VSN
INNOVATION & MEDIA SOLUTIONS

White Paper

Why do you need a Broadcast Management System?
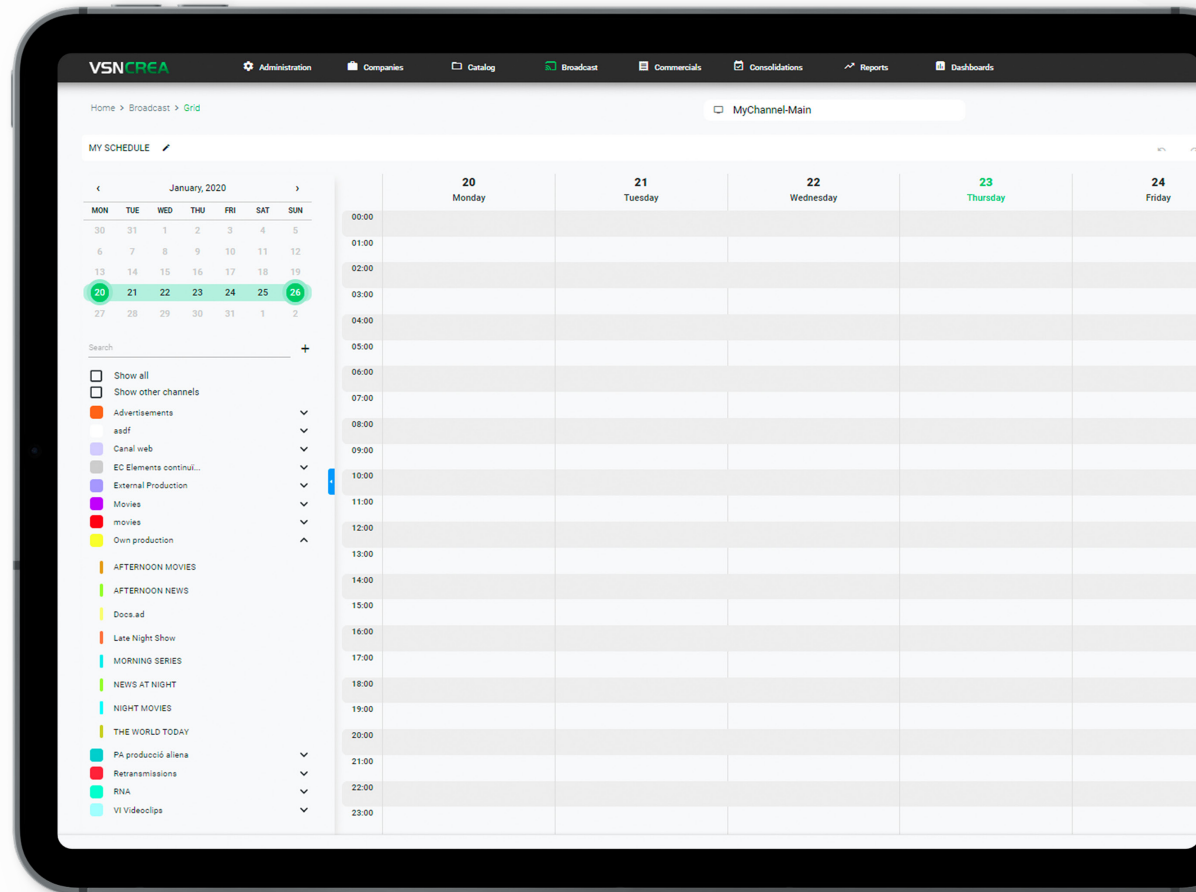
Content

00_ Introduction

Today, competitiveness in the Broadcast and Media industry has grown to the point where every second counts, even more so if we focus on content programming and scheduling. It is impossible to understand the industry without paying attention to one of the most crucial tools for its daily operations: the Broadcast Management System (BMS).

Taking into account the transformation process that content distribution and production has undergone in recent years, programming now takes on new realities, such as multi-device and **multi-platform distribution and consumption**, together with the fragmentation of audiences and the demand for immediacy in consumption. Traffic operators, publishers and those responsible for advertising and content play an increasingly important role.

00 _ Introduction

Planning (single or multichannel), management of programming schedules, as well as the analysis of the profitability of the contents and advertisements broadcast are some of the crucial aspects in this new environment. The traffic and planning systems or BMS have therefore become an indispensable piece for the optimal development of the activity of linear and non-linear channels (VoD, OTT, Web TV, etc.).

At VSN we want to offer an overview of this technology and how it is possible to extract the maximum added value from the available resources, enhancing the simultaneous and collaborative work between departments and professionals and encouraging companies to manage their resources in the most efficient way with the aim of **satisfying their most important asset: their audiences.**

01 _ What is a BMS and how can it help your company?

A BMS or Broadcast Management System is a software that deals with crucial processes for content companies, such as TV channels, streaming platforms, OTT or video on demand (VoD).

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Its main tasks are the programming of content and the management of its traffic, advertising and other spaces, as well as the management of broadcast licenses and their monetization. Additionally, these systems can also generate analytical information based on the broadcast schedule, creating customized reports.

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A system of these characteristics can be very useful, whether for a linear television channel of any size or a non-linear channel (OTT, VoD, Web TV, etc.) when it comes to enabling a **complete and real-time view of all the planned content** or already broadcast, as well as the income generated by advertising. Thanks to their different features, these systems allow companies to save costs and speed up processes that can be vital to generate returns.

White Paper

01 _ What is a BMS and how can it help your company?

Given the capital importance that such a system can have, it is very relevant to take into account aspects such as a simple and intuitive interface, which allows to perform all the operations from the application itself and offers a quick and clear view of the catalog, line-ups, programming and space availability, without having to access an external application or system.

In addition, the flexibility and customization capacity of the work environment must also be taken into account, with customized metadata and new functionalities via APIs and plugins; the possibility of programming both on a daily and long-term basis; the intelligent planning of

advertising, which allows for forecasting the expected costs and revenues; or the adaptation to the specifications of each market, such as advertising regulations.

Additionally, other features such as the 100% web development of the system, the ability to operate in cloud environments, its availability under pay-per-use models (SaaS) or its close integration with content management systems such as a media management system (MAM), playouts and non-linear platforms are of crucial importance when it comes to ensuring a **smooth, cohesive and uninterrupted workflow.**

02 _ Brief history of content programming

On **July 1st, 1941**, **during the broadcast of a New York channel, a paid advertisement appeared for the first time on American television. Despite the fact that the television medium had begun its journey years earlier with a programming that was as scarce as the system's pioneer, perhaps this point could be considered the beginning of the relevance of content programming, since not only for the first time in history did the need arise to plan the broadcast of advertising content in addition to the original, but part of the channel's income depended on it. Since then, this work has evolved over the decades, gaining in complexity, importance and possibilities, usually with the United States at the forefront of innovation.**

1930 - 1950

The concept of **prime time** was established, initially referring to the afternoon hours when all the daily contents were broadcast. Although most of the broadcasts were interrupted during the Second World War, the basis for television to eventually become the most popular medium of dissemination during the next half century was settled. This era saw the emergence of some of the major Broadcast groups still active today.
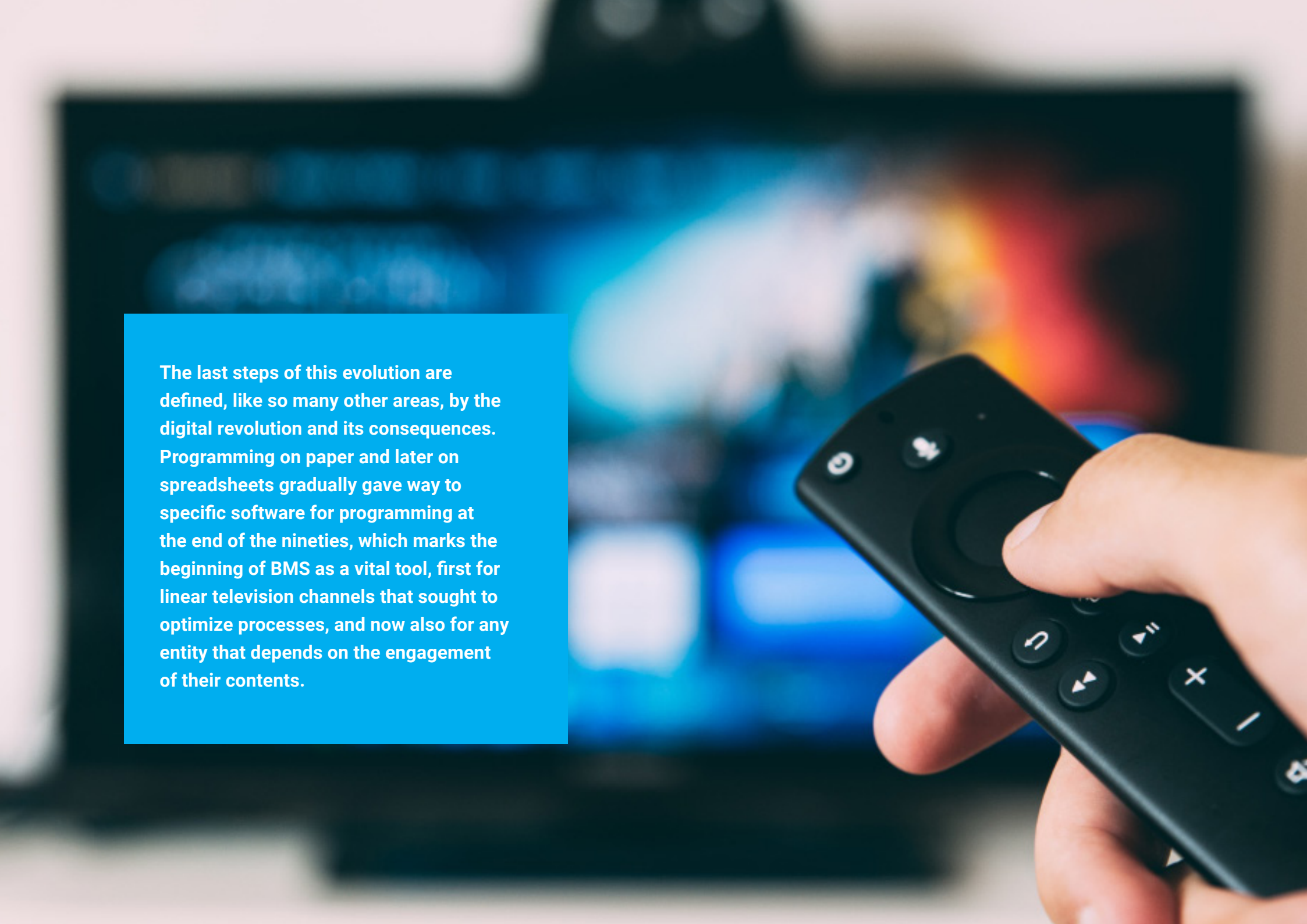
02 _ Brief history of content programming

1950 - 2000

Gradual massification of color TV. Different ways of receiving the signal have followed one another throughout the decades (analog, cable, satellite, DTT), but except for the public or private subscription models (BBC, HBO), most channels **depend largely on their advertising income**, which in turn depends on the popularity of their content. As a result, the programming of both becomes increasingly crucial. Proof of this are the different techniques for creating grids that attract and retain the audience as much as possible that are emerging (counter-programming, marathons, hammocking, bridging...).

2000 - 2020

Following the trail of the revolutionary creation of YouTube, Netflix releases its Video on Demand platform in 2007, the **first non-linear content broadcasting system**, while the Internet grows exponentially as a medium, surpassing other traditional ones (TV, radio and press) for the first time in 2019, according to different metrics. Hand in hand with this change of paradigm, content consumption is also undergoing a radical transformation, towards a future where AI is gaining prominence in advertising programming at the expense of daily grids.

The last steps of this evolution are defined, like so many other areas, by the digital revolution and its consequences. Programming on paper and later on spreadsheets gradually gave way to specific software for programming at the end of the nineties, which marks the beginning of BMS as a vital tool, first for linear television channels that sought to optimize processes, and now also for any entity that depends on the engagement of their contents.
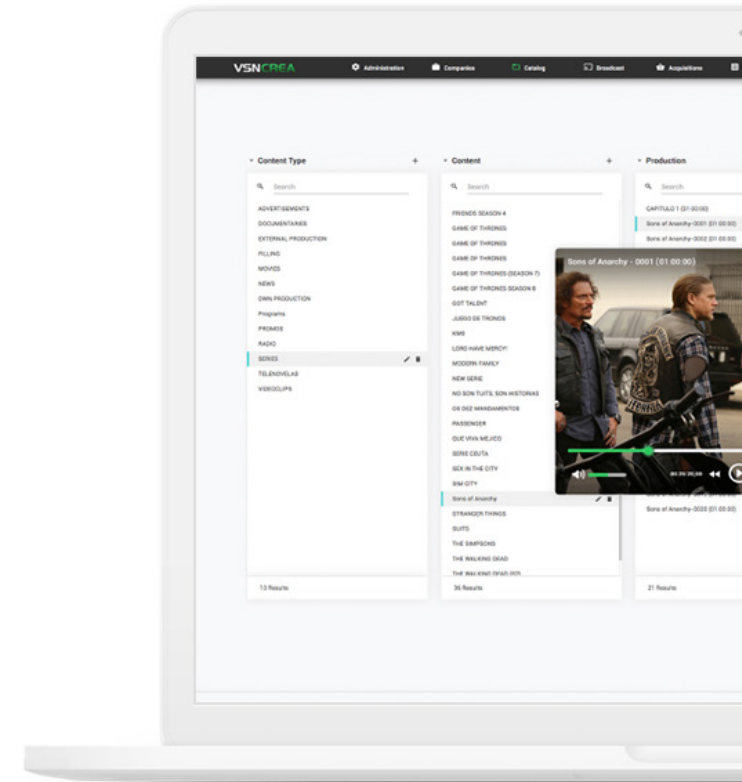
03 _ The content's journey: from ingest to broadcast

A content to be broadcasted, for example, in a television channel, can have different origins: it can be an in-house production, an acquisition from a third party (such as a film or a series from a studio) or it can also be a news report sent from a mobile unit moved to the location of the event.

In any case, the first step to be carried out by the team will be the **ingest and transcoding** of the content. Ingest, in this context and as its name indicates, is the process of incorporating elements of new content into a study or installation. Ingest can be done from conventional video, compressed data streams or data files and the material is usually stored on a server.

Transcoding, or direct digital conversion from one encoding to another, is an optional but usually necessary step due to the wide variety of available video formats and the different compatibility options for each type of broadcast.

These contents rarely come alone, since each one of them contains **metadata**, (literally data about data) that allow us to know information about the file to be managed and facilitate its identification, description and classification, including, for example, if it is a third party production, details about the broadcast license we have to schedule the content.

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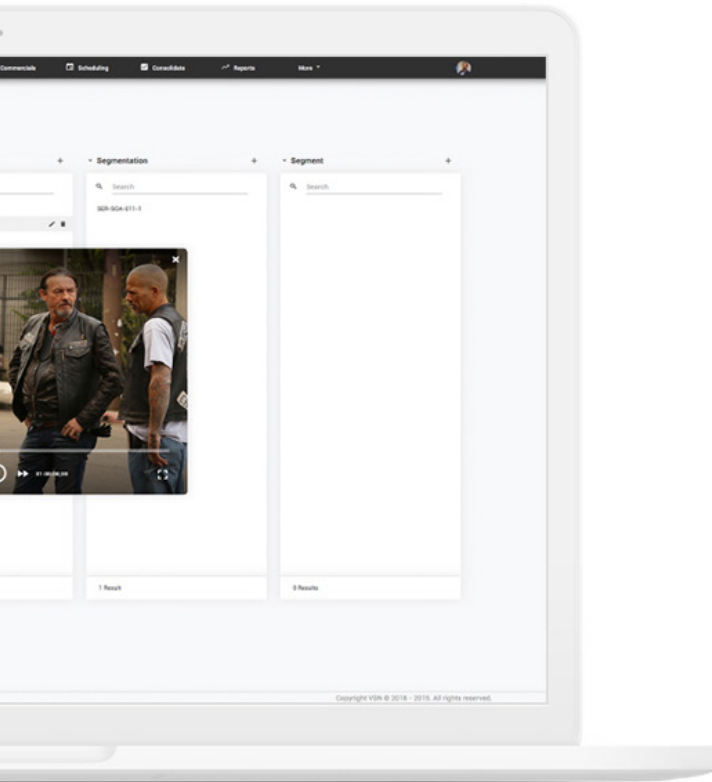
If we are talking about just a few contents, the management of our library could not be easier, and in all probability we would not need the help of a content management system to serve as the core of our operations. However, the reality for the vast majority of media companies is very different, and the need to **easily manage thousands and thousands of contents** is vital for many of them. Let's take as a model a traditional TV channel that, given the changes in the industry, now also broadcasts its contents not only in its linear channels, but also in its private VoD, besides publishing snippets, teasers, trailers and other promotional content in social media.

A system with these features allows the channel -among other functionalities- precise cataloging, advanced searches, management of different user profiles, operating from the cloud, greater security, integration with third parties, interoperability and, above all, access to **multi-platform distribution**. This is where the full potential of a BMS comes into play. If it is a system of easy integration, the software will already have at its disposal all the contents ingested in the MAM, so it will be able to start organizing them for broadcast immediately.

03 _ The content's journey: from ingest to broadcast

Of course, the content will be broadcast on one or more of the channel's linear options. Choosing **when and where in the daily programming grid** (or weekly or monthly if replacements are planned) is the essential task of a BMS, but not the only one. Having the internal data of other programming to decide which is its optimal broadcast slot, knowing at a single glance the license conditions associated with the content and placing the most appropriate ads to its target are other functionalities that a comprehensive system should offer.

If the software also has tools that ease the programming of that same content in non-linear channels, the management of the channel is greatly simplified by having a **centralized platform** from which to send its linear programming to your VoD, as well as incorporating all kinds of promotional videos to your networks to announce it.

Finally, a desirable feature would be direct access to a monitoring system to ensure that the broadcast has run smoothly.

Of course, all these tasks do not have to be carried out by a single user: the organizational flexibility derived from providing multiple user profiles with separate specific functions is certainly a feature that channel operators will take advantage of to increase their efficiency.

04 _ Essential requirements for a BMS system

Programming for any kind of broadcast model

Whether it is for a traditional TV channel, a VoD, an OTT or any other variation of content delivery (Web TV, social networks...), a BMS system must be prepared for any circumstance, particularly taking into account the great transformation that the industry has undergone in recent years and which has forced many companies to broadcast their content across multiple platforms. **Working on a single catalog**, but with each type of programming organized in different sections and adding tools that increase the fluidity and clarity of the processes seems essential to maintain competitiveness in a field where there are fewer and fewer intermediaries and advertising monetization is increasingly accurate.

100% web-based software, available in any browser

Since remote work is already a reality, promoting quick and easy access from any browser or computer users is crucial to any form of broadcast, in addition to enhancing collaborative work through registration and access of multiple user profiles. This capability allows professionals the **necessary control and organization** to manage their programming anywhere and at any time. Additionally, having the ability to operate locally or in the cloud, as well as being able to access the software through a SaaS service model allows operators greater flexibility depending on their needs.

04 _ Essential requirements for a BMS system

Every bit of information in a single interface

The advantage of **centralizing all the programming flows** of a broadcast and media company is now essential: being able to manage the catalog, advertising and the state of the media itself from a single interface, as well as supervising its export to the continuity system and the possibility of importing broadcast log files. Having a single interface from which to execute and monitor all these processes is essential, as it allows for quick decision-making, minimizes errors and optimizes every workflow related to programming.

Advanced advertising management

Having functionalities dedicated exclusively to advertising management should therefore be a priority for programming operators and the company's decision-making profiles, as these allow advertising campaigns and spaces to be managed in the best possible way, **defining time slots and intelligent rules** for their broadcast at the most suitable time or alongside the appropriate content.

The ideal system should have this set of automatic rules, such as avoiding the repetition of ads of the same type and/or product or industry, as well as avoiding a certain type of advertising at specific times (e.g., children's hours). This allows users to automate a good part of their advertising needs, enabling the freedom to take care of key details for the monetization of their content.

04 _ Essential requirements for a BMS system

Customized analytical reports

Currently, any software dedicated to corporate tasks that generate revenues can hardly afford not having functionalities that help to understand their performance in the medium and long term, generating **market intelligence and statistics** that help in the decision making process. In the particular case of BMS software, the ability to create customized reports and dashboards that allow the analysis of profitability and return on investment (RoI) of the contents are very useful tools to analyze the breakdown of investments and make appropriate decisions depending on the results.

Integration with third party systems and content management solutions (Media Asset Management)

Interoperability between different systems is also very relevant for any broadcaster, since in general terms we are referring to companies that have different operators to manage various key processes until the content reaches the appropriate screens. This is why it is important that the BMS software we choose is **open and interoperable**, i.e., that it facilitates integration with third parties and fits in with playout or content management systems. With respect to the latter, it should be noted that the bidirectionality between both systems ensures that all changes made to the traffic system can be automatically replicated in the MAM platform, thus enabling users to preview content from the traffic interface and not having to access the MAM system to change the metadata and/or segments of the stored assets as required
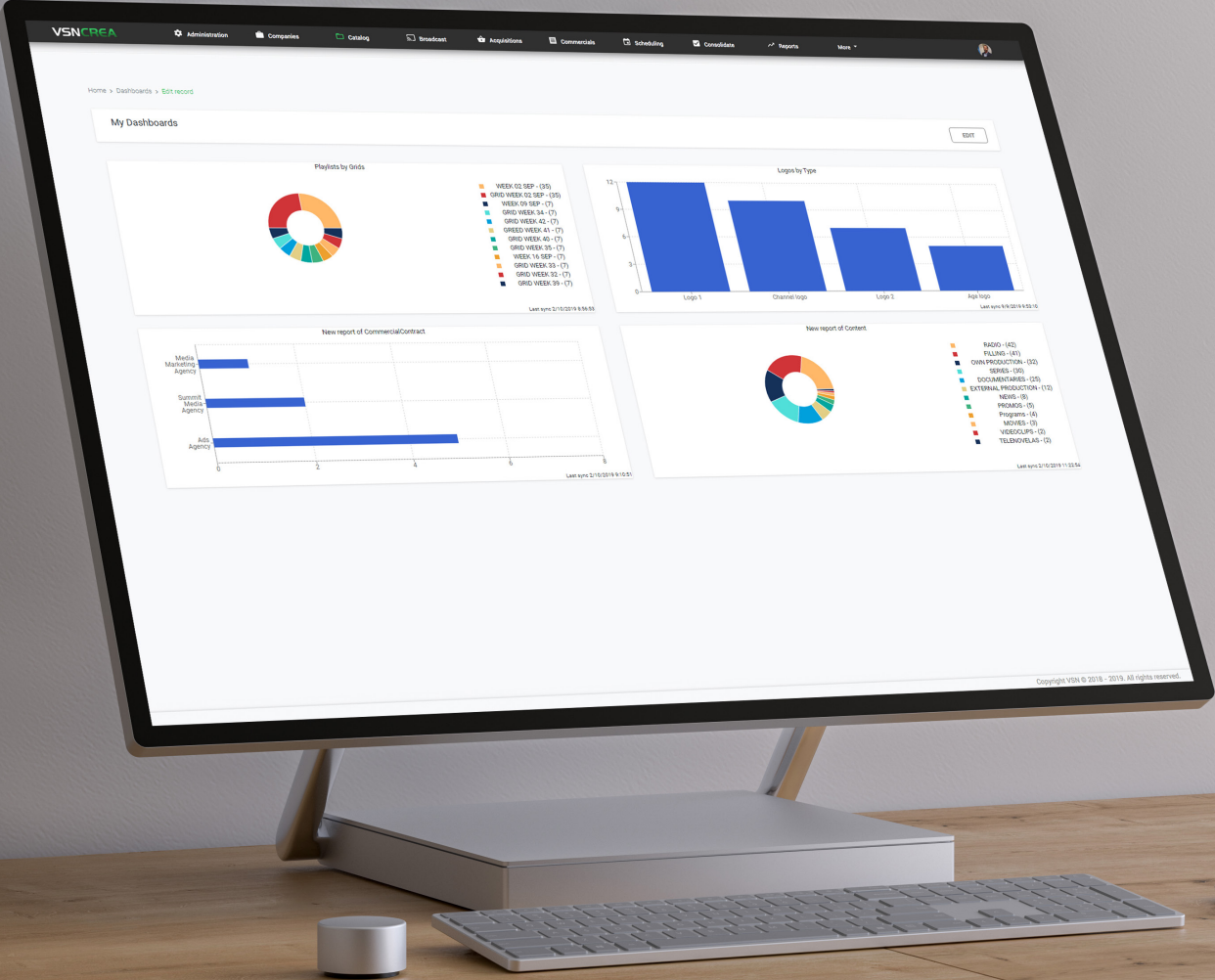
05 _ VSNCrea, VSN's BMS

The traffic and planning software VSNCrea, 100% web based, allows you to schedule content on multiple screens and platforms with total freedom.

This system allows you to have control over the production catalog (for advertising, programs, live shows, promos, etc.), as well as to intelligently plan such contents. You can make all kinds of analytical reports to make the broadcast of advertising profitable and also manage the rights of all your productions based on customized rules.

The system **also integrates in an advanced way with all kinds of own and third party systems** (MAM systems, broadcast automation systems, EPGs, billing software, etc.)) to offer the smoothest possible workflow between systems and centralized in a single platform that multiple users can access from any browser to coordinate

through different roles and functions, optimizing the resources and the synchrony of the company in a simple and transparent way, facilitating their customization and regardless of whether they are programming linear channels, VoD, OTT, Web TV or social networks.

05 _ VSNCrea, VSN's BMS

These are the main areas and characteristics of the system:

Catalog

Here, users can manage and organize in a hierarchical way all the contents of the platform, according to their permissions. VSNCrea's catalog is key to controlling all productions (whether programs, series, advertising, etc.), including the possibility of segmenting these contents, adding all kinds of metadata that can be automatically synchronized with the media management tool or even allowing to preview the contents that are going to be broadcasted.

Advertising

It allows users to prepare and plan advertising campaigns, stipulating for each of them the associated advertisements, the number of airings, the time slots in which they must be programmed, as well as the price of airing per time slot and the profitability and economic viability of each of the campaigns.

Analytics

It provides advanced reports, graphs and control panels that can be fully customized quickly and easily. The system is prepared to cross data and information from various areas of the application and summarize the most relevant results in chart or graphic format. In addition, all these reports can be later exported in different digital formats (Word, Excel, PDF, etc.).

05 _ VSNCrea, VSN's BMS

These are the main areas and characteristics of the system:

Acquisitions

It controls the acquired material through third parties (films, series or other types of content), which once included in the system can be programmed along with the rest of the content, with the particularity that, in this case, the software will take into account the associated broadcasting rights in addition to the regular related metadata.

Broadcast

Area from where the content planning to be broadcasted by linear channels (traditional television) is carried out through an intuitive calendar interface, from the daily detail to monthly grids. Thanks to its template system, it is easy to program large periods of time in advance following a similar structure, which will be sent to the integrated broadcast automation system or to any non-linear platform (Web TV, OTT, VoD) when the time comes.

The various available features allow for long-term programming of any kind of content on linear and non-linear platforms, regardless of whether it is associated with a contract with a third party or a commercial one. It allows users to carry out sequential or non-sequential programming, as well as jingles programming, with total freedom; and for as long as required.

06 _ The expert's opinion: Oriol Egea, VSN Crea's main developer

We started designing **VSNCrea**, the successor to our old traffic and scheduling system, in 2018. Without a doubt, the most important motivation was the key role that a BMS system plays in any organization that intends to manage, distribute and monetize content, be it a conventional TV channel, a non-linear media or another type of audiovisual company. The need to have a modern, reliable system that gives the end user control not only of the programming and distribution of content itself, but of all the processes related to these and to the company itself, is undeniable.

Another motivation was architectural: we wanted to articulate a completely new system in the cloud, which could simultaneously serve more than one organization (known as multi-tenant) and also provide a highly extensible and customizable environment for each organization without the need to incur in development costs, while ensuring the stability and maintainability of the system.

This led us to articulate VSNCrea in the way we know it today: a robust, 100% web-based solution, with a very solid but extensible foundation, customizable for each client, but

in a modular and dockable way, so that users only have to choose the parts of the system that interest them. In this sense, VSNCrea will continue to evolve to fully cover the management, distribution, monetization and analysis needs of any organization that wants to distribute audiovisual content.

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Regarding this evolution, and from a strictly technical point of view, it is interesting to know that when we start planning and implementing a new functionality in the program, we make sure that it complies with the principles and patterns that make up the product's architecture, as well as all the good practice guidelines, and once developed, we subject it to rigorous quality, usability and security tests, both automated and manual.

We must take into account that the technological changes that are taking place at a dizzying pace today allow us and call on us to constantly improve our products to either solve new problems or improve the way our solutions work.

These technological changes apply directly, in a greater or lesser extent, to future product improvements, and it is likely that VSNCrea will also improve information analysis, content and advertising programming, or any aspect to which it may be applicable, as long as it makes sense and is useful.

These same changes also bring about positive developments in the industry itself, which in turn opens up **new frontiers in which a BMS system can solve new challenge**s: this has already happened with non-linear on-demand systems, which are undoubtedly the present that any complete BMS system must meet, allowing for

the management of content scheduling in these environments, the complex management of rights that can be articulated, as well as its profitability and subsequent analysis.

06 _ The expert's opinion: Oriol Egea, VSN Crea's main developer

> **Personally, I also think it is interesting to observe the evolution that linear television media is undergoing to take advantage of new technologies and create a more cohesive ecosystem**

In this transformation a **BMS** has a lot to add, whether it allows the management of targeted advertising in linear media that are consumed through streaming, apps or other media, or in the management of any other aspect that can be improved thanks to technology, enhancing traditional ways of operating.

VSN

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