benefits of data and metrics

“The truth is, firms never are customer-centric. People are,” Harvard professor Thales Teixeira told participants of our Audience Analytics Accelerator in Latin America.

For Teixeira, customer-centricity is a condition of a company’s resilience to disruptions of business models. In *Unlocking the Customer Value Chain*, he claimed it’s customers who disrupted businesses – not technology itself.

Rohit Deshpandé, author of *Developing A Market Orientation*, found that high-performing firms:

- Know more about customers and have deeper insights than competitors about their needs.
- Use insights to out-compete others in serving customers.
- Motivate employees to innovate around the customers’ needs.

As data is the source of insight along with research and intuition of employees, customer orientation essentially means *listening*.

The Times of London’s ex-Head of Digital Alan Hunter went further and declared in his blog: “Data is your readers.”

There is no value in hoarding data if it is not used. Companies don’t become more efficient – nor effective – only because they *collect* data. Their employees improve the business as they *learn* from data and adapt ways they do things.

“

The truth is, firms never
are customer-centric.
People are.



— Thales Teixeira, Professor, Harvard Business School

”

This is why data and metrics are fundamental to the news business transformation. Making media customer-centric, impactful, and financially sustainable depends on employees listening to customers, learning and adapting, and forming a culture to handle this change.

A. Case study: Mediahuis, The Netherlands

Data offers tremendous benefits to news media companies, but one area that's too often overlooked is its importance in creating a more customer-centric business.

"In journalism, we use the five W's," Riske Betten, digital director at Mediahuis Nederland told attendees of the Audience Analytics Town Hall in November 2021. "If you leave one of those out of your article, it might be incomplete. But a colleague shared that we also have five W's in data."

Those five W's are why, why, why, why, and why.

By asking that question more often, media companies can get to the bottom of their problems, such as a technology hiccup, and find ways to please the customer.

The 5 W's

Journalism

1. Why
2. What
3. Who
4. When
5. Where

Data

1. Why
2. Why
3. Why
4. Why
5. Why

While journalism ask the five Ws of 'Why, What, Who, When, and Where,' the five Ws of data ask 'Why, Why, Why, Why, and Why.' Asking this question often can help media companies get to the bottom of their problems and provide solutions, said Medahuis' digital director Riske Betten.

Data is also useful in looking behind goals and finding the appropriate drivers and influencers for each one. Then, there are indicators that can be identified to confirm that all these elements have fallen in line.

"These are the targets you will hit if you have everything in place. When it comes to using data, you need to get a grip on the chain of elements," said Betten, whose company, Medahuis, is an Antwerp-based media company with national brands in Belgium, The Netherlands, Ireland, and Luxembourg.

Building a customer-centric business depends on listening to what the customer says they need. It can be done in many different ways, Betten said: digitally, through testing, or through face-to-face conversations. How that listening is done is less important than just doing it. "Thinking you know your customer is the biggest downfall because you are not your customer."

One way to become more customer-centric through data is to make sure the data you're collecting is telling a story to the teams that are analysing it because "that's what journalists like, and if you're just gathering figures, there's no guarantee they'll use it."

Make the data compelling to them, and they will use it to help transform the business.

"It comes down to getting more information about your customer," Betten said. "Whether that's using algorithms, A/B tests, user research, or through conversations. Start getting closer to your customer and keep in mind the customer is why we are doing these things. We want them to be satisfied."

B. Case study: SBT News, Brazil

SBT News, a Brazilian television network, worked on finding out what specific content makes visitors stay on its Web site. The team performed A/B tests using Google Optimize to see what elements it could improve and change to attract the audience to the content. One of the big changes that helped with engagement was positioning of elements like embedded images and video.

"By placing video at the top of the page, we realise we can have more engagement, more retention with our users," said Editor Cido Coelho, whose team worked with The Guardian on this project.



SBT in Brazil exceeded its goals in increasing session interactions, returning visitors, and pageviews.

SBT had four main goals:

1. Increase interaction in sessions from 34 to 45 seconds.
2. Reduce bouncing from 86% to 75%.
3. Increase the number of pages visited from two to three.
4. Increase the number of return visitors from 30% to 40%.

Coelho said the big lesson learned was that if they wanted to improve in all these categories, they needed to test everything to understand the behaviour of the reader. They also changed a lot of different things on each page to decide what worked and what didn't.

Over the course of the Meta Accelerator project, SBT enjoyed exponential growth for three months. Session interactions increased to 52 seconds, smashing the goal of 45 seconds. Another positive result was the percentage of returning visitors, nearly meeting the goal of a 10% percent increase, from 30% to 40%.

"We highlighted our call to action and included a link on the homepage after the first paragraph so we could increase the recirculation inside the page," Coelho said. "We saw really good results doing that. In three months, we almost doubled traffic on our home page and the number of pageviews increased in a meaningful way."

From September to October, during that call to action change, SBT saw its pageviews increase 6.3%. From August to September, SBT saw a 5.2% increase in unique pageviews.

"We could have new experiences, new content, and more information for those who access our Web site," Coelho said. ■

Mitigating the risks of data and metrics abuse

Sceptics point out that knowledge and creative work require autonomy to produce quality outputs, worrying that data and metrics undermine professional judgment and artistic creativity rather than empower it.

In the book *All the News That's Fit to Click*, Rutgers Professor Caitlin Petre described metrics as a form of managerial surveillance and discipline at the leading newsrooms. She studied such diverse brands as The New York Times and Gawker Media.

In the worst-case scenario, Professor Petre found, metrics could facilitate the regime in which “journalists are reduced from expert arbiters of newsworthiness to mere executors tasked with unquestioningly following the dictates of quantified representations of audience popularity.”

No wonder the sceptics resist. “Journalists possess professional status, ample reserves of cultural capital, and a highly visible public platform — resources they can mobilise to resist metrics-driven performance evaluation if they choose to do so.”

To avoid resistance, Professor Petre recommended data initiatives and products should gain trust and acceptance by concessions to journalist’s autonomy — for example, by giving reporters less raw data and more insights based on data.

At an INMA Smart Data initiative meet-up in November 2021, she suggested creating rituals, such as meetings during which all team members look and reflect on data, as well as setting clear boundaries when people are free to act based solely on their judgment.

“

Journalists possess professional status, ample reserves of cultural capital, and a highly visible public platform.



– Caitilin Petre, Professor, Rutgers University

”

Most participants of the INMA meet-up agreed with her. In a poll, 65% said data should inform the decisions but not drive them.

A. Case study: Público, Portugal

Becoming a completely digital media company is a slow burn for Público, and the Portuguese company’s Head of Analytics and Audience Insight Elisabeth Fernandes was quick to tell attendees of INMA’s Product and Data Summit in October 2021 they are in it for the long haul.

Having started its digital transformation in 2015, Público knows the importance of buy-in from the different teams in the newsroom. The analytics team developed both immediate and long-term goals around using data to increase engagement.

Público, a tabloid based in Lisbon, was one of the first mainstream Portuguese newspapers to start an online edition in the mid-1990s.

“The goal was to face the daily needs and the daily questions of all the teams and to explore and integrate the data to deliver manual reports,” Fernandes said. “In the long term, the goal was to work in the data vision, develop the data-driven culture, and build automatic reports.”

Another long-term goal, Fernandes said, is to build a strong analytics department to deliver information to its teams.

"We had a lot of conversations with the editorial teams, subscriptions department, and the analytics [department] to understand what they want from the data," Fernandes said.

They then listed all the questions each department posed and delivered actionable information for each person and each department. Then, they worked with T to figure out how to best collect more data.

"We looked at our data and decided which internal and external data sources we needed to integrate and to improve our data to build the first automatic report," Fernandes said.

Once the reports started coming in, the analytics team had to loop in all the different departments to show what they learned.

"It's really important to communicate and to help the people understand what to do with those KPIs," Fernandes said.



Público's KPIs were based on what was needed to improve engagement.

They started with more meetings and focus groups as well as daily, weekly, and monthly newsletters to team members.

“We explain what happened, what could be done, the things that went good or not good,” Fernandes said.

The analytics team also made colourful graphs and charts and put jokes in the newsletters to make sure colleagues engaged with them and, more importantly, improved their decision-making as a result. Once teams learned the basics, Público kept evolving and enhancing its strategy as company objectives changed.

In 2019, Público began focusing more on who its readers are and how to better talk to those readers.

“We deliver content by group like the main hours, the main content that this kind of reader likes to read, which day of the week,” Fernandes said. “All this information was really useful to change the mindset of the newsroom and all the sections of the newspaper.”

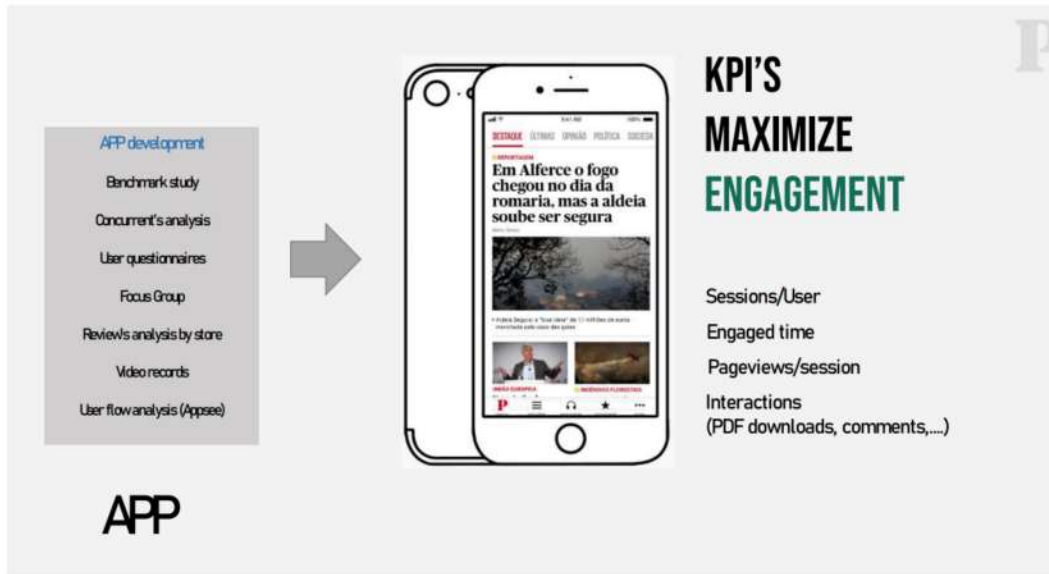
As KPIs changed, Público also changed its automatic reports to include information that would help improve engagement, acquire more readers, and achieve other goals.

“The most important thing is value,” Fernandes said. “To deliver valuable information to the teams could be useful to improve the results and to optimise the experience for our readers.”

Público has found that a centralised Web page to which all the teams have access works best to see all the data coming in. It comes in the form of historical data, real-time data, and data that is helpful in predicting the future. This way, each team – like the distribution team, for example – can work with the analytics team to best serve the reader.

“We work with them to improve the SEO strategy, the strategy for newsletters, the strategy for notifications, always to shift the maximum reach and engagement by channel,” Fernandes said.

Two years ago, Público also started focusing on engagement instead of pageviews as part of the push for value and using great journalism as the best acquisition



For Publico, changing its KPIs to focus on engagement instead of just pageviews helped them to improve engagement, acquire more readers, and achieve other goals, explained Head of Analytics and Audience Insight Elisabeth Fernandes during INMA's Product and Data Summit in October.

strategy. While they have made a lot of headway in their journey to provide great data and analytics, they are experiencing the same challenges faced by many other media companies.

"It is quite hard to find in the market people who want to work in a newsroom and analyse data in a specific industry," Fernandes said. "We have partnerships with universities to improve and develop machine learning models because it is very hard to hire more people with analytical skills."

Fernandes believes the evolution at Público won't ever stop between journalism, tech, and data. "We will always work to help journalists and editorial teams to achieve their goals."

B. Case study: UOL, Brazil

For UOL, the Meta/ INMA Accelerator project was an opportunity to figure out which content to close behind a paywall. Project leader Emiliaine Vieira said the company already uses a paywall but wanted to expand its subscription product, which currently is limited to just a few areas of its site.


UOL is owned by Grupo Folha and stands for Online Universe, the largest content, tech, services, and digital payment media company in Brazil.

The company has some business rules it is working under, including not being able to paywall the following content:

- Gate traffic originating from the home page.
- Hard news content.
- Non-opinion columnists.
- Merging open and closed content in the same section.

UOL decided it would be best to work with Piano's paywall in the future so it can work within the confines of its business rules. But it also conducted a series of analyses and defined areas to test the implementation of a paywall.

"Our first goal was to learn to know our subscribers better," Vieira said. "We studied their behaviour and demographics. We look at what they consume across the site,



AUDIENCE ANALYTICS ACCELERATOR LATAM 2021
PROJECT PRESENTATION

NEXT STEPS

SHORT-TERM

- Run experiments to validate the rules we've defined;
- Repeat steps to identify new rules and opportunities.

LONG-TERM

- Complete the validation of sections that can be gated, based on the developed methodology and business rules;
- Migrate to a dynamic model based on the user journey, using machine learning and Piano features.

EXPERIMENTS

We will run the following experiments in the coming months:

- 1**
For specific traffic sources, apply hard paywall to blogs that already have metered paywall
HYPOTHESIS: Users from traffic sources that are more related to the brand are more likely to convert, even if the audience is smaller
TRAFFIC SOURCES: Facebook, Twitter, LinkedIn, Newsletter and Google AMP
OBJECTIVES: Compare different traffic sources with a hard paywall
- 2**
Test the paywall on a group of tags listed on the most read by subscribers content
HYPOTHESIS: Putting the most read by subscribers content behind the paywall will increase conversion
TRAFFIC SOURCES: All except Home
OBJECTIVES: Test the conversion potential of the next sections we plan to close. Establish order of priority to gate

UOL in Brazil will continue running experiments and repeat the process for long-term results.

beyond the sections, and we compare that to the general users to compare how similar they are and how different they are.”

The next step was for UOL to have a better understanding of its products, such as the sections with the highest conversion rates. It extracted entities from the most-read content using NLP (natural language processing).

Then UOL created these new paywall rules to test:

- Apply hard paywall to content that already has a metered paywall.
- Apply hard paywall to content on Google AMP that already has a metered paywall.
- Paywall the open content most-read by subscribers.
- Paywall content to those with the highest conversion rate.

“We’ve identified 100 tags and four traffic sources that are eligible to close with these rules,” Vieira said.

Next, UOL plans to run experiments to validate the rules it identified and repeat the process to identify even more rules and opportunities. Long-term, it wants to use Piano and machine learning to move to a dynamic model based on the user journey.

Vieira’s advice to other media companies is to cross-reference data on Google Analytics by user ID to see what users are doing across multiple sections. She said they were excited to implement everything they learned all at once, but they quickly learned to take it one step at a time.

“We need to start with the basics of our business first,” Vieira said.

She also learned simple and clear data is more useful than complex data that has no viable use. And most importantly, she learned a model based on the audience is best for starting out; from there, you can evolve if you know your users and their journey. ■

Measuring journalism

There is no agreement on how best to assess journalism and the work of journalists.

A review of academic papers and essays of academics and industry thinkers, such as Lindsay Green-Barber, Rasmus Kleis Nielsen, Robert Picard, Richard Tofel, and Ethan Zuckerman finds that:

1. The work of journalists is the easiest to measure by activities and outputs, e.g., number and length of articles filed, time spent researching stories, and number of sources.
2. The quality of journalists' outputs is trickier to measure and includes checks of adhering to the craft standards, metrics of user engagement, willingness to pay, and recognition by peers such as citations and awards.
3. The impact of journalism on individuals, society, and institutions is the hardest to quantify, and the two main methods are
 - Measuring individuals' gains in knowledge and changes in attitudes (measured with surveys),
 - Measuring actions by stakeholders (donations, statements, changes in decisions or policies).

At an INMA Smart Data initiative meet-up in November 2021, both Caitlin Petre (an academic) and Alan Hunter (a practitioner) recommended using a holistic approach to assessing the value of journalism and work.

Petre said “News media organisations tend to focus greatly on the impact of metrics on news content – which is important – but they also need to look at the impact they make on journalistic working conditions and on the sustainability of journalistic work at that level.”

The measures of individual works’ quality contribute to other considerations about the employee’s performance such as:

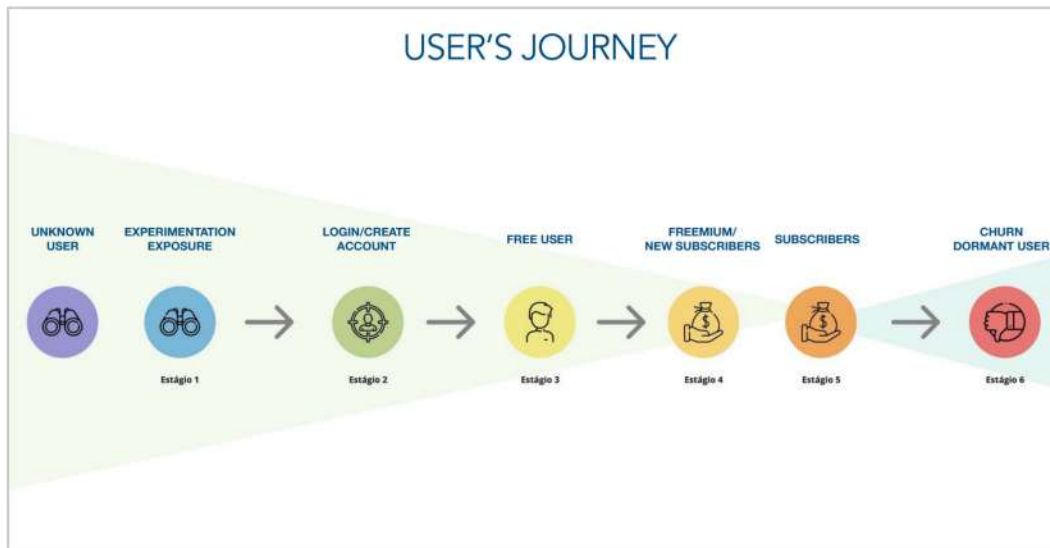
- Creativity and general attitude.
- Alignment to the news firm’s values, mission, or goals.
- Responsiveness to guidance and feedback from superiors.
- Collaboration with other colleagues at a company.

A. Case study: Editora Globo, Brazil

Alexandre Cordeiro, digital strategy manager/head of product and marketing, digital transformation, and innovation at Editora Globo in Brazil said they want to create a dashboard that will help their newsroom’s decision-making process. They want to evolve the way they generate intelligence through data and then transform that into actions. To do that, they identified the deliverables that would help get them there:

- A standardised set of KPIs.
- A method to follow-up on tests and its learnings/key findings.
- An easy-to-understand dashboard.
- A focus on execution.
- An automated dashboard with real-time updates.

The dashboard helped the team at Editora Globo – a family-owned media company that started in broadcast television and is now the largest media group in Brazil, with many newspapers and radio networks – focus on the user journey.



Editora Globo in Brazil mapped the user's journey to determine how to achieve its objectives.

"An unknown user, we want to make him a subscriber, not a dormant, not a churned user. The dashboard shows us, on a weekly basis, what's going on inside this funnel," Cordeiro said.

Technical problems have slowed down Editora Globo's timeline in getting the dashboard fully functional.

"We're stuck on the coding phase, so we're still trying to put all these KPIs together," Cordeiro said. "It's complex, and this is part of the learning."

His advice for others on this journey is to get a version of the dashboard up and running quickly.

"Try to slice your project into small pieces and have them executed. Make it live so you can learn from it and hear from your stakeholders," Cordeiro said.

He also urged teams to make sure the project priorities are aligned with priorities of other departments such as marketing and commercial.

B. Case study: Caracol TV, Colombia

Ricardo Suarez of Caracol TV, a free-to-air television network that has aired in more than 80 countries, said his team wanted to create an efficient model. They had two priorities: implementing Google Analytics and creating a strong, technically advanced dashboard.

Suarez's team created a first version of their dashboard and quickly sent out a poll to see how their departments liked working with it. After gathering feedback and recommendations about the usage from newsroom staff, they continued to evolve the dashboard.

"Some of this feedback was that we had to step on the brake a little bit in order to optimise this tool and this interface," Suarez said. "The idea was to create more advanced functions to have some tools that could be more specific in terms of analysis, but also take into account that they were user friendly."

PROBLEMA A RESOLVER

ACTUALMENTE NO CONTAMOS CON UNA HERRAMIENTA DE DATOS DE FÁCIL ACCESO Y ENTENDIMIENTO PARA LAS SALAS DE REDACCIÓN. CON EL ACCELERADOR DE DATA DE INMA Y FACEBOOK QUEREMOS CONSTRUIR UN **DASHBOARD QUE SIRVA DE ALIADO PARA TODOS LOS PERIODISTAS EN SU TRABAJO DIARIO Y QUE PERMITA **TOMAR MEJORES DECISIONES** EN CUANTO A **PRODUCCIÓN DE CONTENIDO** PARA AUDIENCIAS MASIVAS Y DE NICHU, OPTIMIZACIÓN DE **ESTRATEGIAS DE DISTRIBUCIÓN** Y NUEVAS FORMAS DE CONECTARSE CON LAS **DEMANDAS DE CONSUMO**, PARA LOGRAR MAYOR **IMPACTO EN LA AUDIENCIA.****



The image shows a smartphone displaying the Caracol TV news website. The screen features a navigation bar with the Caracol logo and 'NOTICIAS CARACOL'. Below the navigation bar, there is a section for 'Transmisión' with a live stream icon and the text 'JUEGOS OLÍMPICOS | RIGOBERTO MENDOZAR'. A large image of a crowd is visible, with a caption below it: 'Antioquia Necoclí 'es una bomba de tiempo' por crisis de migrantes, dice su alcalde'.

Caracol TV in Colombia created a technically advanced dashboard that helps it make decisions through data and metrics.

Suarez said they created five versions of the dashboard based on feedback but also taking into account the metrics and how they were going to make it work with their specific KPIs.

Their dashboard has three separate tabs. The first focuses on what to publish. The second focuses on what they should promote. "What are the best channels in terms of performance in terms of content? We're using a metric that is really important, which is CTR," Suarez said.

The third tab is the audience tab.

"It's to bring the main data of Google Analytics in terms of users, demographic data, and there are times when they access the Web site," Suarez said. "This is the area where journalists see how the site is working at a specific time."

They are working on some pending issues.

"We are working with a consulting company, an external one, to deal with data, and we are generating a roadmap of adoption of a dashboard by the newsrooms," Suarez said.

Looking to the future, Suarez anticipates creating even deeper habits within the departments to build a data-driven newsroom that is based on making decisions through data and metrics and not gut feelings.

"So we qualify them, we train them in order to bring this digital culture into the newsroom," Suarez said.

Caracol is working on a sixth version of the dashboard to make it even more user-friendly and ensure the information is clear and easy to understand. ■

Choosing metrics

Advances in technologies made it easy to measure consumption of journalism, and there are many metrics from which to choose

- **Popularity metrics** – number of users to a site, number of visits or clicks.
- **Activity metrics** – time spent, number of comments, purchase of a subscription.
- **Loyalty metrics** – number of active days, total time spent, customer lifetime value.

In *Measuring User Engagement*, Mounia Lalmas and her colleagues conclude there is no single metric that captures all dimensions of engagement. She also noted that performance of a particular article or author will be often influenced by factors independent of their efforts

- **Distribution**, e.g., position on the home page, in social media and search.
- **Promotion**, e.g., a headline and an illustration.
- **Topic**, e.g., news story vs. lifestyle feature.

In a nutshell, comparing the performance of an article about politics and culture, or its authors, will end up comparing apples to oranges.

The biggest controversy in news media usually surrounds the popularity metrics, such as pageviews, blamed for driving *clickbait*, or low-quality content designed solely to attract clicks and ad impressions.

Critics often blame the pageview metric for the ills of modern journalism, but popularity obviously matters – and not only to business, noted Chris Moran of The Guardian, a guest expert at the NMA Digital Reader Engagement Master Class in September 2021.

The impact of journalism on society depends on *how many* people are aware of the news, and journalists often see legitimacy for their political, social, and economic status in being read and not just published.

The shift to reader revenue brought new metrics into focus, such as article conversions, or new sales attributed to individual stories based on the last article viewed before purchasing a subscription. This metric has limitations, too – it neglects *all* articles viewed before the last one. It's like analysing dinner habits based only on cherries on top of the desserts.

How to select the relevant metrics then? The best practice, based on multiple accelerators and labs co-organised by NMA, is to start with defining editorial and business objectives first, and plans to achieve them second, before deciding on metrics.

Management by objectives has been popularised since the 1950s. Over years, the idea of leading with metrics held many names – Objectives and Key Results, S.M.A.R.T. criteria, Balanced Scorecards, North Star goals. It is a proven method of focusing an organisation around a single goal or several goals, counting on breakthroughs enabled by the focus.

For example, an NMA town hall in late 2020 heard from Philippe Colombet, publishing director of the French national daily newspaper La Croix. Last year, company leaders set a goal of 100,000 online subscribers to be reached by 2023, as it would guarantee the company's sustainability. Planning backwards, it understood it needed to acquire 24,000 new subscribers every year, and to achieve that goal it needed to reach 300,000 engaged users monthly.

Based on the growth strategy, La Croix could choose the primary metrics that would best tell whether it is on track to achieve the goal and which are secondary used to assess individual initiatives or to understand their effects holistically.

A. Case study: Diário do Nordeste, Brazil

Diário do Nordeste wanted to know what users were doing on its site. Users were registered, but the company didn't have a good way of tracking what they were consuming once inside the news portal. It also wanted to collaborate more among the newsroom, marketing, and sales departments to drive subscriptions.

UX designer Emilia Fortes said they began with the hypothesis that they could build an ecosystem to track, authenticate, identify, and sort reader behaviour.

Diário do Nordeste, a newspaper published in Fortaleza, the capital of the Brazilian state of Ceará, had three product objectives:

- **Register a unique user ID** for every user that signed up on the Web site, regardless of whether they had subscribed.
- **Sort users by grouping them based on consumption levels and type of content.** Then, Diário do Nordeste could create custom CTAs and subscription offers. "We also wanted to sort the users so we could track if it was the best type to offer a subscription once inside," Fortes said.
- **Create a score for leads in the user funnel** and identify moments to offer them a subscription or different content.

Diário do Nordeste then created a roadmap, which Fortes said had four points:

1. Track user behaviour.
2. Create engagement scoring.
3. Create user IDs.
4. Build the dashboard with the funnel of user sign up and subscriptions.



Diário do Nordeste in Brazil created a clear roadmap before beginning its digital transformation journey.

She said the roadmap had many different avenues, and they completed the steps except for engagement scoring.

"The engagement scoring we couldn't do, but we started it," Fortes said. "We now know how engaged a user is inside our Web site. But it isn't automatic; it's still a manual thing."

Fortes said to track user behaviour, they were able to track 27 different events throughout the Web site.

"We didn't know we could track so many events inside our Web site to track the engagement of the readers," Fortes said.

They created user IDs by using Google Analytics and could see what each user was doing inside the Web site. Then they created the dashboard.

Diário do Nordeste now has a dashboard that tracks users through the subscription funnels. They also better understand loyal users' behaviours, thanks to Google Analytics.

"We also subscribe to Marfeel Compass so we can take more advantage of actions in real time," Fortes said.

They organised the data about users through events they tracked and also created a chart.

"We had all this data inside the dashboard but it was shown in a completely different way that didn't show us the answer to our questions," Fortes said.

With help from their Accelerator mentor, Elisabeth Fernandes, they were able to understand more about the engagement of the users in the Web site.

Next, Diário do Nordeste is learning about how to best use Marfeel Compass, which they began using in September 2021.

"We still need to understand and implement it in our daily routine," Fortes said.

They also hope to streamline their user ID objective to make it less labour-intensive on their people resources. "We had a lot of data from our users with the user ID but we still need to automate that analysis," Fortes said. "Today, it's manual."

Next Steps

- ✓ — Implement Marfeel Compass on our daily routine
- ✓ — Automate analysis to offer subscriptions for engaged users
- ✓ — Grow the data driven culture in the newsroom

Diário do Nordeste

Diário do Nordeste continues its journey, including learning how to best use Marfeel Compass.

She said she wants to continue growing the data-driven culture in the newsroom, including working with editors on how they can use data. But one of the big takeaways for *Diário do Nordeste* was what to base their reports on.

"We learned we need to do reports based on objectives and not based on the data we want to show," Fortes said. "We must first think of what question we want to answer and then create a dashboard or a report based on the answer to that question."

B. Case study: Los Andes, Argentina

Los Andes' rich history as a regional newspaper published in the Argentinian city of Mendoza began in 1883, and it proved itself to be a pioneer again in 1995 when it became the first newspaper in Argentina with a Web site. In 2020, the Grupo Clarín-owned newspaper wanted to reinforce its standing as a forward-thinking company by exploring tools for data analysis and learn how to use those to increase subscriptions, said Leo Rearte, the company's assistant secretary of editing.

"We are in the early stage in [digital] subscriptions so we had to explore tools to grow in this race. There were several things lacking that we had to tackle head on," Rearte said. In the Meta Accelerator programme, they were able to identify their needs and create a road map for reaching their goals.

The first objective was to increase usage from registered subscribers, and that meant finding what generates greater engagement from those users. As they delved into what they needed to do, they discovered three obstacles

- They didn't count on the need for segmentation and didn't know how readers were divided.
- They didn't know what content was most relevant for each group and what content generated the most interest and activity.
- They didn't have a tool to automatically cross-reference the data.

Each issue needed to be approached individually, and they began by implementing Wyleex analytics, which works with a paywall. "This allowed us, based on their analytics, to identify reader clusters," Rearte said. "That let us understand how the clusters were formed."

EL PROYECTO:

Implementamos Wyleex Analytics. Esto permitió, en base a un algoritmo, determinar los siguientes clúster de lectores:

- Golondrinas
- Enamorados
- Interesados
- Amigos



LOS ANDES

Los Andes in Argentina implemented Wyleex analytics to better identify reader clusters.

Identifying reader clusters allowed them to segment the audience, differentiating between light readers, more interested readers, and fans with high levels of engagement.

“We divided the readers by activity level and user cluster,” Rearte said. “Then we needed to understand what type of content each one read.”

Once they understood that, they were able to cross-reference clusters to see what content was most appealing. “Using cluster analysis, we sent newsletters with content of high interest for fans to the group of interested readers. We wanted to convert those interested readers to fans.”

Another trial involved testing their newsletter. While one group received Los Andes’ traditional e-mail newsletter, others received a curated newsletter based on analytics. “We were able to send a newsletter with information that would supposedly create high engagement,” Rearte said. And while it is still too early for them to draw final conclusions, the results have been promising, he said.

“The opening of the curated newsletter was 65% greater than the traditional newsletter. We did not see much variance regarding the traditional newsletter, but in the analytics newsletter, there was greater effectiveness.”

This experiment taught the need to have a focused approach and create trials to experiment and measure results. Next, they will continue conducting trials and measuring the results to see how they can translate the process to a commercial model.

“This will allow us to generate small commercial newsletters and monetise what we’ve learned so far,” Rearte said. ■

Developing data products

A data-based report, an analysis, or a tool all are products and should be developed as any other products of a news company – its Web sites or apps.

The data product development should focus on solving an internal customer's problem – for example, guiding newsroom editors on demand for coverage. This could be addressed by a one-off report or by a regularly updated dashboard or newsroom workshops. It's important not to get fixed on the product's vision in the beginning, but rather to discover the customers' problem first.

Product development starts with the opportunity analysis and research – in this example, with mapping the editors' decision-making process. Research is an integral part of the development, and not an afterthought, teaches Kellogg professor Mohnbir Sawhney in his book, *Product Strategy*.

The next step is to ideate what data could improve decisions, how best to deliver it, and then prototype the solution. This is not yet the end product. It still needs to be presented back to editors and likely will be further worked on.

Modern product development is an iterative process, hypothesis-driven, validated with real customers, and improved with feedback.

Data products should have clear metrics of success such as, for example, adoption of a new dashboard and gains or savings in the editors' time. Data products need managers who own the features and the goals just like any other product in the company.

Many practitioners, such as Caroline Carruthers, co-author of *The Chief Data Officer's Playbook*, recommend a sort of start-up mentality to building data products.

While many data officers might believe they should begin their mission with foundations, such as planning data governance or infrastructure, it takes time, and they risk disillusionment of the CEO, the board, and colleagues.

Carruthers recommends *vertical strikes*, or *minimum viable products* in the start-up speak — find a problem and fix it, demonstrating the business value of data.

"Solving one problem after another, you will build your base eventually, but people will see the return on investment more quickly," Carruthers told INMA members at a Product/Data Summit in October 2021.

The quick wins build credibility of the data team, too, and help get approvals and resources for next products and initiatives.

A. Case study: Grupo Reforma, Mexico

For Grupo Reforma, understanding why users churn is a top priority, said David Hinojosa, TR&D subdirector. The company, which publishes 10 daily newspapers in five cities in Mexico, is counting on this knowledge to help increase subscriptions 15% by 2022 and 60% by 2025.

"With that information, we think we can make more informed decisions to grow our base," he said.

The hypothesis of the project states that developing both qualitative and quantitative tools to identify reasons for churn will help the company transform content and/or the way it is presented, and discover how relevant its subscription offers are.

For its quantitative tool, the company aimed to

- Build a data model based on the navigation and conversion from those subscribers who churn.
- Discover the behaviour patterns they had before their churn as a warning sign.



In developing its quantitative tool, Grupo Reforma in Mexico defined six important variables as they related to engagement.

The company defined six variables for its quantitative tool: frequency, content consumed, categories, concepts, freshness, and duration.

“With those six different variables, we tried to find a relationship between those variables and engagement levels,” Finojosa said.

Using the first version of its engagement index formula with these variables, the team can chart a correlation and identify the propensity to churn. The team plans to continue A/B testing and to improve its data model moving forward.

For its qualitative tool, the company aimed to

1. Find out directly from former subscribers why they churned.
2. Organise, categorise, and count the factors/reasons.
3. Define strategies and actions to reduce the churn.

Grupo Reforma sent surveys to former subscribers to discover reasons behind their churn and offered 14-day free access for those who completed the survey. More than 70% of survey takers used the trial.

The survey itself used open-ended questions so users could describe why they churn. It also asked for suggestions to improve products and user experience. The company aims to use this tool to get insights daily so it can continue to improve its offerings.

Although both the quantitative and qualitative tools are only in their first version, Finojosa said they helped Grupo Reforma prove its hypothesis. “We did it. We found most of the important reasons why users churn and we are taking actions to improve that churn.”

C. Case study: Página 12, Argentina

To improve its click-through rates, Página 12 wanted to find a way to give editors more information about how specific articles were performing – and learn how to present them in a way that would be more attractive to readers. To make that happen, it was important to create a tool that could predict the probability of each article’s success, said Mariano Blejman, head of digital strategy at the Buenos Aires-based newspaper, which was founded in 1987 and is owned by Grupo Octubre.

To begin their journey, Blejman said, they adopted a seven-step discovery process for working with the editors:

1. Present their hypothesis.
2. Adapt hypothesis based on any new information they discovered.
3. Conduct trials using different data sets and test the hypothesis.
4. Redefine the scope of the trial based on results.
5. Find the best results.
6. Review the results with the editor.
7. Learn from the results.

Ruta de la presentación

Primer acto: se presenta hipótesis de co-ocurrencias

Segundo acto: se adapta la hipótesis inicial

Tercer acto: se hacen pruebas con distintos sets de datos para testear la hipótesis.

Cuarto acto: se redefine el scope del set de datos para encontrar mejores resultados

Quinto acto: se encuentran mejores resultados.

Sexto acto: se prueba con editores en la redacción

Séptimo acto: aprendizaje y próximos pasos.

Página 12

Página 12 in Argentina adopted a seven-step discovery process for working with editors.

Paloma Urtizberea Garcia, a freelance data science consultant who worked with Página 12, helped the company create a model that would predict the click-through rate (CTR) in headlines. During the first trial, she explained, they collected articles from the last two years and extracted words from Google Analytics to see how they performed. From there, they gained a better understanding of what title they wanted to be part of the model.

That helped create a model in which they achieved a 76% rate of precision, “which meant 76 of 100 headlines could predict if it would fail or be successful,” Garcia said. Then, they set up an online application that allowed them to play with the headlines and track their performance.

“Once they were published, they were matched with a historic base to see if they had low or high success probability,” Garcia said. “We had to manually track how the articles were doing.”

Then, they compared the CTRs to understand how headlines were helping the stories perform. Being able to give feedback to editors and bring in historical information using the CTRs of similar headlines was helpful in determining what their next steps should be.

Now, they use the platform tailnews, which is available online and uses Artificial intelligence (AI) to assist with headlines. Blejman said it has been an important step in changing how editors select headlines – and how readers respond. ■

Embracing experiments

In 2021, Professor Damian Radcliffe of the University of Oregon updated his annual report of revenue models in the media. The current edition lists 50.

Futurist and bestselling author Amy Webb's *2021 Tech Trends Report* grew to 504 pages and gently warns before letting you download it: "Don't read in one sitting".

A quick search of the INMA's archive of best practices spits out more than 6,000 case studies of strategies and tactics.

Which model, strategy, tactic, trend should you focus on? No wonder today's decision-makers might feel overwhelmed with ideas, paralysed by the search for the next best one.

Michael Schrage, author of *The Innovator's Hypothesis*, calls ideas "empty calories of innovation" – accessible, tasty, and initially satisfying, but often making you sick.

He sneers: "There is not a business executive who hasn't heard or uttered the phrase: 'Well, it seemed like a good idea at the time' in the wake of costly failures or pathetic results."

Instead of meditating and deliberating over ideas, Schrage recommends checking them out – selecting the ones with the highest impact potential and validating them in the simplest, fastest, cheapest, leanest way possible.

"A good business experiment speaks more eloquently than a good business idea," he argues. "Good experiments are more persuasive, more useful, and more valuable than good ideas. Good experiments manage expectations better than good ideas."

In *The Power of Experiments*, Harvard professors Michael Luca and Max Bazerman find the first documented examples of rigorous A/B testing in *The Old Testament's* Book of Daniel and track the record of this method in driving innovation in science, business, and government.

In theory, an experiment is an easily replicable test of a hypothesis that generates meaningful learning and measurable outcomes.

In practice, the experiment validates or negates the relationship between an action and an outcome

- We believe that [doing something] ...
- ... will likely result in [expected outcome] ...
- ... and we will know that because [the relevant metric] significantly changed.

“

Good experiments are more persuasive, more useful, and more valuable than good ideas.



— Michael Schrage, Author, *The Innovator's Hypothesis*

”

Well-designed experiments require rigour and structure, and Luca and Bazerman present the basic concepts

- **Control and treatment groups:** The participants of the experiment, for example online users of a news site, are divided into two cohorts, of which one receives the current treatment (a basis for our analysis) and the other one gets an additional treatment relative to the control group, for example, a different colour of a “Subscribe” button on a home page.
- **Independent and dependent variables:** The former represents the change in our treatment (the colour) and the latter measures the desired outcome (an increase in the number of clicks or conversions).
- **Average treatment effect** will be the effect of our actions on the experiment participants derived from comparing the outcomes of the treatment vs. the control group, for example, a change in the number of clicks or conversions.

While not every hypothesis will be confirmed by the test, any conclusive experiment can be deemed successful as they provide an insight. If the hypothesis is confirmed, we know we can invest more in this idea; and if it is not confirmed, we’d better move on.

This example of an experiment around a “Subscribe” button is real. Helena Sund of Sweden national newspaper Expressen told INMA members at a November Digital Subscription Acquisition Master Class that making the button red and bigger on its homepage resulted in an immediate bump in traffic to the subscription shop page by 94% and a 60% increase in conversions.

“Test now, not later,” she pleaded.

A. Case study: El Tiempo, Colombia

Colombian national newspaper El Tiempo launched its subscription model in 2020. Diego Barragan, head of advanced analytics, said the company is working toward increasing the conversion rate of its content behind a paywall.

“We wanted to increase our number of sales, and we started using an algorithm that would show what kind of content we can close and what can be more successful,” Barragan said.

DataViz Tool for Editors

EL TIEMPO
CASA EDITORIAL

Editors and journalists can easily check the algorithm suggestion to make the locking decision. Users can filter by:

- Date
- Estimated Success

EL TIEMPO | **Locked Content Score**
Sugerencia contenido cerrado

FILTROS

1 Si desea hacer una búsqueda puntual podrá navegar por los siguientes filtros. De lo contrario, podrá visualizar los resultados en el paso 2

Selecciona un periodo

Interpretación éxito estimado
Si este artículo es cerrado, tiene alta probabilidad de ser exitoso

Éxito estimado: Alto (1)

2 CUADRO RESULTADOS

id	title	Éxito estimado	score
624656	Ecuador: claves de un rival peligroso, pero irregular de visitante	Alto	0.7217
624671	La mano de Raphinha y otras polémicas de la Selección Colombia con el VAR	Alto	0.7211

Editors at El Tiempo in Colombia can use a tool to determine whether content should be locked.

Editors were closing certain content and giving away other content for free without having relevant data to back up their decisions, he said. Now, by using a machine learning algorithm, the company can estimate the success of certain news content and decide whether it belongs behind a paywall.

Barragan said they created a tool for editors to use that is user-friendly and can filter by date or estimated success.

“We load the content, and then base decisions on this content,” he said. “This is how we make it available on the dashboard for the final user, for example, the editor or the journalist.”

The team at El Tiempo has validated its first hypothesis, finding that using a machine learning algorithm will help determine what articles will be more successful behind a paywall. They also know the tool it built for journalists is useful to see what works best for subscription conversion.

They tracked registered users and subscribers in the following categories:

- **Recency:** time since last visit.
- **Frequency:** how many days in a certain period.
- **Volume:** number of articles.

The first goal was to move 40% of subscribers who were in danger of being lost into the promising category through a weekly e-mail using content that loyal subscribers were consuming. The second goal was to turn 40% of its most loyal registered users into subscribers through similar weekly e-mails.

“We know who the user is,” Sanchez said. “What is their preferred section, article, preferred day, time of consumption, and different events, and behaviour actions with Google Analytics events?”

Sanchez said deploying the RFV model went as expected, but they didn’t get cloud automation to work.

“What we tried was a manual test, actually we just did two that were very focused because everything was manual,” Sanchez said. “In the next test step, we hope to scale automation, and we could do more tests and be more efficient.”

The team was able to map out some user journeys and tested their actions against certain audience segments. Then, it used the data as a jumping-off point for sending e-mails.

“What really happened was the e-mail strategy was effective in awakening sleeper subscribers, but we sent just four e-mails for subscribers and four for registered users,” Sanchez said.

Even though the test base is small, El Universal saw some promising results that encouraged it to keep going.

“We tested different times, subject lines, and call to actions,” Sanchez said. “For registered ones, we generated a special offer and we tried messages like, ‘You are just a step away from getting the best content.’”

Sanchez said 77 subscribers who were at risk of being lost moved up into the next funnel level of “promising” and four subscribers moved to the loyal segment. Fourteen loyal registered users bought subscriptions.

“These are very small numbers, but we are happy with them because maybe we wouldn’t have gotten them if we didn’t do anything,” Sanchez said.

El Universal is working on new ideas among data, subscriptions, editorial, and marketing teams.

“We are going to try this A/B test with different variables,” Sanchez said. “Narrow the segments even more with different variables to see what really drives engagement.”

El Universal will try different designs, more compelling messages to describe journalistic value, different days, hours, and subject lines. It will also work to increase the number of registered users by increasing its newsletter database. ■

Driving change

If data is your customer, what's the job of you, a data-savvy leader? What about assuming a role of the advocate for the customer? Don't you feel like a hero?

Leaders need to tell stories. Why me? Why us? Why now? "A story communicates the values that call one to action," wrote Harvard Professor Marshall Ganz in *Leading Change*.

"Stories teach. We've all heard the ending. 'And that is the moral of the story'. The moral is emotionally experienced understanding, a lesson of the heart and not only the head."

While data leaders might think being factual, scientific, and simply correct is enough to succeed in their job, history shows it's not enough to be correct to win elections, for example. And change is more like politics.

"Change is not a decision, it's a campaign," wrote Rosabeth M. Kanter in *Managing Change*, comparing change to political campaigns "to win hearts and minds and get people to vote with their feet."

Change leaders analyse their stakeholders' minds and hearts, then identify who might be their change agents.

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Change is not
a decision,
it's a campaign.



— Rosabeth M. Kanter, Professor, Harvard Business School

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In *Data Means Business*, authors Jason Foster and Barry Green grouped stakeholders of data initiatives according to how clearly they understand the benefits for the company and whether they used data personally in the past:

- **Sceptics** have never seen data work for a business and don't get how it can help them. They require both a clear vision and practical advice where to start.
- **Optimists** have seen benefits themselves, and are up to it, but they don't yet know what value it might add to the company. They need the vision and use cases explained.
- **Enthusiasts** understand the value of data for the business and are keen to make it work but they have no personal experience. We should provide them with evidence and practical advice.
- **Advocates** have seen data work before and understand how it can add value to the business. These are your allies in the change process, and one should get them on board with the initiative.

In practice, change leaders spend most of their time reaching out directly to stakeholders and repeating their story.

Lukas Görög, data strategist at Austrian national daily Die Presse, told the participants of the Audience Analytics Accelerator about one week in his life

- Daily presence in a newsroom to explain and show how to use data.
- Data Talks with teams for deep-dive analysis and experiments.
- Data Coffee for individual chats and hands-on training.
- Reports sent by weekly e-mail or shared with dashboards.

In the end, any change in behaviour depends on the individual's motivation, ability, and triggers, wrote Stanford Behaviour Scientist B.J. Fogg in *Tiny Habits*

- When motivating people to use metrics, you'd like to make sure they understand how they fit the brand's editorial and business strategy and what they mean to them individually.
- Viewing data doesn't mean people will be able to understand and act on them. Plan for training people, helping them make sense out of data, answering their questions.
- People ought to be reminded about data with rituals and processes, such as conversations at regular meetings or when reporting results.

A. Case study: Die Presse, Austria

When Die Presse, an influential Austrian newspaper with roots dating to 1848, introduced its paywall in 2017, it found rapid success. "Basically from one day to another we said, 'Hey, everybody, now you need to pay for our content.' And people started paying, which was impressive," said Stefan Körner, chief operating officer at Die Presse, during the INMA Media Subscriptions Summit in February 2021.

That became the foundation of Die Presse's digital strategy, which was bolstered in 2019 by the creation of a digital product that was designed specifically to generate revenue. That product successfully attracted 33,000 paying digital subscribers, which Körner said is "a considerable number" for their market. Die Presse has continued its digital transformation, and Körner shared how the company identified what path it needed to take and how it developed its strategy.

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Growth comes from a number of steps ... it's a steep staircase.



— Stefan Körner, Chief Operating Officer, Die Presse

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"We have one of the best possible strategies to align the business part with the journalistic part, and that is ... to monetise our quality journalism," Körner said. "Growth comes from a number of steps. We have been working on digital transformation for quite some time now, and I can tell you it's a steep staircase and there are a lot of steps to be taken."

Die Presse focused on four areas: data, technology, people, and product as part of its growth. All four of these areas were brought together by strategy, but as the company analysed every aspect of its digital products, it realised it had made many mistakes in its early digital strategies.

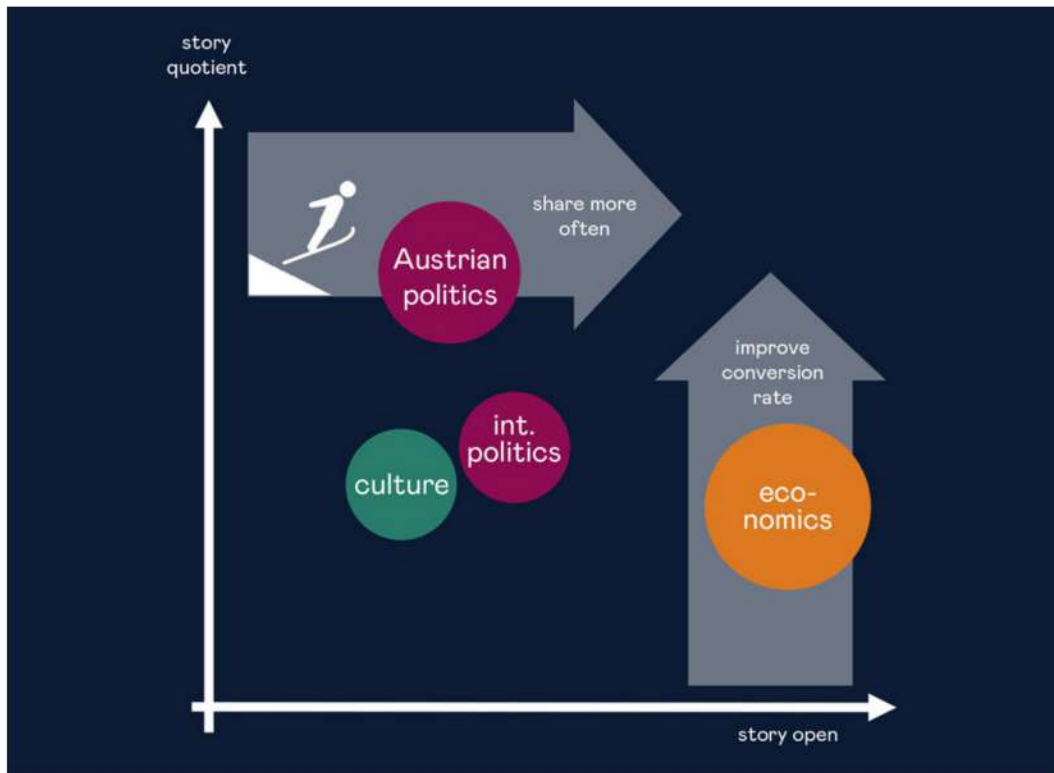
"At a certain point, we needed to realize that what we were doing was CRAP," he said. In essence, that **CRAP** analytics was

- Collecting the wrong data.
- Reporting data that was not a beneficial analysis.
- Avoiding analysis.
- Postponing action.

The solution, he said, was to move to a model of **CARE** analytics:

- **C**ollect the correct data.
- **A**nalyse it.
- **R**ecommend action.
- **E**xecute and experiment.

"This got us to build a data centre that got us from a place of using CRAP analytics to come to a state of seeing, thinking, and feeling data, which is a much better state."



Die Presse in Austria uses the "ski jumper's graphic" to help plan the takeoff, timing, and technique of each story.

A new ecosystem

This new CARE approach to data revolves around an ecosystem with five key elements:

1. Actionable dashboards that track segmentation, engagement, and conversion.
2. Reporting for the entire newsroom that shows "peaks of the week" and allows journalists to understand what stories are converting best, which are most popular.
3. Performance prediction analytics that ranks stories according to their engagement. A graphic called "the ski jumper's graphic" helps plan the takeoff, timing, and technique of each story.
4. Fitness monitoring to indicate the "health" of each piece of content and determine whether it is meeting performance goals.
5. Data talks between different stakeholders to provide deep-dive analysis and experiments.

Developing the right kind of dashboards and making them easy for all stakeholders to interpret has been beneficial for all departments and helps guide the strategy from a more informed vantage point.

"The focus on these dashboards is to allow quick decision-making for story position," Körner said.

Key learnings

The success of its digital journey is due in part to Die Presse's willingness to examine what was working and step out of its comfort zone to address what wasn't working. Ultimately, what Körner said they learned was:

1. Data will fail if it isn't simple and if it isn't lived throughout the entire company.
2. Data must be communicated permanently.
3. The data ecosystem needs to be an inclusive system that is designed for a non-technical audience. "It's not for the data people, it's data for the people."

B. Case study: Grupo AM, Mexico

Data is difficult to understand, especially when you're new to the data journey. So Grupo AM decided to explain it using the universal language of love.

"We're very early in our data journey," said Enrique Gomez, chief operating officer at Grupo AM, a news media company based in the Mexican region of Bajío. "What we found is that the newsroom struggles with it. They're able to gather the data, but it's difficult for them to understand. We wanted to help by making things easy for them. We wanted to help our journalists become data lovers to better serve our brand lovers."

That meant making data easy to read and understand, easy to cater to the needs and desires of brand lovers, and easy to test so they could learn and improve. Five goals were associated with that plan:

1. Change the culture.
2. Boost loyalty.
3. Learn to love the readers back.
4. Increase engagement.
5. Grow the business.

To reach those five goals, Grupo AM established three tools:

- **Cartas de amor ("love letters"):** Reports focusing on brand lovers that are easy for the newsroom to read and understand. These weekly newsletters provide insights on the most valuable user segments and also explain what sections and articles are most popular.
- **A/BC del amor:** A playbook for the newsroom to run A/B tests leveraging tools they already have available.
- **Tableros AMigos & AMantes:** Live dashboards to better understand the behaviour of key user segments. The idea was to get the entire newsroom talking about these dashboards and why they are important.

TODAY Not many in the newsroom 'speak data' because **it's hard to find and harder to interpret...** ... not many **know what our valuable readers want**, or what to change to better serve them it's hard to *consistently* design and **run successful experiments.**

Solving problems by making things EASY



Easy to read and understand



Easy to cater to brand lovers' needs



Easy to test, learn and improve

am

Grupo AM in Mexico decided to use the universal language of love to make data easy for everyone to understand and use.

"The goal of this is for everyone to get this information and start talking about why things are happening; not just looking at the charts but asking, how is my section doing, why are these things happening, and how can I do better?"

As they built the tools, Gomez said, they ran into an obstacle. Their existing Web site was not well designed for gathering data.

"We needed to build a more sophisticated dashboard, and that is going well." The second project, A/BC del amor, included creating an A/B testing playbook with a focus on hypothesis generation.

"We believe that is the most difficult part to get right; the why," Gomez said. "Why are we doing this, what do we think will happen? So we distilled this into a very easy phrase of, 'if we do this, then this will happen' and that's their hypothesis."

Grupo AM conducted product and editorial tests. Product has been extremely successful in improving engagement. The newsroom is running A/B tests on subject lines, which Gomez said is the easiest to produce.

“That’s not been as significant in terms of impact, but the whole goal is to get them going on A/B tests,” Gomez said.

The third project has been more challenging than they envisioned, as it is taking longer to build the real-time dashboard needed. “Right now, we don’t have specific segments we can look at in real time.” So, they’ll be looking into what tools they can use, such as Piano and CXense, to make better use of the data.

However, overall the programme has been a success.

“We were measuring success by falling in love,” Gomez said. “In the short term, we wanted the newsroom to fall in love with data, and we’re getting there. We’re getting engagement and seeing responses. We’re slowly looking for what’s going to get them to engage.”

They’re also going to turn it into a company-wide project, *Al Lector con Amor* (“to the reader with love”) to emphasise the culture change aspect.

Next, Grupo AM will expand its love letters and the playbook projects to get more sophisticated data – and continue making everyone in the company fall in love with data while helping readers fall in love with the content. ■

Conclusion

At a 2021 workshop, Gibson Biddle, ex-vice-president/product at Netflix, told INMA members: “Consumer science – the scientific method of forming hypotheses, then testing them – is the best way to build culture of customer obsession and to discover what delights customers in hard-to-copy, margin-enhancing ways.”

In this report, we provided evidence that customer orientation indeed leads to performance, and data is a key resource for customer insight. Metrics help manage resources more effectively and efficiently. They also drive profits.

We saw high-performing media companies know more about customers and have deeper insights than competitors. They use these insights for product development and growth, as well as for out-competing others in serving their customers. Finally, they motivate employees to produce customer-focused innovation.

We discussed the need to tie data and metrics to business objectives, and we showed that media companies shift from content-centred analytics to people analytics. Identifying, segmenting, and targeting readers have become the core skills driving business results.

Interestingly, advances in measurement also enable new business models. News media companies featured in this report have increasingly stopped selling access to print newspapers and instead started charging for consumption of online content and advertising performance.

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When it comes to creative people, you'd better ask how to use data to free yourself from doing things that you don't want to do rather than trying to make data do the job for you.



— Caroline Carruthers, Author, *The Chief Data Officer's Playbook*

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“Value is the ultimate outcome the customer seeks,” explained professors Marco Bertini and Oded Koeningsberg in *The Ends Game*. Ideally, companies would charge based on the tangible and intangible satisfactions the customer derives from products.

Most industries are in the early stage of this transformation. Technology makes performance models not only feasible, but also profitable.

The success of the customer-centred strategy depends on people and whether they become data-literate, listen to customers, and improve decisions with experiments. We called this process of empowering employees “data democratisation,” as opposed to the data dictate.

Sceptics of data and metrics raise valid concerns about the potential to limit creativity, undermine professional judgment and disempower journalists, marketers, and product teams.

We learned that leaders should make concessions to the professional autonomy of journalists and others to get newsrooms and other departments to accept and adopt data.

Caroline Carruthers, author of *The Chief Data Officer's Playbook*, said at the October 2021 NMA Product and Data for Media Summit: "When it comes to creative people, you'd better ask how to use data to free yourself from doing things that you don't want to do rather than trying to make data do the job for you."

NMA member publishers provided many examples of such concessions in practice. Funke Media in Germany analysed supply and demand of articles to identify topics with much effort and low performance. These were stories that reporters could stop doing.

News leaders should carefully select metrics. No single data point captures all dimensions of audience engagement. And while some metrics will be of primary focus — as they measure the progress towards the companies' North Star goals — a broader view of metrics, surveys, interviews, service calls, and other feedback is necessary to form a holistic and full view.

Democratisation of data requires data-based products that every employee making decisions in the company can use. In *Driving Digital Transformation Through Data and AI*, authors Alexander Borek and Nadine Prill recommended making data

- **Impactful** by addressing the key business and user problems.
- **Beautiful**, e.g., through dashboards and visualisations.
- **Tangible**, so everyone can work with data, e.g., via self-service tools.
- **Controllable** through data governance and data experts available for answering questions.

We discussed the benefits of the scientific method or testing ideas through experiments rather than endlessly debating them.

Germán Frassa, former director of product at El Mundo in Spain, is a fan of Carlo Rovelli's books on physics. When mentoring his Latin American colleagues during the Meta/ NMA accelerator, he recalled this quote: "Science starts with a vision."

While many suggest that science is forcing us into a counterintuitive and purely mathematical understanding of reality, Frassa strongly disagreed: "At the beginning, there is always a dream that comes from the human ambition of understanding, and

then it evolves into a hypothesis and goes through experimentation. imagination is the fuel that feeds the data engine.”

Data leaders should help form the vision, master its communication, and empower others to act on it. They might choose to lead by example like one Norwegian CEO and editor, Espen Egil Hansen, who led his team at Aftenposten to visit readers at their homes and ask them about their experience and needs.

Hansen told INMA these visits generated some new insights, but their main aim was of symbolic nature. “We are truly reader-first.” Smaller projects followed, with multidisciplinary teams experimenting and celebrating the quick wins.

Harvard professor John P. Kotter advised in *Leading Change*: “Use increased credibility to change systems, structures, and policies that don’t fit the new vision for the company.”

This is how Hansen’s spark of innovation started a fire transforming the culture of his newspaper to data-positive and reader-first. In the end, these are synonyms, as this report hopefully proved. ■