STORY DRIVEN READER REVENUE

C-POP: Turning Users Into Subscribers

Use New Data and Neuromarketing Tools To Produce
Relevant Content and Increase Reader Revenue

In cooperation with the

Google News Initiative

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Meinolf Ellers
Meinolf Ellers,
Chief Digital Officer, dpa

Dear colleagues,

For almost 25 years, digital business models revolved primarily around mass. The goal of achieving maximum reach with large volumes of content and turning this into cash through automated advertising models drove the production in newsrooms.

However, since digital advertising revenues have stagnated and platforms like Spotify and Netflix have shown how to turn millions of users into paying customers, more and more information media are turning to digital subscription models and thus to the power of strong content. "Our stories are our best subscription sellers," says Pal Nedregotten from Norwegian publishing house Amedia, one of the international pioneers.

For a long time, journalists had come to feel like subordinate raw material suppliers for channel managers or web developers. Now, in the world of digital subscriptions and story-driven reader revenue, they can influence the impact and success of their work like never before. To do so, they must be prepared to work with new allies in interdisciplinary teams, understand the individual user and his or her different preferences, and accept usage data as the unerring currency of editorial strategies.

The central challenge is to find the "perfect match" between content and user without overburdening editorial departments in times of scarce resources. This can only be met with intelligent technologies, algorithms, and data applications based on artificial intelligence.

With C-POP, the "Content Performance Optimization Program" of dpa and its Finnish partner agency STT, important foundations have been laid here. The project, supported by the Google News Initiative, used tools from the field of neuromarketing, for example, to take data analysis to a new level.

The C-POP feedback loop developed with the participating publishers as well as new metadata tailored to the new business models create the prerequisites for optimizing the content supplied by the agency in line with user preferences and thus actively supports media brands in turning their users into loyal subscribers.

Conversion Increase With the News Agencies dpa and STT

Katja Fleischmann, Head of Performing Content at dpa

Many media houses are working on increasing revenues through digital subscriptions. To support them on this path, C-POP was started: a project of the German news agency dpa with its Finnish partner agency STT. The aim of C-POP is to provide media publishers with high-quality, above all relevant, target group-specific content for their paid content area — using complex data analysis and neuromarketing tools.

International cooperation combines data and emotions

The C-POP project was an international cooperation, which was structured as follows:

DATA: The Finnish news agency STT analyzed relevant agency content together with the media companies Sanoma and I-Mediat. For this, the media companies shared their usage data with STT. To be able to draw the right conclusion from data, a special data strategy had to be developed because news agencies can't control or influence some key content success factors, for example the media houses' publishing process.

EMOTIONS: The German news agency dpa optimized content according to user preferences, which is the basis for a personalization of content. The editors focused on segmenting the content and, when they wrote the stories, addressing the readers emotionally. The usage of new metadata made the content "more intelligent." dpa tested the optimized content with the team from the publishing house NOZ Medien & mh:n Medien. A standardized article score was developed with Funke Mediengruppe to measure success.

STANDARD: The International Press Telecommunications Council (IPTC), the world association of news agencies and newspapers for the technical standardization of news exchange, defined the new metadata as a worldwide standard. This means that they can be used by all media companies.

EXCHANGE: The worldwide news agency network MINDS International ensured a constant exchange of experience among the agencies. Many of them have been engaged in data analysis at different levels and are testing different solutions.

Understanding readers with new data analysis and neuromarketing tools

The usage of innovative tools, for example from data, as well as the development of a new workflow between agencies and media houses were decisive factors contributing to the success of the project.

SPY TOOL: The Finnish news agency STT further developed its modular data tool called Spy as part of a data strategy aimed at finding the right metrics and KPIs which indicate news agency content success. The Spy tool helps the news agency journalists to better meet the needs of publishers and enables the publishers to take the right measures in improving news agency content success in a digital era.

LIMBIC® TOOL: With the Limbic® Map, a neuromarketing tool developed by the management consultancy Gruppe Nymphenburg, dpa built a new content strategy including new metadata for the first time in the media market and implemented it at C-POP. The result was smart content that helps media companies to segment
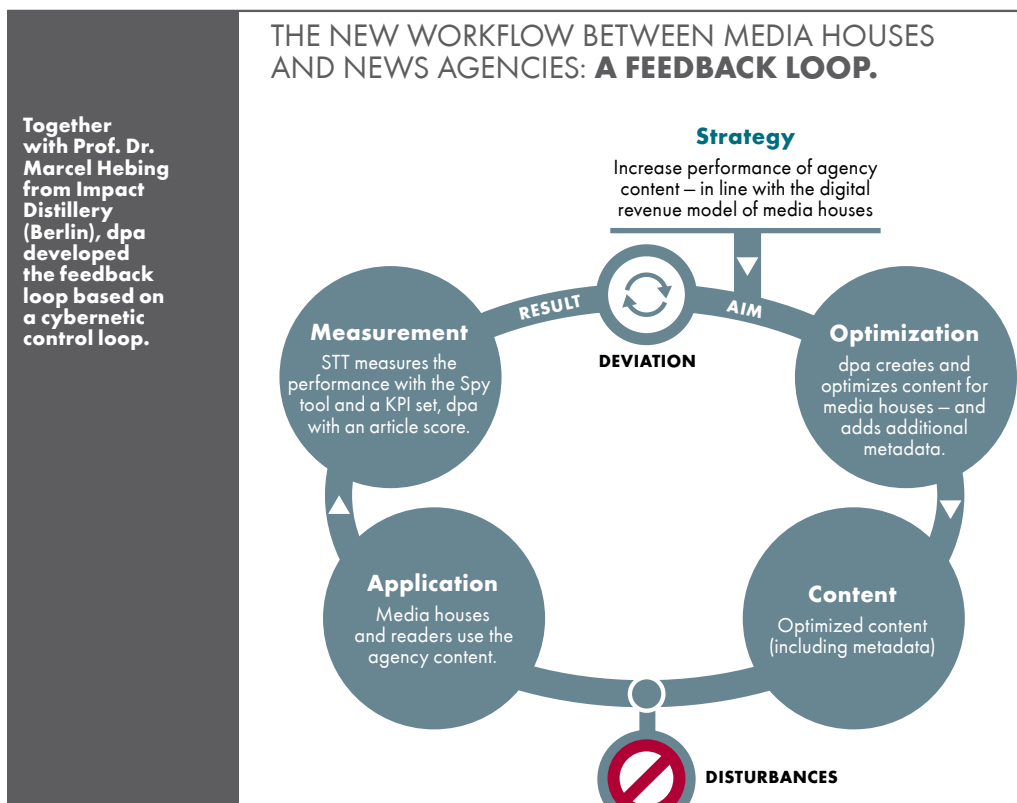
> **"The use of innovative tools and the development of a new workflow between news agencies and media houses were decisive factors for the success of the project."**

their readership and offers visitors to their websites a personalized experience.

INTERDISCIPLINARY TEAMS: The "perfect match" between content and user was a complex task that required the knowledge and cooperation of interdisciplinary teams. At C-POP, a group of data scientists, data analysts, editors, project and product managers, and web developers regularly exchanged ideas. The team evaluated measurement results and concluded instructions for each team member.

The feedback loop: Performance increase through new workflow

In summary C-POP developed a model of how media houses that use agency content can attract new subscribers. The result is a completely new workflow - a feedback loop. And this is how it works: The media houses provide the agency with usage data. The agency analyzes the data, optimizes its content, and delivers better performing content. A win-win situation for both sides.

THE NEW WORKFLOW BETWEEN MEDIA HOUSES AND NEWS AGENCIES: **A FEEDBACK LOOP.**

Together with Prof. Dr. Marcel Hebing from Impact Distillery (Berlin), dpa developed the feedback loop based on a cybernetic control loop.

Strategy

Increase performance of agency content — in line with the digital revenue model of media houses

Measurement
STT measures the performance with the Spy tool and a KPI set, dpa with an article score.

RESULT

DEVIATION

AIM

Optimization
dpa creates and optimizes content for media houses — and adds additional metadata.

Application
Media houses and readers use the agency content.

Content
Optimized content (including metadata)

DISTURBANCES

ANALYZING DATA

Identifying Relevant Agency Stories With the Spy Tool

Pihla Lehmusjoki, Head Of Media Services at STT

Only those who understand users and offer them the right content will turn them into loyal subscribers. To enable media houses to work in a revenue-oriented way, they analyze the usage behavior of their readers. In the future, they will be reinforced by news agencies: As a part of the C-POP project the Finnish news agency STT has further developed its Spy analysis tool to support better performance of the news agency content.

Overview of data analysis

The Spy tool collects and visualizes the following data: production, publication, and web performance. For STT, this means the analysis and evaluation of the...

1. **Production data:** What does the agency produce every day? The production data comes from the editorial system of STT.

2. **Publication data:** Which agency content is used online and in print by media companies? To what extent is the content used? The first question is answered by crawling and comparing similarity between news agency content and published content. STT works together with a media monitoring partner. The second question is answered by a text comparison. This method is used to compare similarities at the sentence level between the original agency content and the published content.

3. **Web performance data:** How does the agency content reach readers on the Internet? For this purpose, the media houses have shared the anonymized usage data for agency content. STT developed a Google Analytics script for the data transfer. The data is then fed into the Spy tool.

SPY AS MODULAR DATA TOOL

News agency

Media house

Consumers

News agency journalist → Editor → Feedback
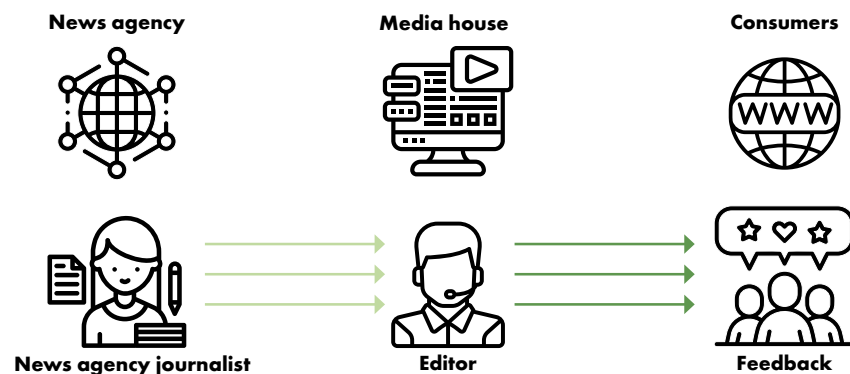
SOURCE:
PIHLA
LEHMUSJOKI, STT

LEVEL 1 Production data → **LEVEL 2** Publication data → **LEVEL 3** Web performance data

Performance metrics to indicate success

STT worked closely with Finnish media companies on the development of the Spy tool. With the help of C-POP media partners Sanoma and I-Mediat, STT defined the most important KPIs to indicate success. It was important to ensure a mutual understanding of the key performance metrics.

This requires the following:

• A deep understanding of trends that affect the performance of agency content.
• A definition of the key performance metrics for basic message flow optimization.

KEY PERFORMANCE INDICATORS

KEY PERFORMANCE INDICATORS	PERFORMANCE METRICS	GOAL
REACH	· Sessions · Page views	STT analyzes the web performance at the topic level. What type of news agency content is scalable throughout different publishing platforms?
ENGAGEMENT	· Engagement minutes · Scroll depth · Ad displays	Providing customers with enough information quickly helps to maintain the readers' interest. This will increase the commercial value of the content.
MEDIA BRAND COMMITMENT	· Bounce rate · Paywall bumps · Digital subscriptions · Ratio of loyal readers to fly-bys	Publishers need to attract more loyal readers. News agency content can supplement media customers' own topic selection and keep the readers browsing the website.

Data analysis, visualization via dashboards and reports: The spy tool makes data from production, publication and performance understandable.
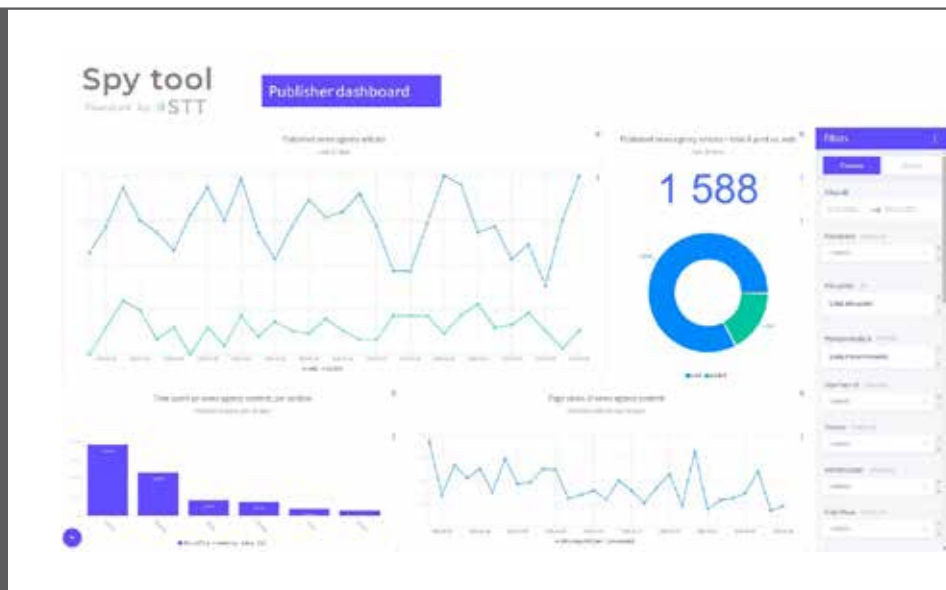
Conclusion

In order for media companies to increase their digital revenues via paid content models, the data analysis should ideally consider the entire content offering. With the Spy tool, STT has developed an analysis tool that closes an important gap between agency content and the media houses' own content. The tool can be used to analyze news agency content in detail with regard to the respective digital business model and offers media houses valuable insights into the overall performance of their entire content offering. Based on this, news agencies can adapt their content offering to the needs of their media customers' readers and thus also contribute to an increase in performance.

Creating Content With Limbic®, Reaching Target Groups Emotionally

Katja Fleischmann, Head of Performing Content at dpa

Within the framework of C-POP, dpa developed smart content for the first time to support media companies in attracting subscribers. In this way, each media house can offer targeted articles that are relevant for their readers. To do so, dpa adapted Limbic®, a proven tool from neuromarketing, and created a unique and innovative content strategy that reaches the reader emotionally.

Emotion-based content strategy for reader retention

People make decisions all the time. That includes clicking and reading an article on a website. Most people think this happens rationally and consciously. But according to modern brain research, people mostly make such decisions unconsciously and emotionally.

Based on neuropsychological findings, Gruppe Nymphenburg, a management consultancy based in Munich, has developed a map of motivational and emotional systems in the brain — the Limbic® Map. dpa has translated and adapted the neuromarketing tool for the first time for the media sector. This has enabled it to develop a new, emotion-based content strategy.

The Limbic® tool is based on the Limbic® Map. This map depicts human motives, values, and desires and connects them to each other. According to Limbic®, this results in three major motive systems, according to which humans act:

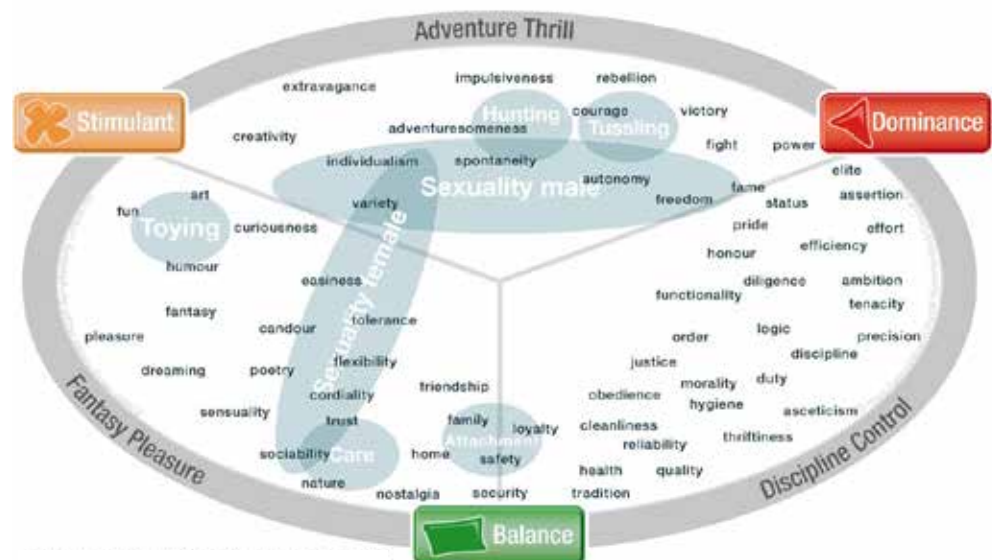**1. THE BALANCE SYSTEM** stands for safety, stability and order.

2. THE DOMINANCE SYSTEM is characterized by status, enforcement and autonomy.

3. THE STIMULANCE SYSTEM is characterized by a spirit of adventure curiosity, and variety.

THE LIMBIC® MAP

Behind these emotion systems are different expectations in (purchase) decisions, which have been incorporated into dpa's new content strategy.

dpa used the Limbic® emotion systems to form target groups:
- Target groups with a **balance focus**,
- Target groups with a **dominance focus** and
- Target groups with **stimulance focus.**

This means that the dpa editors wrote about a topic in several variations. They made sure that the topics, the tonality of the text, and the visual language matched the emotional appeal of the respective target group.

When applying the Limbic® method in initial tests, the dpa team concentrated on advice content. The result is a systematic approach that structures the content production.

NEW WORKFLOW: DPA PRODUCES CONTENT WITH THE LIMBIC® TOOL

TARGET GROUP	BALANCE	DOMINANCE	STIMULANCE
Image			
Characteristic	**Positive**	**Skeptical**	**Curious**
What characterizes the target group?	Family, Caring, Wellbeing, Order	Success, Ambition, Precision, Status	Adventure, Fun, Variety, Creativity

PROCESS OF CONTENT PRODUCTION

	BALANCE	DOMINANCE	STIMULANCE
1. Target group by business model	Conversion: Subscriptions	Conversion: Subscriptions, Membership	Reach
2. Key topics	family, health etc.	career, fitness etc.	games, lifestyle etc.
3. Thematic focus	nutrition: healthy eating	nutrition: getting fit through eating	nutrition: food trends
4. Tonality	warm and sensitive	cool and accurate	modern and relaxed
5. Visual language	green/brown	black/red	orange/yellow

Conclusion

Limbic® has proven to be an effective planning and text analysis tool. The model makes it possible to segment target groups and thus to analyze more precisely what content readers — and thus potential customers of the media houses — are really interested in. The success was shown in the performance of the Limbic® stories: They achieved higher click rates and generated initial subscriptions.

MANAGING CONTENT

Using Metadata to Create a Dynamic Online Offering

Katja Fleischmann, Head of Performing Content at dpa

Smart content is the key to more loyal and paying readers. If you want to offer them relevant stories in a targeted manner, you need a variety of different categories of metadata. The meta categories tested by C-POP — lifetime, importance and Limbic® — served exactly this purpose. They make media companies' online offerings even more dynamic and reach the reader where he or she is emotionally right at that moment.

With more metadata, media companies can better understand the reader step by step and adapt the content in a targeted manner. For this, they are assigned lifetime, importance and Limbic® values:

1. LIFETIME

The lifetime value tells you how long an article is current. It is divided into three categories:

short: Breaking news and daily news

medium: Stories are current over a period of about 24 hours.

long: Timeless articles, for example evergreen content.

2. IMPORTANCE

The importance category represents the news type of a story. It is divided into three aspects:

essential: The top news of the day

useful: Useful, helpful articles, such as advice content.

entertaining: Entertaining stories like celebrity news.

3. LIMBIC®

The Limbic® type identifies the target group for which dpa has produced content. The metainformation exists in three categories:

Dominance: The content is suitable for readers for whom career, status, performance, and precision are important.

Balance: Users of this target group want to gain security. Topics such as family and order are very important to them.

Stimulance: This target group is all about curiosity and fun. The content is aimed at this and appeals to "trendsetters."

Conclusion

The more metadata is used, the better media companies can deliver their content to a specific user segment. This increases the understanding about which content readers prefer. And this makes it easier to produce content that is specific to a particular target group. Above all, the integration of Limbic® helps to better understand the reader's emotional decision-making process. As a result, the content appeals more to the readers.

MEASURING QUALITY

Using the C-POP Score as an Analysis Tool

Dr. Steffen Wagner, Senior Data Scientist at INWT Statistics GmbH,
Katja Fleischmann, Head of Performing Content at dpa

What makes a good story? In order to evaluate the quality of agency content, dpa together with Christian Pieper, Head of Audience Development at Funke Digital GmbH and the experienced data scientist Dr. Steffen Wagner have developed a standardized content score.

Key figures for performance improvement

Defined by the team: Good articles are characterized by reach and commitment. They guide the reader through the conversion funnel — with the aim of securing a subscription. To measure whether this works, several key figures are necessary.

The C-POP team developed a scoring procedure so that the dpa editors can still see the evaluation of their content at a glance. The defined evaluation criteria include standardized and weighted key figures such as page views, entrance rate, average time on page and stickiness.

The content score was used for C-POP. Funke Mediengruppe and NOZ Medien & mh:n Medien shared their anonymous usage data with dpa. This data was aggregated at article level and thus reflected the interest in the corresponding content and its use. The four measures of the score are clearly defined and thus comparable across both media partners. dpa considered the conversion separately, as the subscriptions are customer-specific and therefore not comparable.

Overall, dpa uses a standard format for performance measurement. This enables other media companies to participate in the data analysis with little effort. dpa visualized the data via a dashboard.

C-POP SCORE OVERVIEW

MEASURED VALUE	SCORE VALUE	WHY IS THIS KEY FIGURE IMPORTANT?
Page views	max. 40 points	Which topics interested users?
Entrance rate	max. 20 points	What content attracted users to the website?
Average time on page	max. 20 points	How long did a user stay on the website and engage with the content?
Stickiness	max. 20 points	Which articles kept the user on the website and led to them reading another article?
C-POP Score total	**max. 100 points**	

CONVERSION

Subscription Plus	>0	Which articles generated a subscription?

Conclusion

With C-POP, dpa evaluated the quality of its content with the sum of four measurement values. This meant that a glance at one figure was sufficient to identify good content. A high score value indicated a high level of user interest and interaction with the content. The result allowed important conclusions to be drawn about user behavior and thus about the need for optimization to improve performance on the media companies' websites.

Using Target Group Content Successfully and Inspiring Readers

Natalie Skrzypczak and Katja Fleischmann, Performing Content Team at dpa

K nowing your readers well is crucial for attracting subscribers. Segmentation according to Limbic® enabled the preferences of the readers to be analyzed more precisely and the content to be adapted and played out accordingly. The result was greater loyalty and an improved user experience.

Doubling the reach by addressing target groups

The C-POP team built on dpa's Limbic® experiences. An A/B test with the Main-Post media group was used in advance to see how successful the use of the Limbic® target group tool is. For this purpose, two versions of articles from the advice section were played out to readers of the portal mainpost.de for six weeks: an article with a neutral headline and neutral picture, and a version with a Limbic®-optimized headline and picture.

Result: The reach of the Limbic® stories was on average more than twice as high as for the neutrally formulated content from the advice section.

In addition, Limbic® readers were more loyal than the readers of the neutral version: they came to the website on an average of about seven days over the previous 28 days, with the subscribers among them coming on 10.3 days. In contrast, the readers of the neutral version spent 5.6 days on mainpost.de.

Assessment: Getting closer to the reader with Limbic®-optimized content pays off. "The results show that advice content should be conceived and produced in a way that is more about the target group. Online offers must be geared to the frequency of visits and

the individual interests of the users in order to create the necessary relevance," says Carsten Kaiser, CEO of the digital service provider bineos GmbH, which helped to set up this test.

LOYALTY OF THE READER GROUPS
website visits in days

5.6	

User neutral version

6.8	

User Limbic® version

10.3	

Subscribers Limbic® version

High performance behind the paywall

NOZ Medien & mh:n Medien and dpa used the Limbic® tool when the project was launched to help gain subscriptions. They decided together to address the balance target group as potential customers and subscribers.

For this group of family-oriented people striving for security, dpa created balance-optimized advice content. In the process, the dpa team learned a lot about target group-optimized content. The central finding was that the hook of the stories was much more concrete and solution-oriented in the Limbic® version and the topics thus automatically gained depth.

The stories were published by noz.de behind the paywall — in the premium content segment. NOZ Digital tracked them and visualized the usage data on a shared dashboard. The dpa editors evaluated the data and optimized the content. A feedback loop was created between the news agency and the media company.

"Our experience with the target group content is very good. They met our requirements, were directly aimed at the target group, and ultimately stood out for their high performance."

Holger Blumberg, Product Lead Portale at NOZ Digital GmbH

Result: The target group content achieved an average score of around 53 points (max. 100 points).[1] They scored particularly well in average time on page (Ø 13,4 points, max. 20 points) and stickiness (Ø 16,02 points, max. 20 points).
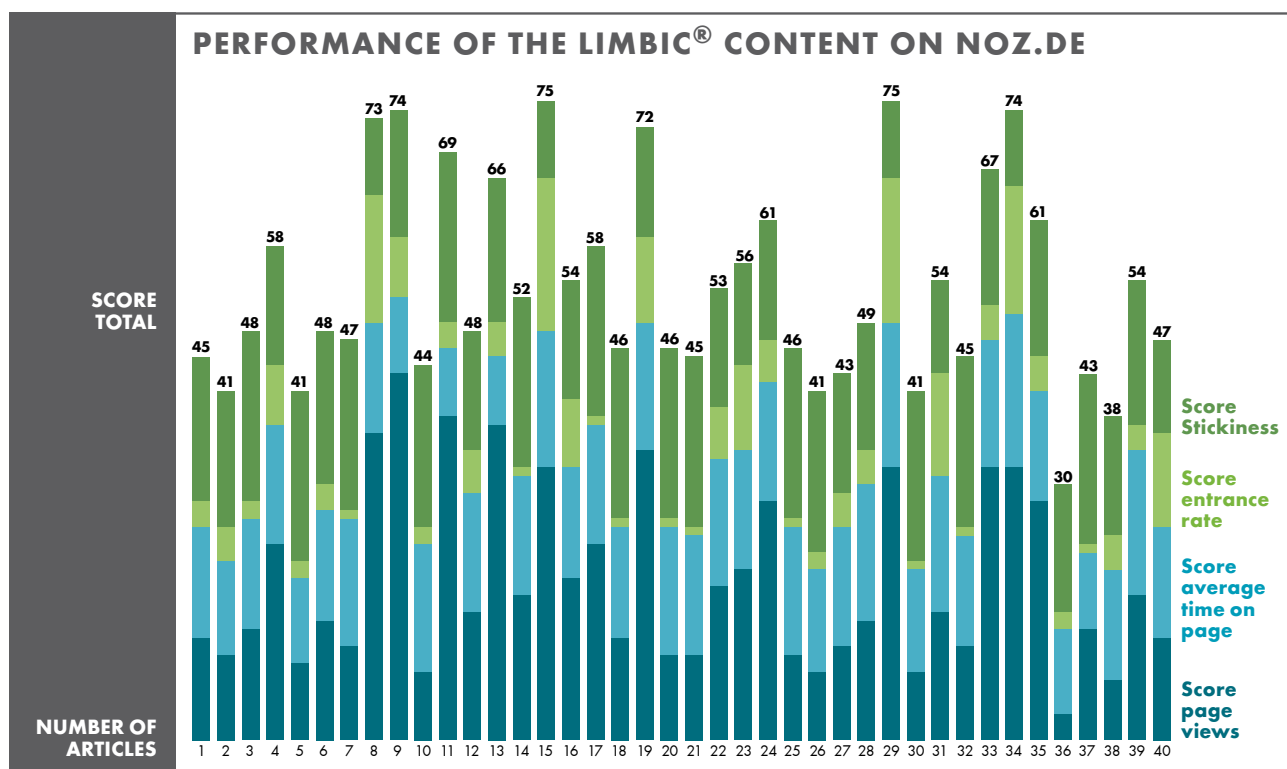
Assessment: Our experience with the target group content is very good. They met our requirements, were directly aimed at the target group, and ultimately stood out for their high performance," said Holger Blumberg, who as Product Lead Portals at NOZ Digital GmbH is responsible for noz.de. "In the test, we delibera-tely played out the dpa content on our social media channels, which led to more traffic. The targeted topic recommendations in the full texts also paid off. This enabled us to keep users on the website more effectively."

### Better understand target groups and increase performance

In order to get even closer to the "perfect match" between reader and content, the C-POP team from NOZ Medien & mh:n Medien and dpa now focused on three target groups and examined their success with an A/B/C test: dpa produced several articles from the field of health & nutrition and provided three headlines for each one — Limbic® Balance, Limbic® Dominance and Limbic® Stimulance. noz. de published the articles using an A/B/C test tool. The team used it to examine how heterogeneous the readership is and how strongly the respective target group is interested in a particular topic.

Result: The graphic shows how the three headlines were received for the individual topics. Result: Each variant found its readers.

[1] When news agencies analyze their content, it is important to consider potential influencing factors. These include, above all, factors that make a directly comparison between dpa and customer-specific content difficult. These include, for example, placement on the website, the distribution of agency content in social networks and a strong regionalization.

PERFORMANCE OF THE LIMBIC® CONTENT ON NOZ.DE

SCORE TOTAL

45 41 48 58 41 48 47 73 74 44 69 48 66 52 75 54 58 46 72 46 45 53 56 61 46 41 43 49 75 41 54 45 67 74 61 30 43 38 54 47

Score Stickiness
Score entrance rate
Score average time on page
Score page views

NUMBER OF ARTICLES
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

Working with three target groups visualise the different interests and needs of the readers on noz.de.

RESULTS OF THE A/B/C-TESTS
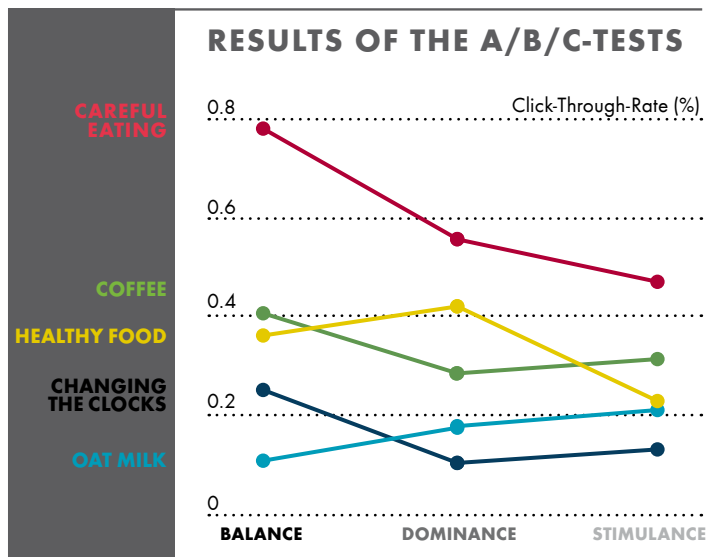
An example: the article about coffee. The headline about how coffee affects health (Limbic® Balance) was the most clicked on by readers. Other readers, in turn, wanted to know how coffee gives them more energy (Libic Dominance) and what new details they can learn about their favorite drink (Libic Stimulance). The different levels of acceptance of the content reflect the preferences of the readers and demonstrate the importance of personalizing content.

This graphic shows which Limbic® version worked best with which article. In an article about mindfulness while eating, it was confirmed that the topic of health and nutrition was of particular interest to the Balance target group. The article with an appropriately personalized headline scored best in the test with this group. The team thus immersed itself ever more deeply into the world of interests of the individual reader groups.

The average C-POP score for content was now 69 points. This is an increase of 15.8 percent compared to the previously published Limbic® content.

The increase is mainly due to a significantly higher reach. The number of page impressions increased by more than a third and the entry rate by around 20 percent. This shows that the gain in insight was increased on both sides due to the feedback loop between the agency and the media house.

Assessment: "Limbic® has helped us to get to know the preferences of the users better. We see how different the interests are. The better we understand this, the better we can satisfy our readers, and this increases the probability of getting them interested in a subscription," said Holger Blumberg.

PERFORMANCE OF THE LIMBIC® STORIES IN COMPARISON TO THE A/B/C-TEST ARTICLES ON NOZ.DE

METRICS	SCORE OF LIMBIC® STORIES	SCORE OF A/B/C-TEST ARTICLES	DIFFERENCE	UPPER LIMITS
Page Views	Ø 18,62 points	Ø 32,8 points	+14.18	max. 40 points
Entrance Rate	Ø 5,15 points	Ø 9 points	+3.85	max. 20 points
Average time on page	Ø 13,4 points	Ø 14,6 points	+1.2	max. 20 points
Stickiness	Ø 16,02 points	Ø 12,6 points	-3.42	max. 20 points
C-POP-Score	Ø 53,19 points	Ø 69 points	+15.81	max. 100 points

"Through the test, we realized that the recommendations in the full texts in particular offer many possibilities for personalization."

Carsten Kaiser, CEO der bineos GmbH

Personalized recommendations significantly strengthen reader loyalty

The more personalized the recommendations, the more enthusiastic the customers are and the higher the sales. Amazon, for example, shows how this is achieved. The principle can also be applied to media companies, as an A/B test in the project proved. Half of the readers received personalized, Limbic®-optimized article recommendations in full text, the other half received article recommendations on related topics.

Result: The readers of the personalized recommendations achieved a higher stickiness. This means they followed these article recommendations more closely and stayed on the website. The stickiness there was 72 percent, and 52 percent for recommendations without personalization. The difference is therefore 20 percentage points.

Assessment: "Personalized recommendations keep readers on the website and improve the user experience. Through the test, we realized that the recommendations in the full texts in particular offer many possibilities for personalization. This is something I can recommend to media companies," said Carsten Kaiser, CEO of bineos GmbH, who supported the C-POP project with data analysis.

LIMBIC®-TOOL

dpa divides the readership of a media company into three target groups. Based on the Limbic® neuromarketing model of the management consultancy Gruppe Nymphenburg, the team brings together readers with similar emotional worlds and values:

1. **Balance group:** If the emphasis is on balance, readers strive for security, peace and harmony. They protect themselves from uncertainty.

2. **Dominance group:** If the dominance system is strongly present, readers strive for enforcement and status. This group avoids loss of control.

3. **Stimulance group:** If the focus is on stimulance, readers like to discover something new and strive for individuality. This group does not like boredom.

The dpa-digitalwires as a Success Factor for Smart Content

Holger Blumberg, Product Lead Portals at NOZ Digital GmbH

Smart content can only develop its **full strength with the digitalwires of the dpa-newslab.** Via an application programming interface (API), media companies were able to use the new metadata — lifetime, importance and Limbic® — for the first time in the context of C-POP and benefit from optimized storytelling — a factor that significantly increases reader engagement.

As Product Lead Portals at NOZ Digital GmbH, **Holger Blumberg** was responsible for noz.de and for the implementation of digitalwires at NOZ Digital GmbH. In this interview he explains the advantages of the API for the media group's digital services.

Mr. Blumberg, how did you go about implementing dpa-digitalwires?
We were due to change our editorial system in 2019. The dpa content had up until then been delivered via the print editorial system.
We didn't want to invest in this system any more. So, it was clear to us that we wanted to switch to the new JSON delivery system. We sat down with the head of dpa-newslab, Gerd Kamp, in the summer of 2019 and discussed the switch to the new JSON feed.

With digitalwires it was then possible to either receive the content via push into an AWS-S3-Bucket or to retrieve all the texts provided in a JSON feed. Since we wanted to call up the interface at any moment, we needed a list of which articles have been created or updated recently. The dpa-newslab had already been planning another interface, the wireq. This provides a ReST API for a queue that contains all messages that have not yet been imported. We have been using this to call up the articles since December. Using the article's unique ID, the so-called URN, and the update date, we can assign the article in our system and when updating overwrite the article in the editorial system with the new content.

With the new delivery method, we were also able to implement new requirements for a text. Up to now, FTP delivery has only provided us with images in 4:3 format. The new image interface allows us to download the images in any format. For the website we load the images in 16:9 format with a page width of 1100 pixels. For the news app, we load an image in 1:1 format, which was not possible via FTP delivery.

Why is the new JSON feed better than the previous XML format NITF?
The main advantages are new formatting, time savings and new metadata: Compared to the old method via FTP, we now have saved two to three minutes when importing JSON documents via wireq API, which is a huge advantage in the daily editorial work. Our wish that the subheadings should no longer be transferred in capital letters, but instead with H2 formatting from dpa, could be addressed during the conversion. We are currently working with dpa on trying out further formatting

PROCESS OF JSON DELIVERY
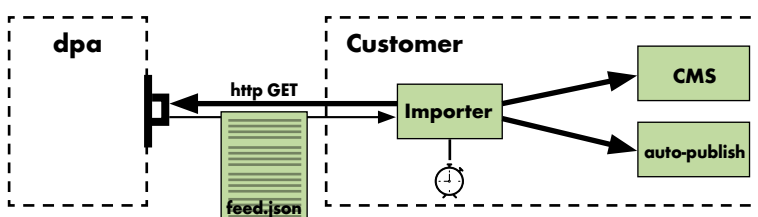
More technology, less effort: editors benefit from modern delivery systems.

"In the trio of dpa editorial staff, dpa-newslab and myself as project manager for the NOZ, SHZ and SVZ, we were able to quickly spot small problems and find solutions."

and links in the continuous text. In addition, we are testing the form in which EMBEDs must be transferred to us as a newspaper publisher so that we can play them out on the portals.

New metadata on the articles, which we receive in the JSON documents, are also advantageous. We can run articles into other departments based on keywords.

What should technical departments/ product management consider when implementing the dpa-digitalwires?
I would recommend that the publishing house explains their in-house working methods to dpa. Talking with Karsten Klosse, dpa's senior consultant, also helped us a lot in developing workflows. In the trio of dpa editorial staff, dpa-newslab and myself as project manager for the NOZ, SHZ and SVZ, we were able to quickly spot small problems and find solutions. And we were also able to talk about the special requirements of a publishing house on an equal footing and found a solution for almost all issues.

For dpa, our feedback on improving the dpa-digitalwires was also helpful. For example, that the JSON feed still delivers dpa's typical quotation marks and the effort that required for us

to convert them. Now the topic of "quotation marks" is being discussed again at dpa.

What requirements do you have for documentation on the implementation of the dpa-digitalwires?
Our developers were very satisfied with the documentation in the API portal. Additionally, we were able to clarify many questions directly with Gerd Kamp and his team via Slack and e-mail.

*The interview was conducted by **Natalie Skrzypczak,** Performing Content Editor at dpa.*

Your contact person for dpa-digitalwires
Dr. Gerd Kamp, Head of dpa-newslab
gerd.kamp@dpa-info.com

How to Build the Reader Revenue Newsroom

Dr. Dietmar Schantin, founder of the Institute for Media Strategies

Thanks to artificial intelligence, data analytics, algorithms, and dashboards, editors can determine the content preferences of their users like never before and tailor their topic offering accordingly. But those who want to take advantage of the new possibilities cannot avoid the profound changes in traditional organization, structures and workflows. Dietmar Schantin, founder of the Institute for Media Strategies (London/Graz), has advised leading publishing houses such as the "Wall Street Journal" and "Handelsblatt" on the conversion of their newsrooms to a consistent digital sales strategy:

Mr. Schantin, what is the current status of reader revenue models for newspapers worldwide?

Media companies worldwide have finally realized that in most cases digital business models based on pure reach, free content and digital advertising are no longer sustainable. Ad revenue is declining and prices are going down. In response newspa- per publishers, particularly in Europe and the North America, have shifted their attention to digital reader revenue. The more focused or niche you are the greater your potential to turn your users into subscribers.

Take the impressive examples of business papers like the "Wall Street Journal," the "Financial Times" or "Handelsblatt" in Germany, who have managed to establish a high price point for their products and can therefore earn substantial revenues.

For regional publishers, on the other hand, this new strategy still poses a different challenge. In order to find their perfect niche, they need to focus more on their local competences and concentrate on local content instead of investing resources in national and international coverage. Customers do not subscribe to a regional paper because of the stories from all around the world, or even from far-away parts of their own country, that are not relevant for the people in the local market. So, the niche that defines your exclusive USP, and which is hopefully strong enough to turn users into subscribers, can be a topic, a region but of course also a particular customer group, such as young families. Whatever it is, it needs to be very clearly defined and communicated.

What can we learn from the successful models in the Nordics?

What you can generally learn from our colleagues in Scandinavia is that they have a clear focus. Not only from a USP point of view, but also a clear focus in the implementation of this strategy.

Take the example of the Schibsted group. The newsrooms are really focused on their local and regional topics. Many of their titles have reduced

> **"So, the niche that defines your exclusive USP, and which is hopefully strong enough to turn users into subscribers, can be a topic, a region but of course also a particular customer group."**

"Nowadays newsrooms can easily track and analyze users' preferences on their sites and make editorial decisions based on this data."

their national and international reporting and they leave more of these subjects to their news agency partners. It's all about shaping your USP so that people are willing to pay for it.

What is the specific role of content and stories in the reader revenue strategy? Why is data so significant?

I'm convinced that content is the absolute king for any successful media strategy. Data can do a lot to help decide which stories are relevant to which users and user groups.

Take the very well-known example of Google Trends. When a flu epidemic is emerging, Google Trends shows a significant increase in search queries and indicates to newsrooms in real time that this subject is gaining relevance. The same is true for social media. Here you can measure the relevance by the emotions and reactions that a certain topic attracts.

Nowadays newsrooms can easily track and analyze users' preferences on their sites and make editorial decisions based on this data. This is especially valuable when editorial resources are limited and you have to decide where to concentrate the newsroom's attention.

To me data is a strong editorial advisor, not necessarily the editorial decider as some media houses argue. But we can't predict future developments. I wouldn't rule out the idea that one day the algorithms might be so clever and the editorial trust in their quality so high that we might hand over more editorial decisions to them. But I don't see this happening in the near future. For the time being selecting the right stories and filtering out the noise remains the core task for journalists.

And this is what customers also expect: People — the customers — pay other people — the

journalists — to gather the relevant data and information, verify it, create a story around it, weed out the unnecessary stuff, and present it in a weighted and prioritized fashion back to them.

What are the requirements for newsrooms?

A modern newsroom needs to be interdisciplinary. Absolutely. The challenges are too complex to solve with just one type of skill or expertise. An effective team shares common goals and has a shared vision, but requires different skills and needs to carry out different tasks in different disciplines to achieve them. There are the journalists, the data analysts, the communication specialists and there are experts for technology, for product management and for customer insight.

Now, more than ever, they all have to work closely together. None of these groups can achieve the overall goals on their own. All international newsrooms that are successful these days have embraced the principle of interdisciplinarity. Take the example of "Expressen" in Stockholm. They now have product managers working next to editors and data specialists. Same for "Der Spiegel" in Germany or the "Wall Street Journal."

What is the importance of culture and mindset? With data and dashboards everywhere the commercial pressure has also arrived in the newsroom.

An editor now needs to be very much aware and should feel the responsibility to not only create

Offering readers the right stories is crucial for a successful media strategy.

"In the digital world a newsroom has much more control when it comes to securing the best possible impact of its work."

content but also know how to best distribute and promote it in the available digital channels, including in print.

In the past the journalists had only a limited influence on where and how the printed newspaper was distributed and how their stories were best presented. In the digital world a newsroom has much more control when it comes to securing the best possible impact of its work.

And this is where data can help. For instance it can help decide the right timing to publish a story, which is hugely important for the impact. Or when it comes to the question of format: Is it only text or is there more potential if you add video, podcast or an infographic? I would argue that the traditional mindset whereby editors only need to concentrate on outstanding journalism and somebody else in the organization has to take

For journalists, it is now part of their job to be competent in terms of content and also have knowledge of the publication channels.

care of how to distribute and monetize it is no longer viable. It has been of course very convenient because when things went wrong, each side could point their finger at the other. These traditional mindsets need to change and barriers between departments need to be torn down. This does not mean at all that the integrity of journalism is under threat. A worry, that I have heard many times.

There are some controversial debates about the future role of data. Is it more of an advisor or is it the driver? Does the newsroom strategy need to be more data driven with even one central "north star" KPI for the entire organization or do you prefer a data informed approach?

I am not convinced that one KPI can be enough. Very often you have to deal with partly conflicting goals. Take, for example, the fact that in digital reader revenue strategies we basically have to deal with two different customer groups. Those who are not yet customers and who we need to attract and would like to convert into a subscription. And those who are already subscribers and who we want to retain and grow the paid relationship.

How do you manage to serve these two groups under one KPI? The strong focus on the conversion part reminds me a lot of the print world, where selling a print subscription and locking the customer into a 12 months contract was the ultimate goal. Keeping them was less of an issue, print subscriptions were rising in most part of the world.

So why bother with churn prevention? But when you talk to leading publishers these days, they will tell you that the primary challenge they face is preventing subscribers from cancelling. Therefore, I believe in dashboards and cockpits

with various KPIs, which show the customer journey, from attraction to conversion and retention. This helps to get a deeper understanding about the success factors of certain stories at a certain point within the journey and the behavioral patterns of the customers.

How can metadata help? Should editors attach certain metadata or should this be left to algorithms?

Metadata is hugely important in this game. Unfortunately, most of the publishers haven't realized this yet. In many cases the available metadata of stories comprises of the section and, in some, subcategories based on perhaps the IPTC convention. But I have rarely come across a thought-through taxonomy system that helps the analysis and insight process. That said, some attach metadata to every story, such as news value or expected story shelf life, which are used as parameters for programmatic publishing.

When we talk for instance about customer focus, I would love to see every story with a metadata point attached to it, with what might be of interest to the target group of this story. Or what the purpose of the story is, acquisition or retention for instance. If a journalist thinks about this when he or she creates the story, and it is tested afterwards to see if he or she was right or not, then this can make a big difference in the awareness and knowledge in the newsroom.

If you had to transform a classical newspaper newsroom into a digital reader revenue engine what would be the first three measures you would start with?

The starting point would be to make the newsroom understand really well who the audience and the potential and current customers are. How do they behave, what are their life interests and motivation, what drives them, what is the "job to be done" that they expect us to take care of? Becoming more customer oriented is a crucial step in the process.

The second would be to analyze our product and content portfolio really well. What do we produce and why do we offer it? Does it match the needs of the audience? Is it all based on tradition and assumptions or on incorruptible data? What works, what does not? What is the impact at what stage of the customer journey? These are important insights into the internal world.

The third step would be to educate the newsroom staff on these first two aspects so that there is a common understanding and everyone is talking about the same facts and singing from the same hymn sheet. When you have reached this point, then you can start to talk about a vision, goals, a strategy, new products. None of the newspapers I've worked with had done a structured content analysis before, let alone discussed it with the members of staff. With these three steps you build a foundation to create a new organization that is self-reflective and self-critical, and ready to embrace digital as an opportunity.

This interview was conducted by *Meinolf Ellers,* Chief Digital Officer, dpa.

"The starting point would be to make the newsroom understand really well who the audience and the potential and current customers are."

Dr. Dietmar Schantin is the founder of the Institute for Media Strategies, based in Great Britain and Austria. As a media strategist, Schantin advised major national and regional newspaper brands during the set-up and launch of their digitalization and transformation projects in the newsroom — including the "Wall Street Journal," "Handelsblatt" (Germany), the "Kleine Zeitung" (Styria Group, Austria) and "The New Zealand Herald."

To contact Dietmar Schantin:
E-Mail: d.schantin@ifms-ltd.com

10 Golden Rules for Target Group-oriented Journalism **From the C-POP team**

Wolfgang Nedomansky
Katja Fleischmann
Pihla Lehmusjoki
Meinolf Ellers
Holger Blumberg
Brendan Quinn
Natalie Skrzypczak
Mark Otten

The circle of fingers as sign of the C-POP team. Here you can see a part of the group at a video meeting in Corona times.

1 Define your target group(s): One text for all users — according to the motto "one size fits all" — is no longer up to date in times of tailor-made content such as that offered by Netflix and Co.: You will be more successful if you orientate yourself towards the interests and needs of your users. With target group models like Limbic® you can determine the most important customer types.

2 Get close to the user: Why is the topic relevant for him or her? Topics that affect their own lives are read more often and for longer, are shared more often, and lead to more digital subscriptions!

3 Prolong the success of a strong topic: With a new approach to the story, new pictures or another headline, strong themes and stories will still work well beyond just one day.

4 Reinforce the impact of a topic: A story is well received by your users? Offer them additional products such as videos, newsletters, podcasts or archive content from the database to match the topic and increase their loyalty.

5 Develop ties with users by involving them: The more starting points you offer your customers, for example by involving them via newsletters or opinion polls, the more loyal they will be.

6 Generate subscriptions using niche topics: They increase loyalty. In particular, areas such as culture, local sports or community lead users to digital subscriptions.

7 Use metadata to give your content technical intelligence: You can use information on the news value or lifetime value of an article to make content programmable, for example to personalize the offering.

8 Employ usage data to make your offer even more attractive: Monitor and analyze how your users consume your content. This allows you to make your offer even more attractive. This increases loyalty.

9 Focus on quality instead of quantity: In online journalism — true to the motto "less is more" — the amount of content published is not what counts. The quality of the articles is more important for reach. "The Guardian" and "Le Monde," for example, also had this insight, the online magazine for online media "Digiday" reported. They reduced the number of published articles and increased reach, length of stay, and ultimately the number of subscriptions.

10 Rely on the media brand: Content may have become more individual, but your publishing brand still radiates across the entire breadth of the accessible market. The International News Media Association (INMA) advises publishers to adopt a timeless "forever proposition" in order to remain relevant for younger target groups and to counter the volatility of digital subscription relationships with a long-term and deep "membership."

GLOSSARY

A/B-Test: A/B-Testing is a method of comparing two variants of a system, whereby the original version is tested against a slightly modified version. The aim is to determine which one achieves the better performance.

Algorithm: Algorithms are found in practically every computer program. They provide a kind of goal-oriented instruction, according to which a certain task can be solved step by step. Simply put, an algorithm is a defined and finite procedure by which a problem can be solved.

Article score: Criteria used to measure the success of an article.

Artificial intelligence: Artificial intelligence, a branch of computer science dealing with the automation of intelligent behaviour and machine learning.

Conversion: A conversion changes the status of a target person - from a prospect to a customer or buyer. In the media sector, it is usually a matter of converting a website visitor into a registered user or subscriber.

Conversion rate: The conversion rate shows the relationship between visitors to a website and the transaction made (conversion). The conversion rate is expressed as a percentage.

C-POP: C-Pop stands for "Content Performance Optimization Program." That is the name of the Google-sponsored project of the news agencies dpa (Germany) and STT (Finland).

Dashboard: Graphical cockpit to display key metrics to the newsroom teams.

Data analyst: Analyzes and evaluates data. Summarizes and presents work results. Coaches colleagues and superiors. Maintains and implements data systems.

Data driven publishing: Data in publishing empowers decision-makers to grasp the preferences of the audience and foresee potential future trends much better.

Data scientist: A person employed to analyze and interpret complex digital data, such as the usage statistics of a website, especially in order to assist a business in its decision-making.

Data-driven: Usage data and algorithms are determining newsroom decisions.

Data-informed: Usage data and algorithms are advising newsroom decisions.

dpa-digitalwires: A new, standardized delivery format that is optimized for the use of dpa content on the web and can be easily imported into the Content Management System (CMS).

Embed: An embed is an embedding or integration of a content, e.g. a video, using code on a web page.

Engagement: Users interacting with stories and services on a media site. The higher the engagement, the lower the churn rate.

Engagement Score: Metric to measure the engagement of a user.

Entrance: This is the page of a website that the visitor has directly accessed or on which he has landed through a campaign.

Entrance rate: Indicator that puts the visits during which more than one page is visited in relation to the total number of visits.

Exit: Leaving the website, for example by closing the browser, clicking on another website, or due to the expiration of the session

Freemium Model: In this case, content that is so exclusive or useful from the newspaper company's point of view that users are willing to pay for it, for example because they have no other way to obtain this content, which is relevant to them, free of charge.

FTP: With the File Transfer Protocol, FTP for short, files can be exchanged between different computer systems. It is a network protocol.

Funnel: Process to convert users from illoyal flybys to paying customers.

H2: <h2> is an HTML element that is used for level 2 headlines. In dpa texts, subheadings are marked as <h2>.

IPTC: The International Press Telecommunications Council, IPTC for short, is the world association of news agencies and newspapers for the technical standardization of the exchange of news. In the media industry, the IPTC is best known for the categorization or indexing of media content.

JSON: The JavaScript Object Notation, JSON for short, is a compact data format in an easy to read text form and is used for data exchange.

KPI: A Key Performance Indicator, KPI for short, is a performance metric that can be used to measure and/or determine progress or the degree of fulfillment with respect to important goals or success factors.

Lifetime Value: Metadata category to characterize the lifetime of a story ("short" for breaking news, "medium" for a 24 hours lifespan, "long" for Evergreen-Content.

Limbic Type: Typology based on the neuromarketing concept Limbic by the consultanty Gruppe Nymphenburg.

Metadata: Metadata or metainformation is structured data that provides information about a resource such as a web page or content. It allows this content to be processed mechanically and automatically.

Metered Model: The "metered model" makes a certain amount of content that is actually subject to a charge accessible to the user free of charge. This allows the user to get an idea of the quality of the content for exactly the topics that interest him.

Metric: Metrics are used to evaluate performance. They are used to measure corporate goals, success and failure.

News Type: Metadata category to distinguish "news to know", "news to entertain" and "news to use".

North Star Metric (NSM): A single metric that best captures the core value of a product.

Page views: Page views show the number of times an individual Web page is called up.

Paywall: Mechanism whereby access is restricted to users who have paid to subscribe to the site.

Propensity scores: Algorithms which calculate the propensity of a certain user to subscribe or to churn based on historic data and certain patterns of behaviour.

Stickiness: Users read an article, stay an the website and read another article.

Time on page: Period of time during which a user stays on the entire website or sub-pages.

USP: A Unique Selling Proposition, or USP for short, is the outstanding performance feature that sets an offer apart from the competition.

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