The dawn of a new media age

Cloud-based business models are challenging media companies

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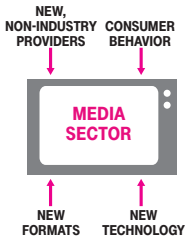
A wild mix: new competitors, new technologies, new consumers



New providers from outside the industry, new formats, the dramatic development of new, potentially disruptive technologies and new consumer behavior are creating a dynamic mixture with tremendous potential. There is no question: the media market is undergoing a profound transformation. But which technology trends (UHDTV (4K, UHD, HDR), 360° programs, virtual reality, augmented reality, OTT etc.) will prevail among media consumers? Which new special interest niches can be addressed economically? The list of questions is long. And – much more importantly – the list of correct answers has not been written yet.

Digitization offers media companies both sides of the coin: existing business models face radical questioning, while at the same time, new options for personalized and/or digitized media offerings are being created. The essential components already exist today: scalability, connectivity and tools based on new architectures. Infrastructure clouds and higher-grade services from the cloud are becoming essential tools for media providers to remain competitive throughout the digital revolution or even to shape the markets. And the cloud is the right foundation for exploring new business options for their potential at low risk, to identify and help shape trends at an early stage.

THE CLOUD MAKES YOU COMPETITIVE

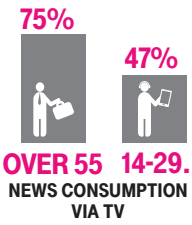
Disruption a la media

The disruptive power of digitization, with all its facets, is likely more apparent in media consumption than anywhere else: YouTube, Facebook, Snapchat, Netflix and the like have long established themselves as media platforms. The global trend – even in Europe, which is still lagging behind – points to on-demand[1]. However, this situation offers broadcasters and the industry an opportunity to reposition themselves.

While conventional television (along with daily newspapers) is still in favor among the older generations, under-25s are increasingly turning to digital platforms where media content can be consumed on demand. The most popular format is video. Mobile consumption is becoming a driver for further growth: worldwide an average of 30 minutes of video was consumed on mobile devices daily in 2016; on stationary user devices such as PCs, the corresponding figure was just 27 minutes[2].

Departure from conventional consumption

Studies from Australia, Great Britain and Germany[3, 4] confirm the departure from conventional formats: in Australia, just 44 percent of TV consumption took place through conventional linear TV in 2015; the data was collected shortly after major, national video-on-demand providers entered the market (or during their rollout). A further shift toward on-demand use is likely. In Germany, revenue with video on demand amounted to 800 million euros in 2016; growth of 18 percent is expected[5] for 2017. Media usage analyses for the UK and Germany highlight the different consumption patterns among different age groups: while 75 percent of over-55s in the UK still watch the news on TV, only 47 percent of millennials do. In Germany, the group of 14–29-year-olds watches just 124 minutes of conventional TV daily, much less than the average (245 minutes daily) of all those surveyed. Instead, this group has an increased affinity for using video formats on the Internet.



Conventional media are losing advertising budgets

The Global Entertainment and Media Outlook 2016–2020 by PWC and Strategy&[6] goes one step further and links this trend with the development of the media and entertainment markets: nations with higher proportions of younger people offer greater growth potential than nations with older populations. Only 2 percent growth is expected in Germany and Japan, for example, while Nigeria, Indonesia, India and China are expected to have growth rates of 8 percent and more. This delayed growth in Germany gives the media industry an opportunity to bet on the most modern technologies for digitization today. At the same time, the ongoing trend away from conventional media and toward (often free) Internet services is redistributing advertising budgets. The largest share is going to Internet and mobile advertising. As a consequence, providers of conventional media are receiving weaker ratings from banks[7].

The internet – the new media lifeline

ESTABLISHED AND NEW MEDIA FORMATS ON THE WEB

The Internet is becoming the new backbone for media distribution – for a wide variety of user devices that already goes beyond TV sets, notebooks, smartphones and tablet PCs: devices for virtual and augmented reality, along with 360° video, offer completely new, interactive ways of experiencing media content. Major Internet players like Apple, Google and Amazon have identified this potential and are expanding their services with their own (software-based) footprints in the media segment, both in the production and playout areas. The cards are being reshuffled in the battle for consumers, with OTT (over the top) offerings and video subscriptions.

No end to the upheaval in sight: Further impetus through 5 G

FURTHER IMPETUS THROUGH 5G

The provider/user ecosystem is transforming and although it is far from being settled, the new, more powerful 5G wireless standard has already appeared on the horizon, with the potential of supplementing the conventional outside broadcasting (OB) van. Yet another impetus that will change the rules of the game once more for the media sector.

Established broadcasters and media producers are being forced to explore this path of new agility. After all, the described challenges also harbor opportunities: to win new advertising budgets, create online channels, implement new exploitation methods (such as stock photos) or offer content in new markets. A flexible IT infrastructure plays an essential role here: the cloud.

Challenges for established media companies

The distribution channel is not the only element in the battle for the market: content is still king. Demand for high-quality content for specific interest groups is growing rapidly. At the same time, however, this content has to be produced at ever-lower unit costs.

NEW PLAYERS WITH WEB DNA OFFER THEIR OWN CONTENT

Companies from the tech sector – like Netflix, Amazon, Apple and others – are entering the market as new competitors and have transformed it completely. They generally rely on the cloud as their foundation, with its corresponding technical and business advantages, and bring their tech competency to the table, betting on agile, software-based business models. They are exploiting the potential of the widespread availability of connectivity. These new market entrants have long recognized that distribution alone isn't enough, however. They are increasingly producing their own TV and series formats[8, 9] and purchasing rights to existing formats like German Bundesliga soccer[10], becoming 360° providers in the process. As such, IT service providers in the media environment currently face several key demands.

Cost reduction, cost adaption and risk minimization

OLD TECHNICAL ARCHITECTURES PREVENT INNOVATION

One of the greatest challenges for media companies is the cost factor: conventional IT infrastructures (particularly when run in-house) incur high management expenses and tie up funds in the long term, while the maintenance and upkeep costs for legacy systems continue to increase. Their old, in-house IT is increasingly isolating media companies in competition with the new, agile players. While UHD and HDR can easily be streamed via OTT, their deployment over conventional distribution channels faces technical challenges.

At the same time, the planning cycles for providing new IT resources, despite all the precision of their planning, are only partially suited to meeting the (unpredictable) business developments and requirements. Decision-makers have to balance the business risks and procure resources in a „best guess" approach. Once acquired, the maintenance of these resources imposes a lasting burden on the bottom line if the new features fail to achieve success. What's more, the agility lead of the new competitors remains if the IT provisioning is not modernized as well.

Agility

TIME TO MARKET IS DECISIVE FOR THE COMPETITION

In addition to its impact on costs, the classic IT provisioning models have the greatest effect on the speed of change. New ideas can only be realized as fast as the required IT resources (software and hardware) can be provided. At the same time, the applications currently used for media production, postproduction and playout are based on conventional IT architectures. Scalability is limited, updates are provided in planned change cycles and data is stored on local storage media. The full stack is produced in-house, on purchased hardware.

On the user side, mobile journalism, live events and the production of serial dramas outside the studios are examples of increased demands for agility. Achieving greater speed in news reporting, while maintaining attractive quality, demands the necessary – mobile – tools and solutions for data transfer and storage.

Multi-Platform Delivery

INTEGRATION OF DIGITAL BUSINESS UNITS

Many companies – including those outside the media industry – have acknowledged the digital trend and are establishing specific units for digital business models. The result: new IT landscapes are being created alongside the existing systems for core business. In this approach, potential synergy lies dormant and additional integration expenses usually arise, because the existing data (and processes) have to be used by both the new and existing units. This makes multi-platform delivery a hot topic. Companies that spotted this trend early on now enjoy the advantages of being a first mover/early adopter. They can play their content and news out over online channels faster and more easily. The infrastructure for achieving this speed was simply not there among the established market players. Companies that produce their content conventionally and then format it for web platforms in a further step are by definition slower than providers that produce directly for all platforms. Doing so requires new technical architectures, however.

Fragmentation/occupying niches

ECONOMICALLY VIABLE SPECIAL INTEREST PROGRAMS

Established providers are diversifying their offerings and offering specific content for ever-smaller target audiences – with the aim of creating a strong fan base. Content offerings are growing. At the same time, such programs also offer a potential environment for delivering targeted advertising content. These additional (specialized/niche) offerings generate higher expenses, however, particularly for smaller target audiences, and must have a sound business foundation.

Collaboration

Another factor resulting from digitization is that companies no longer remain tied to their traditional business areas, but instead are increasingly expanding their operational boundaries. One of the most frequent scenarios involves cross-company collaboration, to obtain specific skills as needed. For the media sector, this means collaboration between broadcasters, production companies and competitors can decide on success or failure. This also requires tools to enable this collaboration, however.

Advantages of the cloud

Cost benefits and risk minimization

BREAK OUT OF LONG PLANNING CYCLES

Production processes and services in the cloud increase effectiveness and flexibility in video production. In a dynamic business environment, cloud services are the right answer to the challenges faced by IT. They offer potential for cost savings, because IT resources can be obtained as a service on demand – from infrastructure to the applications. The resources used can adapt to business development. Additional cloud resources can be obtained in peak phases or to meet short-term demand and then discontinued again in periods of lower use. A cloud strategy frees media companies from the cycle of long-term resource planning and ordering, as well as the corresponding capital expenditures and management expenses.

On-demand increases agility

SPEED GAIN THROUGH CLOUD DEPLOYMENT

Simple availability over the Internet (or through secure, private network connections such as MPLS and IP-VPN) simplifies the provisioning of services on the fly – that is, whenever they are needed. Only the cloud strategy has to be planned for the long term. This includes the framework for usage, defining the planned scenarios and authorizing and training employees. The exact use on specific projects can then commence without lead times, resulting in increased agility. The cloud gives its users greater flexibility and reduces production costs overall.

Efficiency, flexibility and reliability through cloud data storage

At the same time, central data retention in a cloud provides access to data independently of location or distribution channel, which simplifies collaboration scenarios significantly (such as the creation of derivatives or language versions). Analysts confirm that public clouds have achieved a high degree of maturity, which is also reflected in their high level of data privacy. The probability of data loss (through criminal attacks or technical problems) is reduced. Access by unauthorized third parties can also be combated effectively (protecting intellectual property).

Innovation

IMPLEMENT COGNITIVE SERVICES

Today, cloud computing not only offers scalable infrastructure capacity, but also a wide range of new solutions that build on these infrastructures and take advantage of their scalability – such as complete tools for editing, content management, transcoding and GPU rendering. As such, the cloud is the ideal foundation for cognitive services such as speech-to-text or facial recognition. Even virtual live productions are made possible by the cloud. In addition, users of European cloud offerings also benefit from high privacy standards in the handling of personal data. A recent study confirms the trend toward end-to-end solutions, predicting double-digit growth for the SaaS market in the media sector in Germany[11].

USE Cases

WIDE RANGE OF USE CASES

Cloud computing offers a wide range of different services, from end-to-end solutions to simple infrastructure resources. These services address different target groups and deployment scenarios. The provisioning model (private/public) should be selected depending on the significance of the supported process and category of the processed data. Currently, hybrid solutions are being developed that allow public clouds to be used as extensions to in-house resources, for example, for load peaks or in burst scenarios.

Cloud solutions can help to compensate for existing resource deficits quickly, to order basic services (with a low value-added component) more easily or to launch and scale up new business ideas quickly at low risk. Infrastructure clouds like the Open Telekom Cloud give media companies a solid foundation for trying out new provisioning methods for services and new business concepts. T-Systems operates its public cloud in data centers in Germany. It is based on the OpenStack standard and features a high level of security.

CLOUD STORAGE

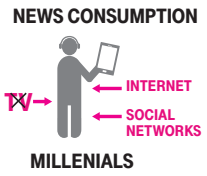
REALIZE TAPELESS WORKFLOWS

The media sector generates huge amounts of data that have to be archived for later processing or use. The archived data grows continuously through the raw data and finalized formats generated by business activities. In addition to providing sufficient storage volume, some companies also aim to standardize their data media based on file storage, to achieve tapeless workflows.

Cloud storage is a simple, cost-effective, easy-to-implement alternative for getting a handle on continuous data growth. Object storage does not have any technical limits for volume size. In its „cold“ storage variant, it is well-suited as an inexpensive store for large amounts of data, even up to the petabyte range. The „cold“ storage variant incurs much lower cost for long-term data storage than standard object storage.

B2B CONTENT PLATFORM FROM THE CLOUD

Millennials and members of „Generation Internet“ prefer to get their news as video content from social networks or Internet services. For conventional media like radio and TV, they‘re a lost generation. They have to be addressed through the channels they know. Existing legacy systems at media companies are usually designed for high-load scenarios, making them oversized for this purpose – and they often lack the necessary functions for new media. Video news on social media does not require complicated systems.



Sony Hive on the Open Telekom Cloud is a lean content management system that has been optimized for fast news reporting. It gives journalists with any user devices access to a web suite where video content can be archived and processed. The transcoding for the different channels takes place directly on the platform.

Playout is also managed from the platform – with an optional scheduler. The SaaS scales automatically with the load and provides a foundation for international cooperation. It connects mobile journalism with a mobile audience over social networks. Harmonic’s VOS™ Cloud media processing and playout solution provides an optimized, scalable and agile platform to transform video preparation and delivery into a hybrid cloud operation, accelerating time to market for broadcast and OTT services.

If cloud desktops with GPU functions are added, Hive can also be used as a fully-fledged postproduction system with multichannel audio and video. This modern usage mode as an all-in-one suite makes the operation of in-house infrastructure and purchase of software licenses unnecessary. Postproduction and playout become possible in an on-demand mode, location-independent – without fixed costs and with full scalability.

Production of live formats

PRODUCE LIVE FORMATS MORE EASILY

Long live segments from remote locations still place high demands on staff and equipment. Usually, the transmission technology and direction are consolidated in an outside broadcasting van. What's more, transmission capacities have to be organized as satellite time. The preparation for such live deployments is expensive and time-intensive.

A direction studio from the cloud makes it possible to use the required infrastructure locally quickly, easily and cost-effectively. Such systems can manage up to six cameras simultaneously. The cameras stream the live recordings directly to a cloud data store over a 4G network. A virtual switcher makes it possible to select the right scenes on site. The processed single OTT output stream is played out/transmitted over a content delivery network, which enables distribution both over conventional TV and in the form of webcasts.

This lightweight approach avoids media discontinuity and cuts preparation costs dramatically. The finished product can be delivered faster and more inexpensively, at a very high level of quality. This approach enables cost reductions of up to 30 percent. As a result, niche offerings can be produced economically; and in the future – as connectivity continues to improve – even top events like the Olympic Games or the FIFA World Cup could be produced in this manner.

Other scenarios

PRODUCTION AND PLAYOUT WITHOUT OWNED ASSETS

Cloud solutions also offer further potential, beyond the use cases described above. One scenario involves emergency operation of a pared-down studio, including playout. Together with rented equipment and high-quality connectivity (4G, 5G etc.), live events can be produced and broadcast without any proprietary hardware, using live virtual switchers. A content system like Hive can be used to edit information and provide it as a final report for a variety of platforms (multi-platform delivery). As a result, new channels can be captured quickly and directly.

Archives for storing the finished formats create an excellent foundation for offering video on demand in new markets without requiring high investments (for example, successful European series on the Asian market). The services could be billed through nanopayments based on the blockchain. Artificial intelligence and cognitive services can enhance such archives with value-added services. In new business models, data could then be extracted from archived content and marketed and monetized further (statistics from soccer games, for example).

Conclusion

Although some trends, such as movement toward the Internet, are obvious, it is still unclear what structure the media industry will have in five or ten years. The future remains undiscovered country. Which existing formats will be retained and which ones will have to be supplemented (or replaced) by new formats (for efficiency reasons)?

No matter what direction these developments take, the IT will play a decisive role. Media companies that have been around for decades have IT that manages their primary processes reliably. At the same time, it is cost intensive and only provides limited support for new ideas. From the IT perspective, one of the major challenges of the coming years will involve supplementing the existing IT with cloudsourcing (and integrating the two), as well as possibly transforming the IT landscape to the cloud.

MAJOR CHALLENGE: ENSURE FUTURE VIABILITY THROUGH CLOUD DEPLOYMENT

At the same time, the cloud is merely means to an end. The key to staying ahead of the competition will be to identify the right perspectives for the development of the media and entertainment market and to shape it at an early juncture. Here, as well, the cloud can make a crucial contribution. After all, time to market is more relevant in the media sector than in hardly any other industry. At the same time, media companies will not be able to avoid trying out a variety of new technologies and content delivery models, and once again, the cloud is the best possible instrument – because it encourages testing new things quickly, at low risk, and scaling them up if successful. Or discontinuing them again quickly if not.

Why should traditional media companies leave the versatile instruments of the cloud to the new competitors and not capture their benefits for themselves?

The cloud enables the rapid deployment of media content; new formats like virtual/augmented reality only become possible at all through the immense cloud resources that are available on-demand.

It‘s time for established media companies to close the gap to the new competitors and position themselves for the future. A future in which a data center might model all the functions needed for media production virtually and provide them at the touch of a button.

Sources

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Any Questions?

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