Entering the new paradigm of artificial intelligence and series

A Study commissioned by the Council of Europe and Eurimages

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Introduction:

This study is the result of a Tender awarded on 10 May 2019 by the Directorate General of Democracy (DG2) of the Council of Europe and Eurimages to commission a study exploring the feasibility of the Council of Europe's intervention in the sector responsible for producing and distributing Television series.

The series sector has changed dramatically in the last few years with the recent development of online video platforms ("OTT platforms") offering large catalogues of content accessed via pay subscription models ("SVOD" offers). These offers have gained many customers worldwide and are strongly changing the way content is consumed and produced. Even though local SVOD platforms are now emerging throughout Europe, the rapid penetration and success of global platforms like Netflix and Amazon in most markets raise issues on their disruptive approach to marketing and content production. This study and analysis will focus on the growing fictional series segment which is henceforth referred to as "Series" in this Study. [1]

This study will provide key research elements and analysis of the series sector in key Eurimages-member markets. It will also present recommendations to assist Eurimages position itself as a potential new player in this market segment.
If Eurimages is also willing to explore its potential role within the framework of its prerogatives i.e supporting cultural diversity of all its member States and defending the fundamental values of the Council of Europe in the audio-visual sector, there may be a larger role for Eurimages to play. In this respect, a specific analysis on new AI methods has also been highlighted in this report which estimates their potential impact in this segment and which also contains our counsel and proposed recommendations.

The team selected to respond to the study consists of 2 companies with in-depth experience in the audio-visual sector:

- Consortium leader Peacefulfish UG (Thierry Baujard supported by Axel de Swarte) from Berlin, Germany with the support from TV and series expert Remi Tereszkiewicz based in Paris
- Digital Media Finland company lead by TV expert Timoteus Tuovinen

The methodology used was primary and direct, based on interviews with more than 50 producers, public institution representatives and professionals in the audio-visual sector (a complete list is contained in Appendix 5) This research was completed by meetings at "Série Series" Workshop in Fontainebleau in June 2019 and a visit to the International Broadcasting Convention (IBC) fair in Amsterdam in September 2019. It is important to note that global platform players like Netflix, Amazon and HBO were contacted for this study, but they did not respond to our inquiries.
In addition, we have conducted secondary research based on many studies, reports and trade press articles dealing with the global platform sector issues and have also included our analysis on potential factors and issues for this study

The different chapters of this study will bring a clear snapshot of the series sector and point out what is needed and what are the best practices.

[1] Series is defined precisely in 2.2.1

The first chapter deals with the Artificial Intelligence usage in the audio-visual sector, describes its evolution trends and evaluates its potential threat to the diversity of content and the free access to information of the citizens of the member States.

The second chapter describes how the series sector system works, its specificities compared to the more nationally focussed fiction segment and how it is evolving with the growing penetration of international platforms and their series offers.

The final part of this report analyses the challenges, levers and needs of the series players based on the findings of the previous chapters. Based on these elements, 5 recommendations of actions for Eurimages and the Council of Europe are proposed with several steps in order to help the institution to enter the series sector with clear-sightedness and efficiency.

1. Artificial Intelligence in the audio-visual sector

1.1.Introduction

Artificial Intelligence (AI)[3] and machine learning[4] have implications on the media industry as a whole. In this study we focus on television and cinema. We analyse how AI influences viewers' demand (bottom-up) and on the other hand, how it shapes what is offered to them (top-down). The balance between the two has implications on the diversity of TV and cinema sector. This part of the study looks at the current role and uses of AI in television and cinema and the impact it makes on the viewers and the broadcasting and internet media-ecosystems.

The first part of this study aims to answer three key questions:

- What is the effect of AI on the cultural diversity of series and cinema content?
- What is the role of regulation and are there specific measures or actions needed?
- What are the current uses of AI in TV and cinema?

Although still in the early stages, the uptake of AI has influenced people's viewing behaviour. AI adoption has raised questions about the balance of programming libraries on offer, in regard to the countries of origin, programming genres and the titles recommended. The proliferation of new video-on-demand services increases the urgency to address the current and future AI ramifications.

Secondly, we take a look at the different aspects of regulating the use of AI in television and cinema; what could be done in order to ensure that AI is used in a fair and ethical manner and that it will not violate the basic human rights, freedom of expression, access to a balanced information, right for privacy, data protection, etc...

The AI policy landscape is still in its infancy. Some policymakers see this moment as the beginning of an AI arms race in need of public funding and regulation. Others are calling for comprehensive guidelines that address ethical algorithms, data protection, retraining, antitrust and transparency. National AI strategies are becoming more common and more companies are adopting codes of AI conduct.

At the same time, emerging regulations around data privacy will also impact AI and may limit its growth because it affects how companies operating globally can use data generated across territories. Europe's General Data Protection Regulation and California's Consumer Privacy Act (coming in 2020) both give individuals the right to see and control how organizations collect and use their personal data—as well as corrective actions should they suffer damages due to bias or cybersecurity breaches.[5]

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[3] AI (Artificial Intelligence): Simulation of human intelligence processes by machines, especially computer systems. They include learning, reasoning and self-correction

[4] Machine learning: Application of AI that provides systems the ability to automatically learn and improve from experience without being explicitly programmed

[5] https://www.pwc.com/us/en/services/consulting/library/artificial-intelligence-predictions-2019.html

The third question of the study examines the current uses of AI. We analyse the role of AI in production and distribution of television series and films, with a special emphasis on its impact on the viewers.

Systems and applications worldwide gather various kinds of data all the time. AI tries answering the big question about data: how to create value with it. Data is like fuel to an AI engine; without data there is no AI. Data in itself is useless if it isn't analysed, categorized, combined with other data and so on; AI brings purpose to gathering data. AI and analytics systems provide strategic insights from data for decision making and improving operations. AI tools have become an important technology for many media companies. At the same time, the growing role of AI has raised concerns.

Television and cinema sectors are still in the early stages of AI adoption, but as more data is fed into AI systems the more the development and adoption speeds up. It is obvious that AI will be a disruptive technology with profound impact in the media industry.

AI in Cinema

Artificial intelligence has been a theme in popular culture for decades. People have been caught up between fascination and fear in movies, such as *Star Wars, Blade Runner* and *Matrix*. Stanley Kubrick's *2001 Space Odyssey* featured the infamous computer Hal, who controlled all the systems of the Discovery One spacecraft and spoke with the ship's astronaut crew. In the end of the film Hal has to be shut down to save the human crew. Generations of spectators have been left wondering whether AI is our friend or enemy. Definitions and examples currently provided in public debate or depicted by Hollywood movies often are fairly vague, even conflicting at times. The questions about AI remain today, as we start to face the impact of AI use in our everyday lives.

1.2. How Artificial Intelligence is used.

1.2.1.Description of Artificial Intelligence technologies

The use of AI in the media sector has enabled personalization on a mass scale. AI is based on models and techniques that, in turn, are often based on a decision tree. This means that the AI-engine monitors and sometimes controls the data flow based on user defined rules and provides decisions and recommendations based on certain decision points. The system learns and can get better in time as it processes data. Another form of AI used in machine learning forms the basis of advanced neural nets. A neural net is based on pattern recognition algorithms and its aim is to find answers from classifying data over and over again. This forms the basis for deep learning applications. For example, it is possible to train AI to recognize an image of a dog or identify a person on a video.

Algorithms are further explained in Appendix 1.

1.2.2.Examples of Artificial Intelligence uses

Content marketing

A large proportion of investments in series and films is allocated to marketing them. Studios are increasingly using AI to help them in creating promotional movie trailers. Machine vision systems examine trailer footage frame by frame, labelling objects and events, and then comparing them to data generated for other trailers. The idea is that movies with similar sets of labels will attract similar types of people.

20th Century Fox has partnered with Google to use the company's servers and the open-source AI framework TensorFlow in order to create their experimental movie attendance prediction and recommendation system, called Merlin. Merlin works as follows.

First, Merlin scans the trailer, labelling objects like "facial hair," "car," and "forest". One criterion is the frequency of these labels, but the actual data generated is more complex. It takes into account how long these objects appear on-screen and when they show up the trailer.

20th Century Fox's engineers say that this temporal, or time-based information is particularly rich because it correlates with a film's genre. "For example," they claim, "a trailer with a long close-up shot of a character is more likely in a drama movie than for an action movie, whereas a trailer with quick but frequent shots is more likely in an action movie." An example of this is 20th Century Fox's 2017 dark superhero film *Logan*. Its trailer features lots of slow shots of the main character Hugh Jackman looking bloody and beaten. By comparing this information with analyses of other trailers, Merlin tries to predict what films might interest the people who saw *Logan.*

Merlin gets quite a few of the films correct, including other superhero movies like *X Men: Apocalypse*, *Doctor Strange*, and *Batman v Superman: Dawn of Justice*. It even correctly identifies *John Wick: Chapter 2* as a pair for *Logan.* That's an impressive inference since *John Wick* is certainly not a superhero movie. However, it does feature a similarly weary and jaded protagonist with a comparably rugged look. All in all, Merlin identifies all of the top five picks, even if it does fail to put them in the same order of importance.
What's more revealing, though, are the mismatches. Merlin predicts that *The Legend of Tarzan* will be a big hit with *Logan* fans for example. Neither Google nor 20th Century Fox offers an explanation for this, but it could it have something to do with the "forest," "tree," and "light" found in *Logan,* elements which also feature heavily in the *Tarzan* trailer.

Similarly, *The Revenant* has plenty of flora and facial hair, but it was a drama-heavy Oscar winner rather than a superhero movie. Merlin also misses *Ant-Man* and *Deadpool 2* as attracting the same audience. These *were* superhero films with quick-cut trailers, but they also took offbeat approaches to their protagonists, similar to Wolverine's treatment in *Logan.*

As the researchers behind Merlin explain in a paper published in October 2018[6], this is exactly the sort of data movie studios love. (They already produce lots of similar data using traditional methods like interviews and questionnaires.) Understanding detailed audience composition is important for

[6] https://arxiv.org/pdf/1810.08189.pdf

movie studios that invest in stories of uncertain commercial value. In other words, if they know who watches what, they will know what movies to make.[7]

Aside from Google, 20th Century Fox had partnered with IBM two years earlier. In 2016 Fox used IBM's AI service called Watson. The goal was to produce a promo trailer with the help of AI for a horror film called *Morgan*. The trailer team first fed promotional trailers of 100 horror films into Watson and labelled each segment. Watson then made a visual analysis of the characters, objects and locations. Each segment was assigned an emotion and once Watson "understood" the mechanics of horror scenes, the team helped Watson to pick up ten scenes to compose the trailer. Human work was involved in the editing of the trailer and adding music to it. One scene was also rejected on the basis that it did not fit the story.[8]

In addition to promotional trailers, still images, called thumbnails, are also important in promoting series and films. In Appendix 3, we will have a closer look at how Netflix uses AI in its programme promotion via thumbnails.

Content creation

Script writing is a creative area where we have seen AI "in action". AI has been used for simple factual text creation (sports and news reports produced by robots), but AI has also been applied to writing fictional stories. Automation has reached a level where AI starts to play a more prominent role in the content creation, although we are still in the early stages of this development.

Sunspring is an experimental short film, based on an algorithm and produced previously in 2016. Americans Oscar Shapin and Ross Godwin programmed a computational system they named Benjamin, and fed it with science-fiction movie scripts, including *X-Files, Star Trek* and *2001, A Space Odyssey*. Benjamin analysed similarities and repetitions in the scripts, drew up scenarios and created a dialogue. It even composed a part of the soundtrack, based on 30.000 pop songs.

The end credits of the film reads: « WRITTEN BY Benjamin, a system-on-chip (SOC) computer with graphics processing unit (GPU), running a "long short term memory (LSTM), Recurrent neural network (RNN)" .[9] Another AI script developer commented the film*: Sunspring* is the perfect example where the A.I. failed to recognize deeper plot logic causing it to not make any sense.[10]

Another example of AI script writing is a horror film called *Impossible Things*. The project is an AI co-written feature film, taking a step forward in human-computer collaboratively created original content. *Impossible Things* is engineered using big data and artificial intelligence. The film raised financing on the crowd-sourced funding platform Kickstarter, but we conclude the campaign failed

[7] https://www.theverge.com/2018/11/2/18055514/fox-google-ai-analyze-movie-trailer-predict-success-logan
[8] https://www.lexpress.fr/actualite/sciences/video-watson-l-intelligence-artificielle-d-ibm-a-cree-une-bande-annonce_1826667.html
[9] https://www.journaldugeek.com/2016/06/13/sunspring-court-metrage-intelligence-artificielle/
[10] https://www.kickstarter.com/projects/970954017/impossible-things-worlds-first-ai-co-written-featu

to attract the projected goal of 30.000 Canadian dollars. The latest funding activity was dated in December 2017.[11]

Interactive stories have been around for a long time. Brazilian company Globo introduced an interactive television format in the early 1990's. The format was called *You Decide,* and it was a TV series in which the audience could choose between two different endings to the story. The choice was decided by the number of viewers' telephone calls favouring one or the other ending of the story.

These days, the level of viewer interaction has intensified with the help of AI. Complex story lines with varying levels of audience interaction are introduced. One recent example is the British series *Black Mirror*, airing on Netflix. The last episode, called *Bandersnatch*, became available in December 2018. It allowed the viewer to choose the upcoming scene from an array of choices. The viewer could choose between story options and control the fate of the main protagonist- a game developer named Stefan. And this is where Netflix user data kicks in: Stefan's first dilemma was whether to eat Sugar Puffs cereal or Kellogg's Frosted corn flakes for breakfast. 60 % of the viewers opted for Frosted Flakes. The choice is non-relevant to the story of *Bandersnatch,* but it does provide Netflix with data it can combine with user profiles and use it as marketing research.[12]

Netflix's *House of Cards* vs. Amazon Studio's *Alpha House*

An example of using data to make strategic choices for Netflix original productions is the development of the series *House of Cards*. The main advantage in using and benefitting from the user data was to identify viewer profiles and viewer preferences. This enabled Netflix to make a connection between a large potential audience and content that would match the viewers' expectations.

In 2011 Netflix invested nearly 100 million dollars in the first two seasons of *House of Cards*, which was an adaptation of a British series by the same name. (The original *House of Cards* was broadcast on BBC in 1990.)
The new version of the *House of Cards* is produced by David Fincher who also directed the first episodes. The investment was a risky one and it was based on audience data Netflix had been gathering from the 33 million subscribers it had at the time. The data showed that the original British version of *House of Cards* was very popular and that most viewers watched director David Fincher's feature film *Social Network* from the beginning to the end; this showed interest and commitment to Fincher's work. Lastly, the data showed that films starring Kevin Spacey were very popular. By combining these findings, Netflix ended up producing an extremely successful American version of the *House of Cards*.

Netflix also chose a data-driven marketing campaign for the *House of Cards*. The main poster image was designed by a machine learning system and it replicated the style and colours of earlier successes, such as the film *Macbeth*. Promotional trailers were also produced with the help of data analysis. Season five of the *House of Cards* had ten different trailers, each targeted at a specific audience segment. For the fans of Kevin Spacey the trailer showed him in action, whereas fans of

[11] https://www.kickstarter.com/projects/970954017/impossible-things-worlds-first-ai-co-written-featu
[12] https://www.telerama.fr/series-tv/avec-black-mirror-bandersnatch,-cest-prouve,-netflix-vous-suit-bien-a-la-trace,n6132462.php

Thelma and Louise were shown trailers with the female characters, such as Robin Wright starring as Claire Underwood.

Netflix's competitor Amazon Studios had a different approach to using audience data. Amazon produced pilot episodes of several series. Based on the audience reaction, Amazon decided which pilots were turned into longer series, thereby the decision rests on the audience acceptance and not Amazon Studios itself. In addition to audience comments, each pilot is evaluated on the following criteria:

- Moments when viewer pauses viewing.
- Scenes which are watched more than once.
- Skipping over scenes.
- Scenes which create a specific reaction.
- How well is the casting liked by viewers.

By combining data from these points Amazon concluded that out of the pilot episodes, the audience wanted a situation comedy about four republican US senators, - and from that, the *Alpha House* series pilot went into production. The series concept relied on audience data and that gave little creative freedom to the talent behind it.

The comparison between Netflix and Amazon Studios indicates that while the audience data is important, more crucial is the way it is used. Amazon decided to produce a series which was statistically tailored to match the tastes and expectations of the viewers, whereas Netflix provided the creators data and conclusions which would help them in guiding creative choices, and, most importantly it allowed more risk taking. *House of Cards* became an emblem of success, while *Alpha House* had a lukewarm reception from the audience.[13]

Audio, speech and text

Before TV series and films, AI has had an impact in the music industry. It is used to create personalized playlists for online music services, such as Spotify.
Today the use of audio has evolved further into voice-controlled devices, smart speakers, and services. Although AI still is in early stages, first audio-based consumer products and services have entered the market. Voice controlled services, such as Alexa, Siri and Google Assistant have expanded as the number of smart speakers has gone up. The forecast for the global smart speaker base will grow 82,4 % from 114 million units sold in 2018 to 207.9 million units sold in 2019. The US accounts for over 40 % of the uptake of smart speakers.[14]

While the audio sector is not the focus of this study, voice AI cannot be separated from it. Voice control technology is emerging as an important user interface (UI)[15] for people to access to series

[13] https://pubosphere.fr/lecon_de_big_data_par_netflix/
[14] Canalys, https://www.canalys.com/newsroom/canalys-global-smart-speaker-installed-base-to-top-200-million-by-end-of-2019
[15] UI : The means by which the user and a computer system interact, in particular the use of input devices and software.

and films on various devices. Therefore, voice as a UI must be considered in the marketing and distribution of series and films.

In Europe, intelligent voice services are still used mainly by early adopters, but the role of audio and voice recognition will gain momentum as one of the important media sectors to use AI. This may pose a challenge for the small language areas in Europe. The market will first serve the larger language areas, such as English, French, Spanish and German. Likely speakers of Finnish or Bulgarian, for example, will have to wait longer to get voice-based services in their native tongues. It is obvious that the choice of languages in speech-based services has an impact on the speed of uptake of new user interfaces and even entire services in small language countries.

One of the early uses of AI in television content has been transcribing spoken language into written words. An example of this is an automated subtitling workflow project with the Belgian Public Broadcasting Station VRT. In a project called STON, the consortium partners built a platform to automate the subtitling workflow by means of speech and language technology. AI technologies involved aimed to answer these questions:

- Speech detection: when are they speaking?
- Speaker clustering: who speaks when?
- Language detection: which language is being spoken?
- Speech recognizer: what is being said?
- Synchronization module for the alignment of the script[16] on video
- Post processing to stylize the subtitles according to the VRT standard

The focus within the STON-project lies on the automated subtitling of documentaries and online news content, but the results of the project are also valuable for other applications, such as the automated annotation of audio-visual content. [17]

Speech to text is especially important among public broadcasters who often are required to serve viewers with disabilities, be they hard of hearing or otherwise impaired and in need of closed-captioning, or subtitles.
Naturally, all production companies benefit from being able to machine-produce transcripts from spoken words. The user interface operation by speech (voice control) is an invaluable addition improving accessibility to all users.

Speech recognition AI has been trained to write down even punctuation marks. Speechmatics Inc.'s service can deliver accurate placement of full stops, commas, question marks and exclamation marks. The service, Advanced Punctuation, has been trained on over 2.5 billion words using other neural networks. The languages Advanced Punctuation covers are: Global English, Spanish, German and French.[18]

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[16] Script: scenario (of a film, a show), including the technical breakdown and dialogues
[17] https://tech.ebu.ch/docs/metadata/rv3_AME%20scenarios.pdf
[18] *RapidTv news, 25.8.2019*

Metadata

Metadata means a set of data that describes and gives information about other data. It is a central element of a content management strategy. Adding metadata to content does not make it interesting but makes it useful and provides information on data usage, preferences, viewer behaviour, etc. Metadata is key in finding and organizing material in digital archives. The European Broadcasting Union's (EBU) Principal Project Manager Jean-Pierre Evain summarized the problem of knowing what is in the archives and using them as an asset: "*If you don't find it, you don't have it.*"

The EBU is world's oldest professional broadcasting organization with 77 active members. It operates a Media Cloud and Microservices Architecture project. Its purpose is to minimize the effort required to deploy, adapt, scale and benefit from cloud-based workflows and AI-driven services. The project aims to address both the need for tools for business purposes and the ad-hoc, manual use of AI-tools in the use of text-to-speech, captioning and dubbing applications. The metadata can also be applied to material administration: transfer, transformation and repository management. This is done by using classification categories to facilitate discoverability of the content.

Programmatic Advertising

Commercial VOD-platforms' raison d'être is to turn profit from content production and distribution. Monetization is achieved in various ways-the main sources of income being subscription sales and advertising revenue. This is mainly achieved by programmatic advertising, which relies heavily on AI, used to deliver advertisements to target audiences, but at the same time, estimating advertising costs and revenues has become complicated. More details about this field are in Appendix 2.

1.2.2.Who uses Artificial Intelligence

Independent production companies have very limited use of AI. Much of the development work is left for the public service companies, - in addition to the big corporations whose business decisions are based more and more on AI technology.

To analyse AI users, first we'll take a look at the public service sector, followed by cases from Netflix and YouTube.

Public Service Broadcasting (PSB) is faced with the need to reinvent itself as new video-on-demand services change the media market. The main challenges for PSB are:

- Losing young audiences.
- (Public) funding is insufficient.
- Traditional, schedule-based broadcasting of TV channels turns into platform management. This brings up the need to understand the business of distribution: where, when and how viewers find content. Broadcasters are learning about multi-platform distribution, instead of broadcasting only on a linear TV channel.
- Understanding audience behaviour and attention drivers (motivational factors).

- Objectivity of news service, trustworthiness.
- New production tools and processes create new working cultures.

EBU representatives claimed at the International Broadcasting Conference on 13.9.2019 that for broadcasters to stay relevant, they must gain access to data that social media companies hold, especially for their younger audiences.

The EBU asked regulators to get tougher on the companies known as FAANG's (Facebook, Amazon, Apple, Netflix, Google) saying that now "we have an unregulated social media sector, dominated by four or five big companies that have an unprecedented amount of control."[19]

Many European public broadcasting services have experience in adopting AI tools and services. Broadcasters' online platforms have been treated as valuable from early on and many online services achieve large audiences. Especially Swedish and Finnish public broadcasters SVT and YLE who are noted for their success in growing their young online audiences.

Aside from the EBU, which is an important cooperative platform for public broadcasters, other alliances are taking place among the broadcasters. One of the recent ones is the Associated Press, Al Jazeera and the Irish public broadcaster RTÉ joining together to collaborate in creating an AI solution to manage their on-air content. They use AI visual analysis in order to carry out fact checking on both new and archived content for both regulatory compliance and editorial value. In an era when accuracy is becoming increasingly important and demonstrating bias or posting inaccurate information can cause both reputational and financial damage, broadcasters are looking for ways to speedily index on-air content.[20] Collaboration takes place in Hollywood, as well. All the major studios are involved in joint projects to agree on data storage specifications, file formats and security issues.

Yleisradio, YLE, Finnish Broadcasting Company

The Finnish public broadcaster has an extensive history in using AI in recommendation[21] engines, robot journalism and many other applications. Although AI is widely used, a public broadcaster is not motivated by purely commercial considerations. According to YLE, they focus on the end user experience. The consumer needs to gain something, and it needs to align with the values of YLE. YLE experiments with many AI uses, but the system needs to be transparent to the consumer.

Both YLE and its Swedish counterpart Sverige's Television (SVT) are successful in OTT[22] competition. Since the 2010's YLE has been migrating towards a comprehensive online offer. By repositioning its distribution strongly online, YLE has been able to gain an impressive 78 % reach. Its own Areena

[19] The IBC Daily, 14.9.2019
[20] The IBC Daily, 14.9.2019, page 24
[21] Recommendation algorithm: System that seeks to predict the "rating" or "preference" a user would give to an item. They are primarily used in commercial applications. The user will be first confronted to items that the system considers as relevant for the user (and in accordance with the service provider strategy).
[22] OTT: Over-The-Top : a term used to refer to content providers that distribute streaming media as a standalone product directly to viewers over the Internet, bypassing telecommunications, multichannel television, and broadcast television platforms that traditionally act as a controller or distributor of such content (Examples of OTT : Netflix, Amazon Video, Hulu). More details on https://en.wikipedia.org/wiki/Over-the-top_media_services

platform clearly attracts younger viewers (49 % were 15 to 44-year-olds).[23] Part of this success is contributed to the use of data-driven AI.

Mr Jarno Koponen, Head of AI and Personalization at YLE described the role of AI:
Distribution business is a relatively new area for us. We need to understand distribution, because we don't want to externalize it to a third party.
AI is moderating and summing up audience responses, it is used in chat bots and it is a content recommendation tool. We do try to avoid creating "bubbles". We tested an early Netflix algorithm and it clearly favoured entertainment and drama, but not factual or documentaries. An objective media company must present a many-sided representation of reality. Journalistic decisions are behind all algorithm development here. Localization algorithms for example can push news from nearby. AI must support the core mission of the company."

Netflix

The subscription video-on-demand giant was founded in 1997 as a DVD mail order company. Since then it has grown to be the world's biggest Over-The-Top (OTT) operator, covering over 190 countries and 139 million subscribers.[24] Netflix' influence in the series market is very important and will be also addressed and detailed in part 2 of this report.

Netflix's challenge is the large content library, which is constantly changing and is overwhelming for a user to consume. What is the best way to help the user to choose from the program library and maximize subscriber loyalty?

Recommendation is one of the best-known features of Netflix: users who watch A are likely to watch B. Netflix follows consumer's viewing choices and recommends similar programs, mainly based on similar genres.
This could be analogous to how users who like romantic comedies could also like parody or satire movies because they both involve laughing. Netflix also uses the viewing history of other users with similar tastes to recommend to you what may be most interesting to watch next. This makes it convenient for the user to narrow down the enormous choices in the programming library. At the same time, the diversity of the content offer is thusly reduced.

The recommendation system of Netflix is based on the following criteria:
- Interaction with the service (viewing history and rating of the titles).
- Selections by other people, whose tastes are similar to yours.
- Title information: style, genre, categories, actors, release year.
- Time of the day you watch content.
- Which devices you use to watch.
- How long you watch.

When a viewer creates a profile, Netflix asks the user to choose a few favourite titles. This phase is optional, but these choices form the basis for the recommendations. If the user selects no titles,

[23] https://www.meta-media.fr/2019/09/11/battre-netflix-cest-possible-la-tv-publique-finlandaise-la-fait.html
[24] https://muchneeded.com/netflix-statistics/

Netflix will randomly recommend some of the most popular titles. When the subscriber starts watching, these new titles will replace the initial preferences.

Each user's homepage has sections in which the algorithms optimize the offers. AI chooses the titles to be recommended and the most recommended titles are on the top of each row of the top titles, starting from the left to the right. Each time a user makes a selection, this data is input into the system and it will influence the next titles Netflix recommends for him or her.

The algorithms are meant to learn and become more relevant with each selection the viewer makes. In addition to the genre and style of a title, Netflix attempts to characterize each title by action, location, protagonists' personalities, characters' actions, plot line, atmosphere, music and so on. These points form an individual digital path, along which each viewer is guided on. The logic of this path might work like this: people who enjoyed conspiracies of the *House of Cards* might find interesting *Bloodline*, a series where family members must deal with important secrets. *Bloodline* has characters with a questionable moral compass, so watching it might lead the viewer on to *Daredevil*, which is a Marvel series about a blind protagonist battling with moral dilemmas.[25]

When people are given a chance to watch television anytime, without the limitations of a program schedule, they often watch several episodes at one time. Even entire seasons are watched in a matter of a few days. This phenomenon is called binge watching and it increases the viewer engagement, thereby supporting the goals of video-on-demand operators, such as Netflix. The goals of Netflix's recommendation system are:

- Increase and maintain viewership of minutes consumed.
- Increase the number of titles explored and the frequency of logging back in.
- Exceed whichever minimum threshold that Netflix has determined as a success metric.
- Increase in monthly subscription (acquisition), loyalty and a decrease in cancellations (churn).

YouTube

YouTube has evolved into world's main video platform from quite modest beginnings. Back in 2005, when YouTube first started out, it had a uniform homepage for all users. This meant that every YouTube user would see the same homepage and the creators who were featured there would get a huge boost in their viewership. Their selection was based on their subscriber count, views and user engagement metrics e.g. likes, comments, shares etc. This inspired other users to become creators and start contributing content. In 2006 YouTube was bought by Google. The company policies and homepage started evolving gradually.
As adverts started showing on YouTube videos, the scenario changed quite quickly. Also, with the rapid rise in user numbers, Google started to curate the homepage as per each user's watch history, subscriptions, and likes. This was a good move in principle since it helped the users to see what they wanted to see. As a part of their next level innovation, a machine learning model was created to recommend videos to users. The goal of this deep neural network-based recommendation engine was to increase watch time of every video so that users stay longer on the platform.[26]

[25] https://usbeketrica.com/article/netflix-devoile-comment-son-algorithme-vous-rend-accros
[26] Source: https://www.theverge.com/2017/8/30/16222850/youtube-google-brain-algorithm-video-recommendation-personalized-feed

YouTube has used machine-learning techniques for years, with a great success. Instead of basing its algorithmic recommendations on how many people had clicked a video, YouTube would instead base them on how long people had spent watching it.

Google Brain is the parent company's artificial intelligence division, which YouTube began using in 2015. Brain wasn't YouTube's first attempt at using AI; the company had applied machine-learning techniques to recommendations before, using a Google-built system known as Sibyl. Brain, however, employs a technique known as unsupervised learning: its algorithms can find relationships between different inputs that software engineers never would have guessed. For an example, a Brain algorithm began recommending shorter videos for users of the mobile app, and longer videos on YouTube's TV app.

It guessed, correctly, that varying video length by platform would result in higher watch times. YouTube launched 190 changes like this one in 2016 and is on pace to release 300 more this year. Integrating Brain has had an immense impact: more than 70 percent of the time people spend watching videos on the site is now driven by YouTube's algorithmic recommendations. Each day, YouTube recommends 200 million different videos to users, in 76 languages. And the aggregate time people spend watching videos on YouTube's home page has grown 20 times larger than what it was three years ago.[27]

In Appendix 4, we will examine the offensive content filtering policies of YouTube.

1.2.3.Artificial Intelligence ethics

Ethics as a philosophical area deals with the good and bad in humans. AI ethics can be viewed from several points: data protection, freedom of expression, cultural diversity, productivity and economics, social justice, individual's happiness, human autonomy and uniqueness, stability of society and so on.
An ideal way to apply a dynamic AI-impact evaluation is that certain principles are recognized categorically (AI must not threaten human lives or health and not to invade privacy, etc…) and some others are activated case by case, depending on the use context.

The trustworthiness of AI is important for all stakeholders. The following five areas are especially important in creating a responsible AI. Every AI user should take these into consideration. [28]

1. **Fairness:** Are you minimizing bias in your data and AI models? (Bias means interference in the outcomes of AI by predetermined ideas, prejudice or influence in a certain direction. Data can be biased but so can the people who analyse the data. When data is biased, we mean that the sample is not representative of the entire population.)

2. **Interpretability**: Can you explain how an AI model makes decisions? Can you ensure those decisions are accurate?

[27]Source: https://hub.packtpub.com/is-youtubes-ai-algorithm-evil/
[28] http://explore.pwc.com/aipredictions2019/pw-c-2019-artificial-2?eq=CT13-PL1300-DM2-CN_ai2019-ai19-exesum-foot&utm_campaign=ai2019&utm_medium=org&utm_source=pwc_ai2019

3. **Robustness and security**: Can you rely on an AI system's performance? Are your AI systems vulnerable to attack?

4. **Governance**: Who is accountable for AI systems? Do you have the proper controls in place?

5. **System ethics**: Do your AI systems comply with data privacy regulations? How will they impact your employees and customers?

An increasing number of companies are overseeing responsible AI through ethics boards or chief ethics officers for technology, with AI as part of their remit. This encouraging trend is expected to accelerate in the future. New job roles are created that combine technical expertise with an understanding of regulatory, ethical and reputational concerns.[29]

Several studies on the use and impact of AI have been conducted in Europe this year. The Institute of Information Law published in March 2019 *Implications of AI-driven tools in the media for freedom of expression*. It highlights a number of points and the need for further initiatives. Among them is the role of news distribution, development of professional algorithmic ethics, importance of value-centric design, automated filtering and freedom of expression. The study also refers to the European Convention of Human Rights (ECHR). Article 10 of ECHR sets out the freedom of expression and information: Everyone has the right to freedom of expression. This right shall include freedom to hold opinions and to receive and impart information and ideas without interference by public authority and regardless of frontiers.

The exercise of these freedoms, since it carries with its duties and responsibilities, may be subject to such formalities, conditions, restrictions or penalties as are prescribed by law and are necessary in a democratic society. Article 10 signals the need to promote AI driven tools in a way that is compatible with human rights and fundamental freedoms.[30]

Council of Europe work on Artificial Intelligence is summarized in an information document and it lists the past and future actions of the Council of Europe in regards of AI.[31] Discussing the added value of AI the document recounts the many initiatives already taken. A recent study listed around 60 such initiatives. In general terms most of these are oriented towards indicative, ethical guidelines and self-regulation.

They include, among others: the Ethics Guidelines for Trustworthy Artificial Intelligence[32] published on 8 April 2019 by the independent High-Level Expert Group on AI, set up by the European Commission; the Recommendation published on 22 May 2019 by the OECD Council on Artificial Intelligence; Ethically Aligned Design published by the IEEE (Institute of Electrical and Electronics Engineers) on 25 March 2019; the human-centred AI Principles adopted by the G20 on 9 June 2019; the 2018 Montreal Declaration for a Responsible Development of Artificial Intelligence.

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[29] https://www.pwc.com/us/en/services/consulting/library/artificial-intelligence-predictions-2019.html
[30] Implications of AI-driven tools in the media for freedom of expression, IViR, page 3
[31] Council of Europe work on Artificial Intelligence, Information Documents, SG/Inf(2019)21
[32] https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai

1.3. Impact of Artificial Intelligence

Key points of AI impact are:

AI use is rapidly expanding in media; its commercial motives are clear, but also public stakeholders are active in developing and using AI.

- Distribution is an integral part of the new business models; broadcasters must learn the dynamics of multi-platform distribution (using audience data, publishing sequence and platforms, reactive scheduling, etc.)
- The two main AI uses currently are to guide consumer decision making (recommendation) and to target advertising.
- Adverse effects of AI are recognized; concerns especially on data protection, on freedom of expression and cultural diversity are expressed.
- Discussions on regulatory needs are under way.
- Ethics of AI has a positive reaction in the interviews. However, ethical rules are complex since following them is voluntary. Rules are based on autoregulation and there are no enforceable penalties for breaking them.

AI solutions rely on the amount and accuracy of data being fed into them. There is no "intelligence" in the systems as such, and there is a risk trying to use AI for purposes it cannot solve. Another challenge for companies using AI is that it takes a long time to feed sufficient data into the system and let AI to learn problem solving. Perfecting algorithms is a time-consuming task.

AI has brought new opportunities in the series and cinema sector in a very short time.
Media companies now have new possibilities to better serve viewers and expand the service and business side of media. Companies currently use AI to help with strategic decisions, inventing new business models and creating personalized and data-driven products and services.

To benefit the most from AI, media companies put the strategic needs as drivers of AI: the machine language models used, what data is collected and processed, what types of partnerships are needed, etc. Personalization is not provided just because it is interesting technology, but it needs to be linked to a business problem and compared with other priorities of the company.

1.3.2.Impact on Production

AI has many interesting areas in production that it adds value to. While it is hard to recognize specific breakthroughs, this study shows that AI use in content production is on the rise. AI has been around for a long time but only recently has AI been applied for production use. Many producers and broadcasters are experimenting with AI in early deployments, pilots and demos.

Futurists dream about a movie entirely written by a machine. We already have created music composed by AI in the style of Johann Sebastian Bach which was passed off as the genuine thing. The same is slowly taking place in video production as well. There have been early tests of AI-created video content, for example, virtual news anchors.[33] However, behind every success is the ”human factor” and it is very difficult to predict the commercial success of any creative work. [34]

The use of AI in production is a high priority in broadcasting communities and working groups have been formed around AI to disperse information and practices on AI usage. For example, the EBU has five strategic AI-programs which are:

1. Pre-production
2. Production
3. Infrastructure, cloud, IP networks, media cybersecurity
4. Distribution, platforms
5. Spectrum, frequency

The exchange of information and sharing experiences among EBU members is considered important. Many of the joint projects have been on speech-to-text, including tests on facial recognition and improvements on the use of metadata.

Examples of AI in pre-production

AI is used in many phases of content production. Predicting the future success of video has been attempted. If we can measure the financial gain and critical reception of a film or series, why not apply the resulting data to predict success based on defined variables, such as: celebrity status of the cast, genre, budget, length, key plot events, etc.?

Some companies offer AI technology as a “wise producer” and license historical data about movie performances over the years. The data is then cross-referenced with information about a film’s genre, theme and key talent. Machine learning is used to find out hidden patterns in the data. Some software lets users play with their movie script, inputting a cast, then swapping one actor for another to see how this affects a film’s projected box office revenue.

Los Angeles-based start-up Cinelytic is one of the many companies promising that AI will be a wise producer. It licenses historical data about movie performances over the years, then cross-references it with information about a film’s themes and key talent, using machine learning to find out hidden patterns in the data. Its software lets customers input a cast, then swap one actor for another to see how this affects a film’s projected box office.

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[33] https://www.theguardian.com/world/2018/nov/09/worlds-first-ai-news-anchor-unveiled-in-china

[34] The novelty, or ”newness” of a film was analyzed in 2013 study (Quantitative analysis of the evolution of novelty in cinema through crowdsourced keywords, https://www.nature.com/articles/srep02758) on analyzing crowd sourced key words on Internet Movie Database (IMDb). The study shows the novelty of a show (female nudity, martial arts) means higher box office returns, but only up to a point. We are put off by the banal, but also hate the radically unfamiliar. The very best films sit in the narrow sweet spot between ’new’ and ’not too new’. *Source Hannah Fry, Hello World, p.216, Penguin Random House UK, 2018*
Another study from 2005 used neural network trying to predict the performance of films before their cinema release. They study categorized films into nine categories but failed to yield any positive predictive results. https://www.sciencedirect.com/science/article/pii/S0957417405001399

Say you have a summer blockbuster in the works with Emma Watson in the lead role. You could use Cinelytic's software to see how changing her for Jennifer Lawrence might change the film's box office performance.

Cinelytic isn't the only company hoping to apply AI to the business of film. In recent years, a number of firms have sprung up promising similar insights. Belgium's ScriptBook, founded in 2015, claims its algorithms can predict a movie's success just by analysing its script. Israeli startup Vault, founded the same year, promises clients that it can predict which demographics will watch their films by tracking (among other things) how its trailers are received online. Another company called Pilot offers similar analyses, promising it can forecast box office revenues up to 18 months before a film's launch with "unrivalled accuracy."[35]

The actual use of AI in content production is still quite rare. Some of the production areas where early signs of AI use can be detected, are reviewed in Appendix 5:

- Script evaluation and predictive AI.
- Location scouting.
- Production budgeting.
- Production planning.
- Production hardware.

Examples of AI in post-production

Post-production means editing the raw material, finalizing video (colour correction, special effects, on-screen graphics) and mixing audio. The best-known AI element of post-production is the special effects. Special effects and computer-generated imaging have been around for a long time, but the use of AI can streamline the process of creating digital sets, effects, even entire characters. Computer generated imaging has introduced audio-visual media to endless possibilities of manipulating both picture and sound. AI is complementing post-production also with material management, rushes and adding metadata to all material produced. AI addresses specific points on content tailoring, moderating and tagging material. AI makes it easier to compile different kinds of content from the same original material.

Movie editing can use historical data to see where quality control checks have failed in the past, for example, in syncing the sound with movements. AI can help to replace manual checks in what otherwise could be a very time-consuming and laborious process.

Post-production has already been impacted by video intelligence applications. This means that based on pre-trained models, AI can automatically classify and organize video content, detect brands and logos, blur explicit content, extract material, and transcribe and translate it. As a result, image recognition becomes a part of the post-production process. For example, an editor can ask AI to point out all scenes with a blue car, or a certain actor. This will make post-production work faster and more accurate.

[35] https://www.theverge.com/2019/5/28/18637135/hollywood-ai-film-decision-script-analysis-data-machine-learning

1.3.2. Impact on Distribution: Filter Bubbles

The most visible and the best-known use of AI are recommendation engines. This means that personalization algorithms store and analyse what individual content consumers are watching. Based on the program choices, viewers are recommended similar content, which usually is based on content genre; romance, thriller, etc. In the core of recommendations are also preferences of others with similar profiles, or their behaviour.

This creates a bubble, also called an echo chamber. The viewer has no surprise offering because a loop of recommendation is based on previous choices. It is more of the same, and there is little content diversity offered to the viewer. Some broadcasters are aware of this and they provide additional content recommendations aside from algorithms. For example, a random news topic will be inserted by human editorial decisions into the news stream recommended by AI. It also is noteworthy that creating too narrow bubbles or isolating the viewer from a wider selection of content is not a commercial interest either. Media isolation has been recognized as a threat for content diversity. It can be argued that media literacy is a tool to combat the lack of diversity and viewpoints. Isolation leads to ignorance, so educating audiences from early on is considered important.

Controlling filter bubbles is a complicated task as can be seen in the case of the Filter Bubble Transparency Act (FBTA). The US senate has introduced a bill in early November 2019 which aims to counter digital filter bubbles by letting people to opt out of those echo chambers. According to the bill, large companies would have to notify users if they're delivering content — like search results or a news feed — based on personal information that the user didn't explicitly provide. That could include a user's search history, their location, or information about their device. Sites would also need to let users turn off this personalization, although the rules don't apply to "user-supplied" data like search terms, saved preferences, or an explicitly entered geographical location.

The FBTA doesn't make platforms explain exactly how their algorithms work. It doesn't prevent them from using arcane and manipulative rules, as long as those rules aren't built around certain kinds of personal data. And removing or disclosing a few factors in an algorithm doesn't make the overall algorithm transparent. This bill isn't aimed at systems using hidden algorithms, or so called "black box" algorithms. Despite this, the bill fights "secret algorithms" rather than micro-targeting or invasive data mining.[36]

Viewers have started to criticize ultra-personalization and the lack of diversity brought about by algorithms. This has resulted in some OTT operators adding a human touch to the recommendations: Netflix introduced in August 2019 a test functionality called Collections. Collections regroups content under characterizations such as "just for laughs" and the content is pooled together by humans. According to Netflix, Collections is only available on iOS, and being a test, it is not available for all users.

In summer 2019, HBO launched in the US a new website called Recommended by Humans.

[36] https://www.theverge.com/2019/11/5/20943634/senate-filter-bubble-transparency-act-algorithm-personalization-targeting-bill

It provides video suggestions and fan tweets to recommend different series or documentaries that people should watch. There are 50 free episodes, movies, and documentaries available on the site, which makes the site a marketing tool designed to give potential customers a taste of HBO shows in order to get them to sign up.

A major distribution challenge is audience churn, meaning customers leaving a service. Reducing churn is a central goal of audience data collection. Personalization tools are used to foresee the action points which imply that a viewer is about to discontinue the service.

Independent content producers: social media hacking via algorithms— Case Norsemen

The extensive use of recommendation algorithms hasn't happened without reaction from independent stakeholders. There has been a lot of talk about" hacking YouTube algorithms" but essentially, it is a question of maximizing the visibility of the (video) content. The same, but in a more refined way, applies to this example on the TV series, The Norsemen.

YouTubers who upload video content on this global social platform vary from first time video jockeys to big corporations. Both have the same goal: to get as much exposure as possible. Both need to find out what are the key indicators, according to which YouTuber evaluates the value of the content.

There are several key criteria in categorizing video content of YouTube. The length of the video, its genre is important but so are the timing of release, frequency of new releases, and all the social media characteristics such as likes, sharing options and other viewer engagement actions. Search Engine Optimization (SEO) also is crucial in the marketing of a video by offering large amounts of keywords for the video to appear in as many searches as possible. There are many sites offering advice on how to best use the presumed YouTube algorithms. Some of those suggestions are general observations- what works in the online publishing environment and standardized recommendations. Others are more in-depth tips on how to upgrade the" algorithmic visibility" of a video.

If too many people are using, or manipulating the same algorithmic key points, will it distort the outcomes in any way? Is it a good thing that content publishers learn to use new means available in marketing their content? Reaching the right audience seems to remain a central challenge in the YouTube economy in the days to come.

Independent producers can become slaves to the algorithms. With the amount of content available, it is extremely difficult to get attention at the launch of a series. A good example of proactive marketing is the Norwegian Anders Tangen, who sold his Viking-comedy, Norsemen, to Netflix in 2017. For Netflix, Norsemen seemed like a perfect counterbalance to the gloominess of HBO's Game of Thrones.

Anders Tangen took initiative and planned a detailed social media campaign, focusing on major US cities: LA, New York, Miami and Chicago, with additional pushes in states with a large Norwegian descendent populations. Each separate target group got their own tailored Facebook campaign.

In less than a month, Norsemen marketing reached 5.5 million Facebook users and generated two million views. Netflix's algorithm had started to kick in. Fans who had become aware of the show through Tangen's campaign began recommending it to their friends. Norsemen started appearing on Netflix's recommendation carousel. Tangen invested a further $15,000 to promote the show on Facebook worldwide, using what he had learned during the initial U.S.

1.3.3.Impact on Consumers

Data issues are in the centre of the impact of AI on individual content users. From a consumer point of view, AI usage on different platforms should meet the following criteria:

- Use of data only by the original request maker (data is not given out to third parties).
- Informing what the data is used for and how long is it stored.
- Consumers' access to data and the ability to change it or take it out.
- Explanation on how data must be different in order to change a decision made by AI (How to change viewer profiles in order to avoid certain content recommendations).
- AI service providers must follow regulations on data privacy.

A technical consideration of AI is that platforms operate in the cloud, where enforceable international regulations are almost non-existent. In practice, it is difficult to define where certain information is located- it can also be stored in several different locations.

In addition to the media industry, AI has had other effects on consumers on a larger societal scale, such as the change of work life. AI replaces human workloads and thereby creates unemployment as well as new work opportunities. These consequences have an ethical side (enough income for all) and a political one (shortening the working hours).

1.4. Future of Artificial Intelligence, New Services and Business Models

To describe the future of AI, we see two paths of development.

The first one we have been witnessing for some time, is the organic and commercially driven path: AI is used for whatever purpose makes strategic, business (or political) sense.

The other path is the way of regulation. Under the commercial realities of AI, we have started to see the need for regulation and rules. But can rules be applied to the practicalities of AI use today?

Many businesses are already using AI to improve operations and enhance the customer experience, but AI implementations are still in early stages and AI continues to be a learning process for all. Looking into the future of AI, the following challenges are identified:

- Lack of uniform ethical code; nobody is in charge. EU and national authorities address multiple levels of AI issues, including AI's impact on data protection, access to information and cultural diversity, but a set of actions are missing.
- Commercial deployments of AI are taking place, industry standards are set "on the fly" and companies will not necessarily adhere to ethical standards.
- Global competition is intense, and most AI tools and platforms in use are not owned by Europeans.
- AI should follow the same rules as any other part of society: human rights and freedom of information.

The current three top uses of AI in media are: 1. Company management, 2. Content production and 3. Content publishing and distribution. Media companies often externalize AI work, and this seems to be the state of things in the future as well. Over 40 % of the respondents in a recent International Trade Association for Broadcast & Media Technologies' study[37] said they rely on cloud service providers for AI capabilities. Over 30 % responded that they use a specialist AI platform, and the rest leverage specific AI functionalities in solutions of the vendors and other service providers.[38]

At the moment, the greatest gains from AI come from productivity gains and enhancements, as businesses use AI to automate processes and help employees make better decisions. But the majority of AI's economic impact will come from the consumption side, through higher-quality, more personalized and more data-driven products and services. This is clearly exemplified in the recommendation systems of video on-demand operators, such as Netflix.

AI is based on machine learning, which in turn, depends on data input- the amount and quality of data. The two footholds of AI in the future are better and faster learning technologies and control of data. The deep learning in neural networks will resemble more of human reasoning. New applications, such as machine vision and image recognition, when combined with the faster learning machines, will produce new tools with a wide range of uses. In the media context, they can help in tagging metadata onto archives and bringing them back to use. However, the same technologies can be also used for detailed surveillance of people. There obviously is a need to closely follow the current and future uses of AI and take appropriate measures to prevent unjust use, when needed.

Another AI growth area in series and films is the measurement activity. There are early pilots of AI used in measuring people's moods by sensors detecting heartbeat, sweating, breathing, etc. Matching content offer based on viewer's moods is still in early experimental stages, but it brings content recommendation to a new level.

Today, the challenge is to get user figures. With the rapid growth of new content distribution platforms and the high levels of consumer fragmentation, the old measurement services in the industry are falling behind everywhere. It becomes more difficult to know who is consuming what and when.

The solution to the industry's difficulty in navigating cross-platform fragmentation is through measuring global content demand. Demand for content is what drives consumption on all platforms — linear and OTT alike. Pooling the user information together on several different service platforms has been challenging. New commercial services, such as Parrot Analytics propose to solve the problem.

Consumers express their demand for content through multiple "demand expression platforms". They include video streaming, social media, photo sharing, blogging and micro-blogging platforms, fan and critic rating platforms, peer-to-peer protocols and file sharing platforms. Parrot Analytics captures the expressions of demand from these sources and combines them. they use AI to combine a single weighted measure of demand called Demand Expressions. Business models need business information and pooling expressions together with demand is important for programmatic and targeted advertising.[39]

[37] https://www.theiabm.org/ibc-2019/
[38] IAMB Head of Insights and Analysis Mr Lorenzo Zanni at ICB session The AI/ML Effect on 16.9.2019
[39] https://www.parrotanalytics.com/insights/

Publicly funded broadcasters have little need for business models, but they need a sufficient audience share to justify their funding. In the competition for audience, non-profit broadcasters are forced to uptake various AI applications in order to stay relevant.

It is likely AI ecosystems will polarize many: the big corporations will get bigger and there is a growing number of small players. New companies will enter the ecosystem, mainly from the coding and technical side, and various new service and solution providers will also enter the market.

Aside from direct business implications, AI demands are felt in the workplace. Most media companies have gone through drastic changes during the last decade in their workforce, in numbers and needs for capabilities. Lay-offs and organizational restructurings have been commonplace, and many work tasks have changed.

According to PriceWaterhouseCoopers, training non-AI professionals to work with AI has become a crucial part of workforce strategy. Programming AI is becoming easier and new tools, including automated machine learning, are becoming available. This process streamlines and automates creating AI models. But user-friendly AI is still complex. Even with basic training, people, who sometimes are in charge of the company's AI strategy, may not fully understand different AI algorithm's parameters and performance levels. As a result, the wrong algorithms could be applied, with unintended results.[40]

It is estimated that AI will contribute 15.7 trillion USD to the global economy by 2030, driven primarily by productivity gain and AI-fuelled product innovations.[41] The media sector's main use of AI most likely will continue to be focused on consumer analysis and content production for many years to come.

[40] http://explore.pwc.com/aipredictions2019/pw-c-2019-artificial-2?eq=CT13-PL1300-DM2-CN_ai2019-ai19-exesum-foot&utm_campaign=ai2019&utm_medium=org&utm_source=pwc_ai2019
[41] http://explore.pwc.com/aipredictions2019/fast-company-pwc-AI-wont-take-your-job?eq=CT13-PL1300-DM2-CN_ai2019-ai19-exesum-foot&utm_campaign=ai2019&utm_medium=org&utm_source=pwc_ai2019

Key Findings of Chapter 1

Digitalization has transformed the TV and film industries with increasing speed during the past decade. The production, distribution and consumption of audio-visual content has also been affected by the increasing adoption of Artificial Intelligence (**AI**).

AI is already in wide use in various business areas and other functions of society. The use of AI in media is especially important as it challenges some of the commonly shared values, such as freedom of expression, access to information, cultural diversity and data privacy.

Some of these threats can be identified because of the use of AI. For example, personalized content recommendations can contribute to the narrowing of content offered, because recommendations are based on a viewer's previous viewing choices or viewing patterns of others with similar viewing behaviour.

Another very common use of AI also involves personalization, but instead of program recommendations, personalization is used for targeted advertising. As more and more personal data is gathered by AI, the more targeted advertising will become. Media industries in general are moving away from mass audiences into smaller, and more specialized and perhaps engaged audiences. Furthermore, there is an increasing competition in Europe on collecting consumers data, and US digital companies are taking the lead. This may in turn have a deleterious effect on the issues of personal data protection.

This report studies the impact of AI on various levels of production, distribution and consumption of series and films. There are early signs of AI adoption in production. Many companies already use the AI-enabled tagging of metadata to more effectively index and identify their content, thus maximizing the use of their digital archives. AI applications utilizing voice recognition are also appearing as the numbers of voice-controlled smart speakers and other media terminals are rising. AI can also be used for original content creation. The first robot-generated news clips have now appeared, and there have even been fully computer-generated news anchors on the air. However, these are still trials and therefore, have not had any significant impact on the media industry yet.

Program distribution and content recommendations remain the main AI uses today. Personalization can be a valuable feature for consumers in finding content relevant to them. The study points out that it also can be beneficial to both consumers and advertisers not to have people exposed to non-relevant advertising.

For now, the main development and uptake of AI takes place among the large media companies. Smaller companies typically are solution providers focusing on single products or functionalities. The push for AI among commercial media companies is done to increase viewership and loyalty and to maximize revenues. Public sector companies are more focused on user experience and the transparency of the AI. There is also a need for sharing information and experiences about AI among professional organizations such as the European Broadcasting Union.

As highlighted in several interviews and background materials for this study, the concerns of fair AI use are evident. However, enforcing rules or regulations directed toward the AI itself is challenging, if nothing else, for technical reasons. AI uses proprietary algorithms which are the core of the AI system. This code is highly confidential and also has intellectual property rights. Advanced neural nets use AI in a way, which can make it impossible to open up the logic of the machine learning process. This is the “black box” problem in which even some developers don’t know why the AI system “learned” what it learned.

In the absence of international or European AI regulations, this study raised the importance of AI ethics being applied much more globally. While many companies already are imposing auto-regulation of AI, there is a need for general European wide guidelines to ensure the trustworthiness of AI. Numerous AI ethics related studies and codes of conduct already exist. One key finding was that there is a desire among the various entities using AI for a European-wide guidance gathering generally accepted rules on AI ethics.

2. The growing series market

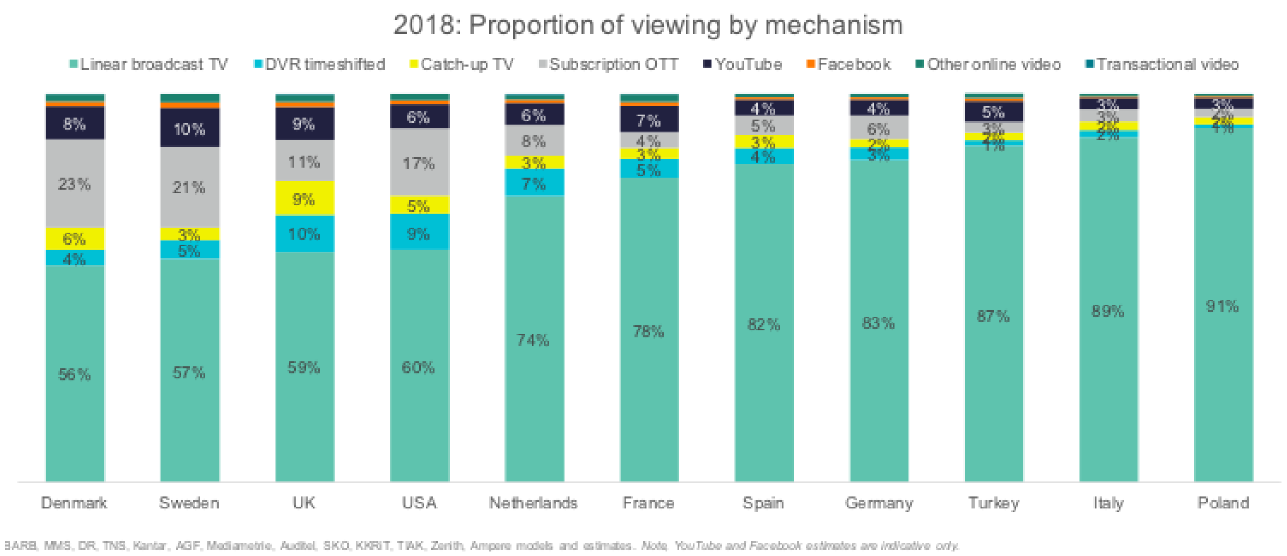
2.1. A new market context paving the road to series

2.1.1. New Convergent usage

TV usage has dramatically changed in a few years. With the increase of broadband access, the high penetration of connected devices (TVs and phones) and the arrival of new video offers like the SVOD[70] (Subscription-Video-On-Demand) platforms provided by new entrants like Netflix or Amazon, video is consumed anytime, and anywhere. The video market now goes far beyond the TV market and embraces all kind of usage: linear TV, non-linear[71] SVOD, free streaming, personal content…etc.

In this global video market, overall TV viewing remains stable while SVOD grows (from 5% to 9% between 2016 and 2018) at the expense of broadcast viewing (79% to 74%, still at 3 hours 45 minutes per day on average[72]), fortunately TV players are also developing their own non-linear usage ("catch up" or "replay" services : 4%). Series are particularly watched in a non-linear mode, boosting the overall series audience by 13% in France and up to 46% in the UK[73].

There is a disparity between the countries reflecting the broadband penetration and their associated new services. For instance, the split of TV viewing versus SVOD viewing is 56%/23% in Denmark whereas TV viewing is still predominant in Poland (91%)[74].



Source Ampere Analysis, Series Series keynote July 2019

[70] SVOD: subscription video on demand. The consumer can watch as much content as desired at any time from the catalog of the content providers, for a flat rate per month

[71] Contrary to traditional linear media such as Radio or TV, non-linear media is a form of media that can be interacted with by the consumer, such as by selecting shows to watch through a video on demand type service, by playing a video game, by clicking for pausing or watching at any time

[72] Eurodata TV - One Television Year – April 2019

[73] MIPCOM 2019 presentation of Eurodata / Glance ("new ways of consumption for specific genres")

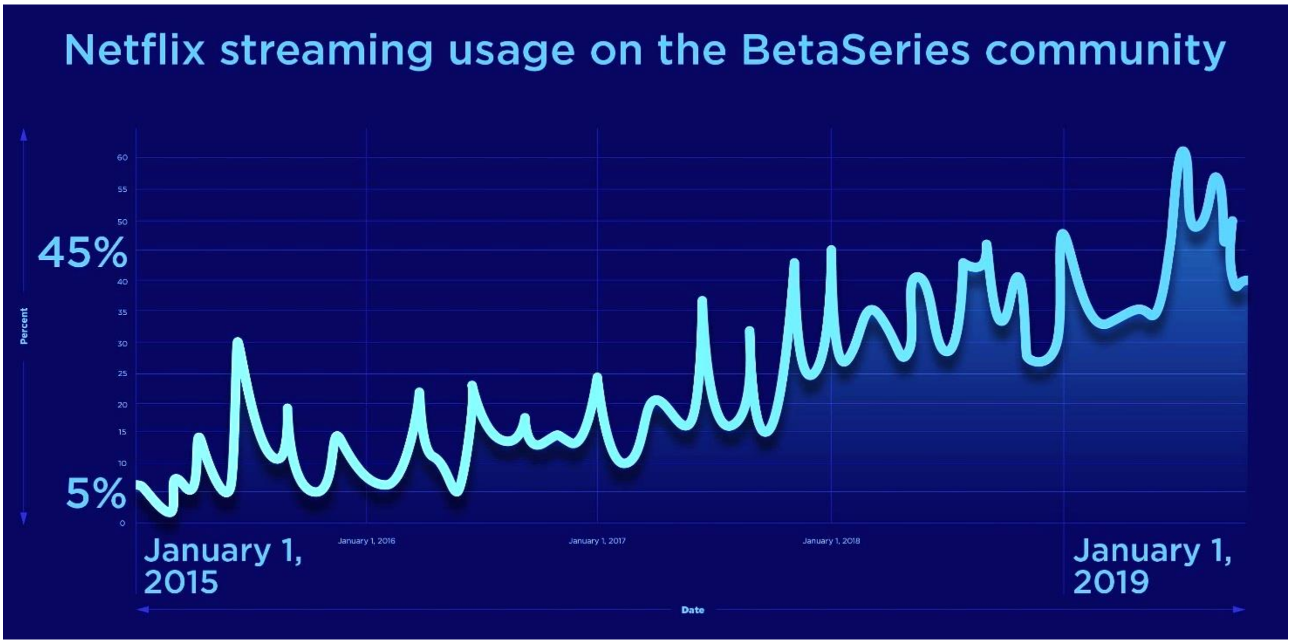
[74] Ampere Analysis presentations at Series Series, July 19

There is also a disparity between the generations with SVOD initially driven by the youngest viewers and now driven in Western Europe by the 55-64 demographic, the core of TV audience. The OTT platforms address in particular these differences of content demand thanks to their recommendation engines as detailed in Part 1 of this report and also with adapted content sourcing.

With the production of period drama pieces like "*The Crown*" or the increasing commissioning of documentaries, Netflix, for instance, addresses and skews more for its elder demographic users.

2.1.2. New players accelerating convergence and content production

The new non-linear and online usages have been addressed by new entrants and their SVOD services, competing therefore against European Pay-TVs: 43% of European Internet users subscribe now both to Pay TV and SVOD. Even if incumbent Pay TV revenues still represent 30% of the TV market and SVOD new services only 5%, these services are growing fast and are expected to reach 25% of Pay TV revenues by 2023 and almost half of the subscriptions (SVOD has a lower Average Revenue Per User than Pay TV : 6,7€/month versus 20,4)[75]. "Cord cutting" (cancelling a subscription to a Pay TV service) is expected in Europe like it has happened in the US.



i.e. Netflix usage growth: from 5% to 45% of series viewing share in France in 5 years on the 1,3M community of BetaSeries fans of series (source BetaSeries, September 2019)

These new players have been initially US tech companies ("FAANGs") but the competition they have created in their domestic markets has given birth to new services developed for by US media groups with international sales strategies (Disney+, the recently announced Peacock AVOD[76] (advertising-based Video On Demand) service from NBCUniversal, Viacom's BET+).

[75] Trends on the EU VOD Market, European Audiovisual Observatory, September 2019
[76] Advertising Video On Demand. It is free to consumers, but they will be confronted to advertising.

Notwithstanding the already existing US Pay TV services now accelerating their OTT and international offers (i.e. HBO combined with Warner for an "HBO Max" service or AMC). The diagram on page 26 presents these US players and their parent companies and a benchmark to the UK players thus demonstrating the important gap of valorisation between them.

Despite the growing number of SVOD players (220 services in Europe at the end of 2018), the duopoly Netflix / Amazon represent 74% of the SVOD European revenues with Disney expected to join soon the third position[77].

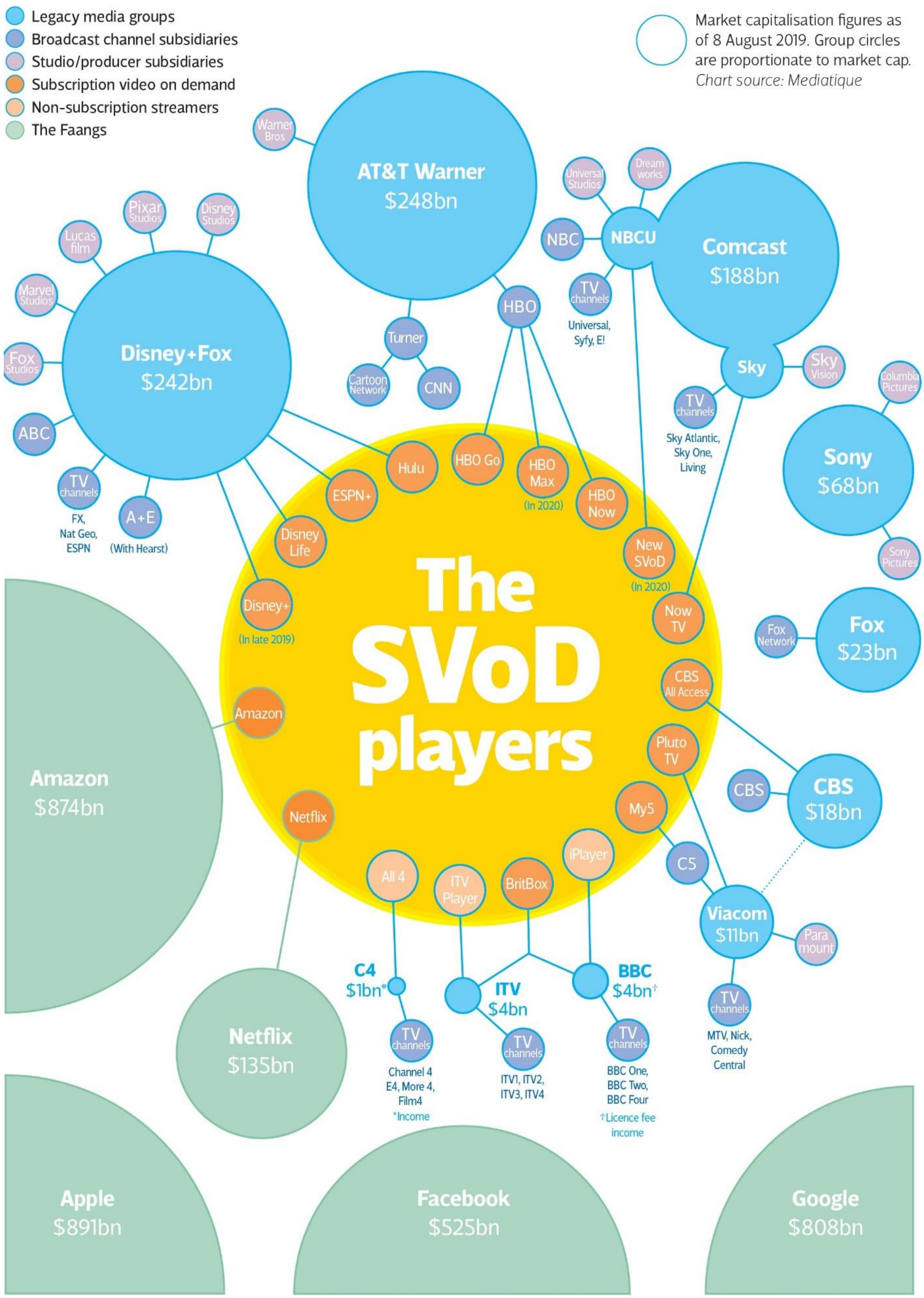
Most of them are described as "OTT players" as they do not own the Internet technical infrastructure, they also don't sell access, but they are starting to have distribution agreements with telecommunication operators ("telcos") and other distributors as they become "must have" services and as such, also need extended distribution, hence the mutual interest.

In parallel, free-TV stations see a progressive migration of their audiences to these OTT players and are now starting to react by offering content and other offers targeting younger audiences and their core audiences who are choosing to go online.

In this dynamic environment with corresponding new demands, new offers from both new entrants and incumbent players, competition is intense. User experience and pricing are key elements of the marketing mix, but content is used as the main differentiator to recruit and retain customers, and many audio-visual professionals interviewed stated that series is the main category sustaining most of the market growth.

With Netflix and Amazon spending 12,5$bn in 2018 (from "only" 2,8$bn in 2014) and planning to significantly increase their efforts with other players like Disney or Apple, European broadcasters have to reinvent their production strategies within an important, but flat and segmented content budget for the last 10 years (24,8$bn) [78].

[77] Digital TV Research estimates, September 19
[78] Ampere Analysis' presentations at Series Series, July 19



Source: Mediatique/RTS, from the September 2019 issue of
“Television, the magazine of the Royal Television Society”

2.2. Towards a new series segment

2.2.1. Definition

An audio-visual series is a set or sequence of related programs. In this study, the word "series" will refer to live action drama series, meaning fictional series, in which live actors are playing and lasting at least a minimum of 20 minutes per episode. As many series are not provided uniquely by "TVs" (broadcasters), we will not use the term TV series in this report as it would be too restrictive. Animation series or short format series are also not included in this report as this format is produced differently, and partially has other needs and receives other kinds of support.

Why have series become so important?

Series have existed almost as long as TV has existed. If they were primarily used by private broadcasters to create loyalty, maximize audiences and therefore, sell more advertising. A Pay TV entity, HBO, has started in the 90's to use series as an exclusive differentiator and invested in a new high quality and costly category of series for demanding clients (*"The Wire", "Six Feet Under"* and today *"Games of Throne", "Chernobyl"* or *"Little big Lies"*), attracting more and more high profile talent and proposing edgy and innovative stories which creates buzz and more subscriptions.

Progressively, their production process has been optimized to deliver high quality content to appeal to the US but also in the territories where HBO was expanding. The writing has been put front and centre in the process with a generation of "showrunners" creating more and more series also for HBO competitors, such as SVOD platforms looking for "products" to enable the recruitment and retention customers efficiently.

Traditional domestic fiction on European local televisions was initially not considered high-profile series but they have started to react and produce or purchase similar high qualitative content for their Pay TV units, but also for their free stations suffering from decreasing viewership. A new segment has now been born: the "international" series, with potential for local audiences but also capable of generating interest and … sales abroad. This is the segment covered by this report. They are in some cases categorized as "high concept series", or "drama fictions" which sometimes restricts the genres. We will use the term "series" to cover them all.

2.2.2. Main Figures

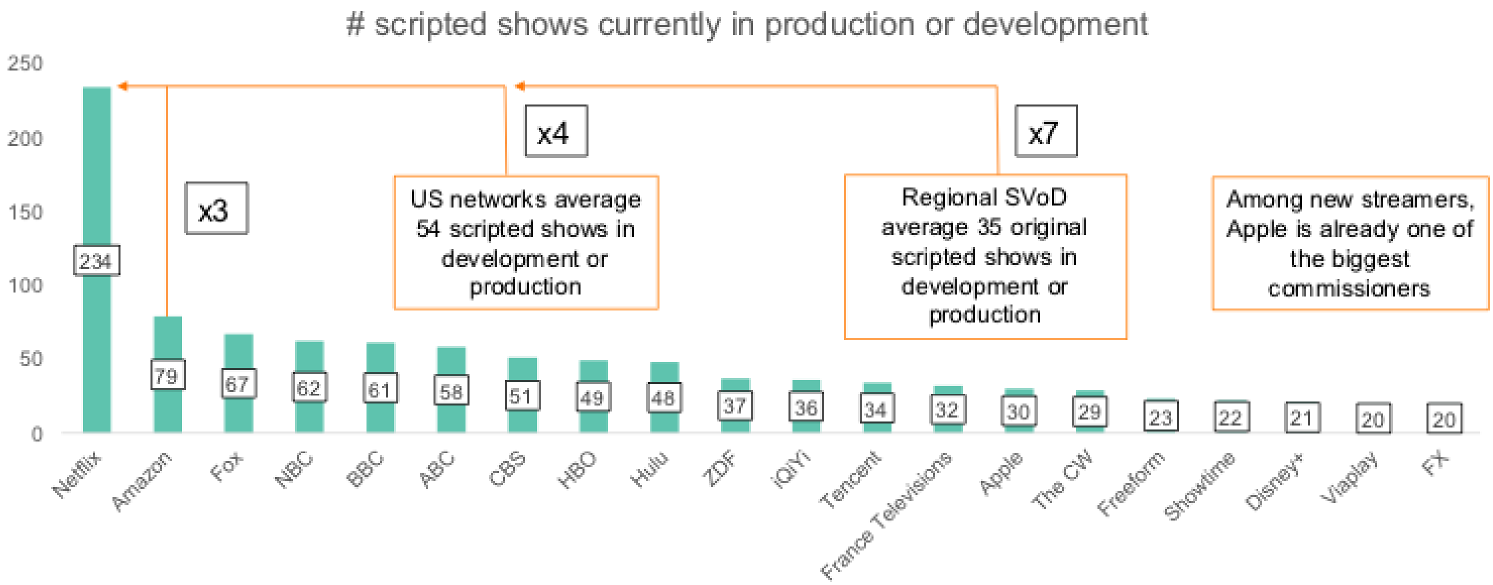
Series is the growing investment from commissioners, from both OTT platforms, Pay TV and Free TV.

- Worldwide expenses in content (sports excluded) have increased of 29% between 2013 and 2018 (123€bn spent in 2018) [79]. In the fiction portfolio of formats diffused throughout Europe (TV unitary or two episodes films, soaps, telenovelas, series), the growing format with international potential and marketed by OTT players or by TVs competing with OTT players is the series format, (mostly series of 3-13 episodes), with 54% being new projects in 2018/19[80]. In the US only, 495 new series were released in 2018 versus 210 in 2009.

[79] Ampere Analysis' presentations at Series Series, July 19

[80] *Production and Circulation of TV fiction in EU28*, European Audiovisual Observatory 2018

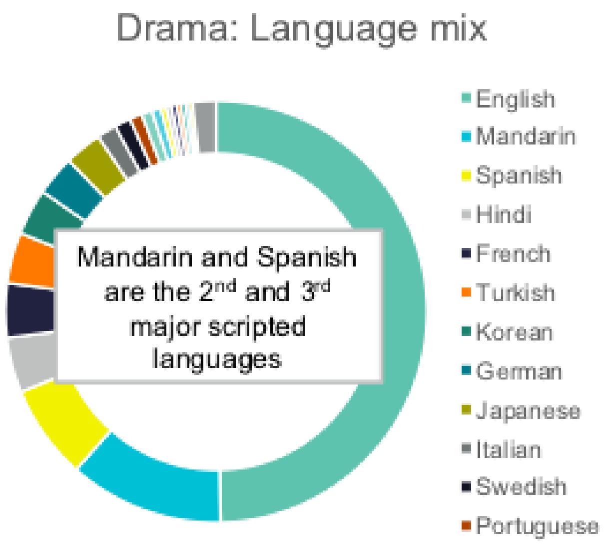
- SVOD players and US networks are driving the growth: currently in 2019, there are more than 230 shows in development or production for Netflix (100 hours of fiction per month), 54 on average for US networks and a maximum of 40 for European players (37 for German PSB ZDF, 32 for French PSB FTV, 15 for Italian PSB RAI). Broadcasters adapt their budget towards more fiction as many were mostly investing in unscripted formats (live shows): RTL, BBC or RTVE[81] still spend more than 50% on unscripted formats whereas RAI, ZDF or TF1 favour already fiction.



Source: Ampere Analysis, Series, July 2019

- Local content is preferred by local audiences in Europe. 2/3 of fiction in prime time are produced locally (+5% in one year), and 90% of the "top 10" TV audiences in the 5 biggest markets (DE, FR, GB, ES, IT) are local. Overall 45% of broadcast hours are EU28 TV fiction. In 8/12 of analysed countries, the most successful primetime shows are new productions which demonstrates the growing interest for new stories (i.e. *"Lifeline"* in Turkey, *"The Restaurant"* in Sweden)[82].
- Local languages have been, for a long time, an issue preventing local series productions to travel, but the growing usage of subtitles, especially among younger audiences (requiring subtitles on their mobile usage in noisy environments) is changing the behaviours: more than 50% of Netflix originals are not in English.

[81] RTVE: Radiotelevisión Española is the state-owned public corporation that assumed the indirect management of the Spanish public radio and television service
[82] Scripted Series Report, Eurodata TV Worldwide, Glance, January 2019



Source Ampere Analysis, Series Series keynote July 2019

This is not yet happening on local free TV even if RAI has proposed to use subtitles on their series productions in a Neapolitan dialect *"My Brilliant Friend"* or decided to shoot *"The Name of the Rose"* in English[83]. Co-productions are also often depicting multi-national characters, each of them speaking in his or her own language which facilitates localization (many examples like "*Midnight Sun*" are covered later in this report as a case study).

- Drama is the most popular genre of series (70% of European primetimes), with Crime and Thrillers alone representing 40%, but there is growing interest for "genres" like sci-fi or horror among younger audiences, as pointed out by several TV commissioners like at TF1 or ZDF and as proven by the local successes of *"Dark"* or *"The Rain"* on Netflix[84]. Most commissioners and producers believe that international potential lies more in the quality of writing, and the capacity to address universal human themes through local and authentic stories for drama, or to be creative for other genres. This has been the recipe of success for Nordic or Israeli series so far, and as analysed later on in the report.

<u>There is, therefore, a clear appetite with European audiences for local and fresh high-end series with a focus today on dramas evolving into more segmented genres.</u>

- To match this local demand, and also, quotas from the various laws, the trend is to increase localized content production for OTT players: only 45% of Netflix new series are produced in the US (7% in the UK and Spain, 5% in France, 4% in Germany…). Amazon is already localizing 35% of its productions.
- This competition on potential abundant choices of new local content stimulates competition in local markets. TV viewers are solicited, their attention become scarce and they are demanding more and more quality. European broadcasters then react and develop more series growing audience awareness but also increasing production costs.

[83] "*My Brilliant Friend*" is a common project RAI & HBO (see case study in this Report) and *"The Name of the Rose"* an Italo German coproduction commissioned by RAI
[84] *"Dark"* is a local German production and *"The Rain"* is a local Danish production for Netflix Originals

- They tend to favour original productions as opposed to acquisitions, so that they avoid losing against bids from the deep pocket OTT players (60% of their budgets are now original productions compared to acquisitions. It was 50% 10 years ago).
- As the gap to match budgets per episode remains wide (in many countries, TVs still produce series below 700k€/episode, whereas many OTT series start at 1M€/episode and can reach a lot more like *"Games of Thrones"* and the upcoming, record breaking *"Lord of the Rings"* project from Amazon- having spent 250M$ just for the rights acquisition), they develop projects with both local interest and international potential.
- They create alliances and co-productions to increase their budgets per episode and match their new audience expectations. Only 9% of series are co-productions[85], today mostly originated by "PSBs" (Public Service Broadcasters) and with various countries and unique situations.

The lead today is clearly in the Nordic countries, followed by the UK and Italy, Spain and France. Country specificities will be analysed later on in this report. And as we will point out in our TV strategies section, this trend is meant to grow as it is among the only option to match the OTT wave of series expected soon in Europe.

2.3. Main player descriptions& strategies

2.3.1. Description of the series ecosystem

Compared to the differences of the cinema industry with its media chronology consisting of several rather fixed windows (theatrical release, home entertainment release, pay TV, free tv, SVOD …), the series chronology is not as rigid and depends on each "sales" context. For instance, series commissioned mainly by Pay-TV will have a first window on this Pay-TV and then possible distribution on Free-Tv, whereas series ordered by Public Service Providers will directly have a Free-TV window.

Historically, series were produced for one broadcaster owning all the content and which considered the producer as a supplier, and sometimes even producing series internally or, in the case where the producer kept the rights, having a long window of rights and editorial control over the content.

With the growing segment of international series among both broadcasters and OTT platforms, all the distribution options (free tv primetime, pay-tv, SVOD from a local media group, SVOD from OTT players), the rights allocation depend on each project's financing, on the initial ownership (who had the initial idea and initially carried the development costs) and its international potential.

The traditional TV production process is therefore deeply affected and needs to reinvent itself to adapt to this new complex environment also providing many possibilities thanks to enlarged distribution options and increased production values. These new market issues will be analysed per player, with highlights on some of the most advanced countries, focus on key business issues and will result in a set of recommendations for the industry, and consequently for the Council of Europe.

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[85] *The production and circulation of TV fiction in the EU28*, European Audiovisual Observatory, 2018

2.3.2. Close-up analysis per player

2.3.2.1. The Producers

The TV producer is usually the origin of a series project. Until now, in a “local” space, s/he brings an idea developed with an (several) author(s), present it to a channel he is familiar with in terms of marketing needs and budget constraint. S/he usually gathers the majority of the budget and completes the remaining 10 to 20% with local public funds and/or a distribution agreement for international sales or second windows sales. In many cases, the channel even funded the whole project and left the producer a margin, but kept all rights on the series. Compared to cinema, a TV producer gets usually less public support and relies more on “sales” before starting the production. S/he is often the “success factor” whereas the film director plays this role in cinema. As most series conceived in several seasons generate profit on seasons 2 and onwards, an audience needs to be there from season 1 on, hence a lot of pressure on the first episode and season’s quality and power of attraction.

With the growth of international series, national broadcasters cannot finance these more expensive projects by themselves so the producer needs to set up more complex financing with co-producers, other channels for other territories or other rights windows (free TVs, pay-TVs, SVOD), and other countries’ public support (European and national public support models are described later on in this document).

To switch from a pre-financed model by one channel to a complex multi-player financing model, the producer needs to have more control on the project initially and invest more in its development. He will then split the rights versus the different financial commitments he can get from each of the channels and distributors. As most producers are small entities without important available investment capabilities, the international series opportunity is addressed by:

- teams of co-producers splitting the risk for each project, each of them bringing channels, public support and also artistic and talent input to match their market needs. This configuration preserves most independent producers and pluralism. It is a common model in the cinema industry, but it is not the predominant model for TV. Smaller countries like the Nordics or Portugal are more concerned as their national broadcasters have less resources than in larger territories;
- producers belonging to international media groups (RTL, ITV, BBC, Canal+) or independent groups acting as conglomerate of producers such as Banijay, Endemol or Lagardère Studios. These groups enable more development funding, synergies, better bargaining positions and integrated distribution arms and usually leave a lot of independence for their producers to encourage creativity and keep motivation going. For instance, ITV Studios gathers 55 producers from all over Europe, combining new companies, like in Germany and acquired ones, like Cattleya in Italy (Gomorra) or Appletree in Denmark (the Killing, the Bridge). Lagardère Studios gathers 27 companies worldwide including European series pioneer Atlantic Production (Borgia, Midnight Sun). Studio Canal aggregates 8 European production subsidiaries with autonomous strategies but nevertheless synergizes with its Pay TV parent company.

- a new generation of producers has merged with distribution arms like the German EOS (Events On Screen, backed by distributor Betafilm) or financed by private funds like Federation Entertainment positioned exclusively for international series (i.e. *"Marseille"* for Netflix, *"Bureau des Légendes"* for Canal+).
- TV channels initiating the development in partnership with other channels from other territories or platforms like FTV, ZDF and RAI in their alliance or NordicVision for the 5 Nordic countries. To be noted are the predominance of PSBs in these alliances partly because their budget constraints are more rigid than private TV.

Top 20 TV fiction producers - 2017 (3-13 episode TV series)

Ranking per Titles Produced	Producer	Nb of Titles	Ranking per Hours of content	Producer	Nb of Hours
1	ITV	22	**1**	ITV	136
2	EndemolShine	22	**2**	EndemolShine	135
3	RTL	15	**3**	RTL	97
3	BBC	15	**4**	BBC	69
5	Bonnier	9	**5**	ARD	55
6	ARD	8	**6**	Ceská Televize	46
7	Sony	7	**6**	Sony	46
8	Mediawan	6	**8**	Akson Studio	45
8	JLA	6	**8**	Mediaset	45
8	Ceská Televize	6	**10**	Mediawan	43
11	All3Media (Discovery)	6	**11**	Atresmedia Televisión	42
11	Vivendi	6	**12**	Bonnier	40
13	Banijay	5	**13**	ATM Grupa S.A.	38
13	ATM Grupa S.A.	5	**13**	Vivendi	38
13	Akson Studio	5	**15**	ZDF	36
13	TF1	5	**15**	TF1	36
13	Beta Films	5	**17**	JLA	35
13	ZDF	5	**17**	All3Media (Discovery)	35
19	Elephant	4	**19**	Neue Deutsche Filmgesellschaft	34
19	Mediaset	4	**20**	Banijay	31
19	Time Warner	4			
19	LAGARDERE	4			
19	Neue Deutsche Filmgesellschaft	4			

Source : European Audiovisual Observatory / Peacefulfish

With the rise in both quality and costs, the trend is to consolidate in this industry and many TV producers aim to reach larger sizes in order to address international opportunities, leverage their assets and reinforce their bargaining position with giant OTT players. This raises the issue of the independent producer in this new industry: will they disappear, or get very specialized? Will they have to change their business model and give up their IP (Intellectual Property) as this is a strong ask from OTT platforms, as further explained in part 3.1.2.1. Helping producers to retain as much of their ownership rights as possible could be an important role for public funds and authorities.

Series are also a real opportunity for producers to bring power and control back to them in the ecosystem as a single TV channel can't be the only client financing the higher budgets of series. The producer is then a "project coordinator" assembling several TV channels and distributors on one project.

S/he needs therefore to keep as much of the series ownership as possible in order to make an adequate margin from its production budget but also from potential upcoming international sales. For this, the quality of the initial project should be as high and targeted as possible and development funding, as well as relations with authors are critical issues, especially as authors are key "assets" in series, as opposed to the cinema industry which is more focused on the film director credits.

2.3.2.2. The Distributors

Unlike in the movie industry where the distributor is an essential partner in the initial financing round, TV distributors used to intervene at the end of the financing process to close financing gaps of producers mainly targeting their local markets. In exchange, for instance, of 10% of upfront investment, they get international exclusive sales mandates and can generate substantial profit in this growing international demand. When part of large production groups, their role is also to bring extra revenues from catalogue sales which further generates funding possibilities for new sales mandates.

In this specific international series segment, professionals from local channels interviewed reiterated than they can't finance the majority of a production anymore as they are now more qualitative and expensive to produce. It also appears that the number of additional projects has also created a certain talent scarcity, at least on directors or technical experts of this segment and in some territories (showrunners for instance all over Europe or even film directors or editors in Spain, Sweden, the UK or in specific areas like the Berlin region in Germany) and inflated production costs because of these unbalanced market conditions (cf. UK country benchmark and talent focus chapters in this report).

The distributor can then play an important role at the genesis of the project financing. This is the case for distributors integrated in groups where they play an important role today at the start of production projects.

This is more difficult for independent distributors as they take more risks for IPs they don't produce and control and for which they have no specific public support today. Another risk is the fact that OTT platforms can also be considered as financing partners for producers (pre-sales or co-producers) and often claim worldwide rights which is cutting out distributors from their revenue potentials . The same can happen when co-producing channels request their internal distributor to handle the remaining rights.

For all these reasons, distributors now consider consolidation in a larger production or distribution group or start to develop production activities so that they have more control on content and ownership of it. This is, for instance, the case for French About Premium Content initially as the distributor of international series and now they are proposing and also doing development and production services.

Several independent producers listed in the previous chapter (i.e. Federation Entertainment) do have both production and distribution activities to align their strategies and optimize their revenues thus blurring the limits of production and distribution.

Strengthening this segment of the industry enables more content propositions in the market and avoids the market dominance by a few worldwide OTT players. It could consist of facilitating dual “producer-distributor” companies or more specifically, subsidising independent distributors.

2.3.2.3. The Broadcasters

Broadcasters have for years dictated the demand for fiction and initiated projects either by defining their needs and organizing competitions between independent producers or producing them internally. As explained before, they were able to cover almost all the production costs and get in exchange full ownership on the properties or at least the main part of it. Some countries like France or Italy are forbidden by law to produce internally or to retain all IP in order to preserve independent producers, but even in these systems, the channels DNA was so strong that the potential for international sales were minimal. Indeed, the artistic influence of the TV commissioners was so strong that the producers usually made concessions on the initial format and gave up on important selling points (choosing for instance a local actor fitting in to the channel identity, but not necessarily suitable for international demand). Many formats arose- like TV films in one or two episodes in Germany or in France. But with the growing emphasis on series, broadcasters have started to modify their programming and their production.

European broadcasters today are therefore strong commissioners of local series. The top 10 list of European scripted commissioners for instance, includes 8 broadcasters (BBC, ZDF, RAI, YLE, SVT, ORF, FTV, C+) and two OTT platforms (Netflix and HBO). On a local scale, combined yearly investment of local channels in series (for instance 5,4 bn€ for France all fiction included) is far below Netflix, Amazon, Warner Media, Disney, and Apple’s combined worldwide investment (35,5 bn€[86]) but still much higher than purely local production spend from these OTT players (£280M in the UK for Netflix and Amazon in the UK in 2018, representing 12% of domestic TVs spent and growing fast with +86% between 2017 and 2018[87]).

With the international series trend, and the need of channels to produce them against the rising influence of OTT platforms, production costs have increased and broadcasters have been obliged to secure their series and raise their split of their own productions versus content acquisition (49 to 60% between 2007 and 2018), sometimes considerably boosting their investment in original creations (Norwegian NRK has for instance doubled its budget for “originals” , from 25M€ to 60M€ in a few years[88]).

They have also opened their financing rounds to other partners, usually in other countries, via co-productions and partnerships. It nevertheless represents only 9% of the produced fictions which is low compared to the cinema industry, but which is presently boosted by the OTT competition. This is true for Pay-TV directly in competition with (pay) OTT platforms, but also for Free TV which is losing their audience and therefore building their own OTT services (i.e. RTL and its TVNow service, BBC and ITV launching Britbox, French broadcasters with upcoming Salto, Prosieben and Discovery

[86] NPA conference Sept 19
[87] https://amp.theguardian.com/media/2019/sep/06/netflix-and-amazon-double-their-spending-on-uk-made-tv-shows
[88] 3 July 2019 Liberation, interview of NRK’s CEO Thor Gjermund Eriksen

JV Joyn, etc.). Series are then co-produced for their OTT services as well as for their linear offers (where they are promoted like exclusive “blockbuster” series).

The International cooperation initiative today has been mainly driven by PSBs who had less possibility to increase their budgets and could also align this way with their mission to educate viewers about history or Europe. In the meantime, private channels have developed or acquired a lot of independent production subsidiaries like Freemantle (RTL), Newen (TF1), Altresmedia or SKY Studios.

Some of them have started to consider local alliances in order to build alternatives to OTT platforms, like Altresmedia joining forces with Movistar (Telefonica) in the joint venture “Behemoth” dedicated to series and movies production[89].

Some of them like ZDF were already used to co-producing with external producers (inland and abroad) and facilitated this move. UK broadcasters also showed the path with regular co-productions, usually with a US network interested in the creativity and access to talent of BBC and an independent producer: *“The Night Manager”* (prod The Ink Factory, BBC, AMC), “*Taboo”* (BBC, FX), *“Downtown Abbey*” (ITV, PBS). BBC can this way initiate projects with… a third of the investment. Deals with OTT platforms also occur, with pre-sales agreement for worldwide rights (excl. the UK) for *“Chewing Gum”* (E4, Netflix), “*Catastrophe”* (C4, Amazon). In these last cases, despite the mention of “originals” marketed by the platforms, these agreements were not co-productions.

RAI has also demonstrated its capability to develop with independent producer’s series achieving major audiences on its channels and also an Italian “fame for stories” with impact abroad: “*the Name of the Rose*” (with worldwide pre-sales to BBC, AMC…), “*my Brilliant Friend*” (coproduced with HBO). But some major European channels have not started yet (RTVE or channels in Eastern Europe).

Larger partnerships also have started to flourish. This is the case for the “Alliance” between FTV, RAI and ZDF (and maybe RTVE), selecting common projects together every two months pitched by producers to develop, produce and broadcast them together, at least 2 of them at a time with leadership going to one channel in order to avoid losing the focus on the original power of the story and generate “Europudding” content . The criteria for projects is to be histories of European appeal like “*Leonardo*” (Luxvide and Beta for FTV and RAI), international stories taking place abroad from Europe like “*Mirages*” (Lincoln TV, Cineflix, Wild bunch Germany for FTV, ZDF) in Dubai or genre categories like sci-fi or even horror, appealing to younger generations from all countries, like Netflix does.

This is also the case for the Nordic channels and the Nordvision project delivering 12 series per year (200 episodes) and strengthening the Nordic style especially skilled for dramas, crime and politics. By combining their budget of a few hundred thousand euros per country, episode budgets match larger countries’ budgets and even OTT platforms, therefore ensuring a competitive broadcast locally and with possibilities of sales abroad.

ARTE is by itself a successful partnership between 2 countries, extending its reach to other countries and languages (Italian, Spanish, Polish) and with a project of progressively building a European “Netflix” on behalf of broadcasters. ARTE develops many co-productions (a minimum of 3/year) to achieve high-end series (in 2020: “*Anna* “with Sky Italia, “*Country Men*” with NRK, “*Black Port*” with

[89] San Sebastian International Film Festival release on September 20th 2019

RUV, "*Paix à leurs Armes*" with ZDF), even pragmatically including Netflix in its financing (pre-sales on "*Au Service de la France*" S2 2018).

There are also many examples of cooperation involving private broadcasters, mainly between two countries so that there is no risk of competition, and often between Pay TV/free TVs, private/public. This is the case for "*Midnight Sun*" (Canal+/SVT), Borgia (Canal+/ZDF). It is also sometimes the case between two potential competitors in Pay TV like "*Years and Years*" (Canal+/HBO) or between TVs and OTT platforms like "*La Casa de Papel*" (Netflix and Atresmedia channel Antena 3).

In all these more complex co-productions, initiatives are often taken by independent producers like Endemol, Banijay, EOS, Federation Entertainment, Lagardère Studios or producers within media & TV groups who have usually also independent strategies (Studio Canal, ITV Studio).

This way they can set up complementary co-productions & pre-sales strategies, taking care of alignment between each partner.

In this model, The Oligarch Productions has developed "*le Bureau des Légendes"* with Canal+ but completed its financing with numerous distribution deals worldwide. This is, as highlighted before, an opportunity for producers to be central in this new market, as long as they can define clear rules with their distribution partners on who owns what, how long and where… the risk being to give up all IP to OTT platforms and lose any "backend" financing opportunity.

2.3.2.4. Telecommunication operators ("telcos") and Pay TV Platforms

Historically, European TV distribution has been split between analogue terrestrial, cable and satellite, with different local configurations, some of them having a wide & almost free analogue cable distribution (Germany, Netherlands), with some others with limited free channels and growing cabsat services (UK, France). With the digital rollout in the late 90's and the development of numerous thematic channels, Pay TV has grown significantly, creating large Pay TV distributors such as Sky, Viasat or Canal Satellite (Canal+ group) for satellite or UPC (Liberate), Com Hem or ONO (Vodafone) for cable.

With the deployment of multicast technology on the ADSL (Asymmetric Digital Subscriber Line) networks (called IPTV (Internet Protocol Television)), Telco's have started to invest in the pay TV landscape and develop multiple-service offers (x-play offers), using television offers to complement their voice and access offers: acquisition of new customers thanks to exclusive content like football games, and Average Revenue Per User (ARPU) increase with channels and VOD. Even if Telco's had to invest a lot in IPTV networks and high-end set top boxes in order to distribute television, they grew fast in underdeveloped countries with cable like France (58% penetration). We have, therefore today, a Pay TV distribution more or less split in three equivalent market shares in Europe: IPTV (still growing) and cable offers (owned by « Telco's ») and satellite offers owned by media groups (Digital Terrestrial Television remains small for PayTV offers). Pay-tv's primary distribution has often been satellite (Sky, CanalSat, Viaplay), but growth today lies in internet networks either with distribution agreements with Telco's on their IPTV networks (CanalSat and Orange) or directly with their OTT offers.

The arrival of OTT players distributing SVOD services at a cheaper price than their offer has endangered Pay TV revenues for all these players. Pay TVs have developed their SVOD offers and distributed them in their existing networks or in OTT (Viaplay from Viasat, Sky NowTV, CanalSeries).

To be noted is the important role of Sky combining Pay-tv and internet access (2nd largest UK ADSL provider) and therefore becoming a convergent player.

Telcos had a more global approach either by developing their own SVOD services (i.e. Elisa Viihde for Elisa in Finland) , but also joining forces with existing vulnerable Pay TVs (Telefonica acquiring Movistar in Spain, Telia acquiring Bonnier group including CMore) or finally just distributing Netflix and/or Amazon to serve all their households needs (Dutch telecom operator KPN giving up on its own SVOD).

Some of them have adopted several strategies in parallel like Orange, distributing Netflix but also proposing its own OCS channel to subscribers in its network, and in OTT, in linear and SVOD modes.

In parallel, PayTV operators like Sky or CanalSat have started to adopt similar strategies proposing their own channels and SVOD offers but also starting to distribute Netflix or Amazon, in order to retain their customers and provide them with the widest choices and also to anticipate increased competition with new players coming in, like Apple or Disney.

In this huge consolidating market, series have been developed considerably by Telco's (like they have been for broadcasters) as they address demand in the market and their usage (binge watching, multiscreen…) goes well with the Pay TV operators (Telco's and media groups) "anytime anywhere" marketing pitches. Movistar & Telefonica (Hierro) soon joined by Altresmedia with their new Joint-Venture "Behemoth", Sky (Gomorra), Orange (OCS Originals), Elisa (Man in Room 301) are therefore important commissioners involved in series productions and co-productions. Being part of international groups, they can leverage their costs in several territories (Sky in the UK, Germany, Italy, Orange in France, Spain, Poland, Viaplay in Nordic territories) and develop European alternatives to FAANGs. They are, therefore, growing clients for producers.

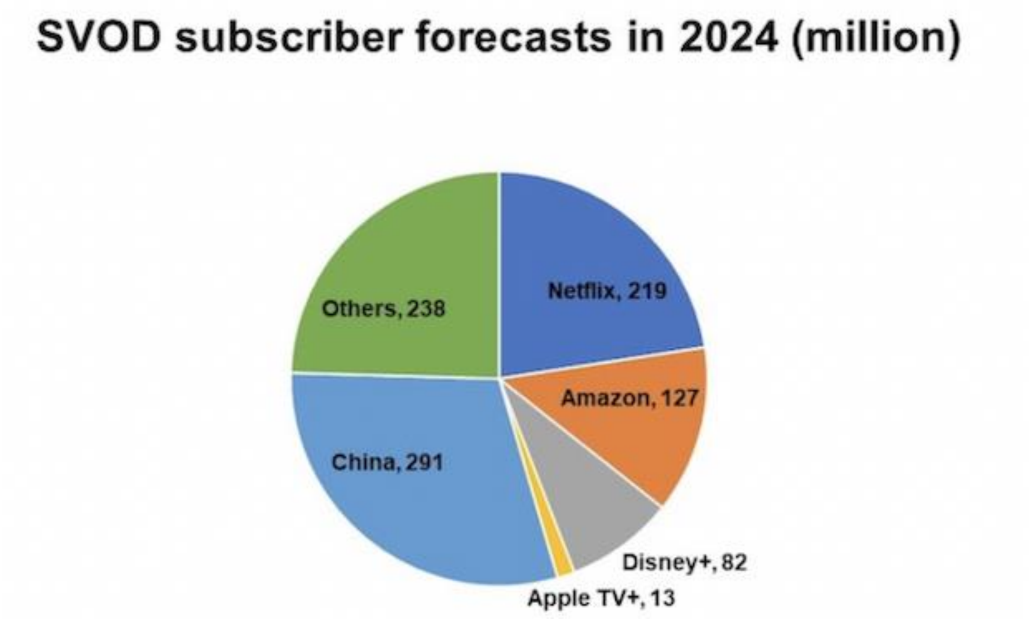
With 100M€ investments on content originals over 5 years, Orange has contributed this way to the launch of the 26 minute format in France ("Orange signature" collection), discovered a new generation of series authors and is becoming part of several international successes (*"the Name of the Rose"* with RAI, or the upcoming *"Spy"* with Sacha Baron Cohen together with Netflix). Recent announcements of a horror series for its Spanish operations may open the road to an international strategy.

Together with local media groups, they can constitute local alternatives to the FAANGS powerful platforms as they access millions of subscribers and can then share data with media groups to develop a good understanding of audience expectations, co-produce targeted content (series, sports), aggregate this new generation of OTT contents and provide next-generation recommendations based on fair use of AI.

2.3.2.5. The OTT Players

Last but not least, we cover the OTT players who are the key drivers of the series market. These new entrants in Europe are tech companies who used "over the top" distribution to get directly in touch with their audiences, to differentiate between traditional media players and their intermediaries (cable, satellite, theatres…). These "D2C" (direct to consumer) models enable direct feedback and personalization of content which fits well with new user internet behaviours.

Regrouped in the FAANG denomination (Facebook, Apple, Amazon, Netflix, Google), the revolution they provoked in the USA and the competition they create against studios and US Telco's has stimulated the emergence of OTT offers from these players, expected in Europe shortly (AppleTV+ in the last quarter of 2019, HBO Max in Q1 2020, NBCUniversal Peacock announced for Q2 2020…). In China, huge OTT players ("BATX" acronym regrouping the 4 main players Baidu, Alibaba, Tencent and Xiaomi) have for the moment not communicated on European expansion plans.



Digital TV Research forecasts September 2019

They all share a technological background, an expertise for user experience and innovation ("user driven") and huge financial resources often generated by their core businesses (e-commerce for Amazon, hardware for Apple, advertising and data for Google and Facebook). This gives them a clear competitive advantage to establish their new media brands: i.e. in 2019, 29M€ of media spent on promotion for *"American Gods"* S2 from Amazon in France versus 2,9M € for *"Skam"*, one of the most promoted shows of FTV (France Télévisions).[91]

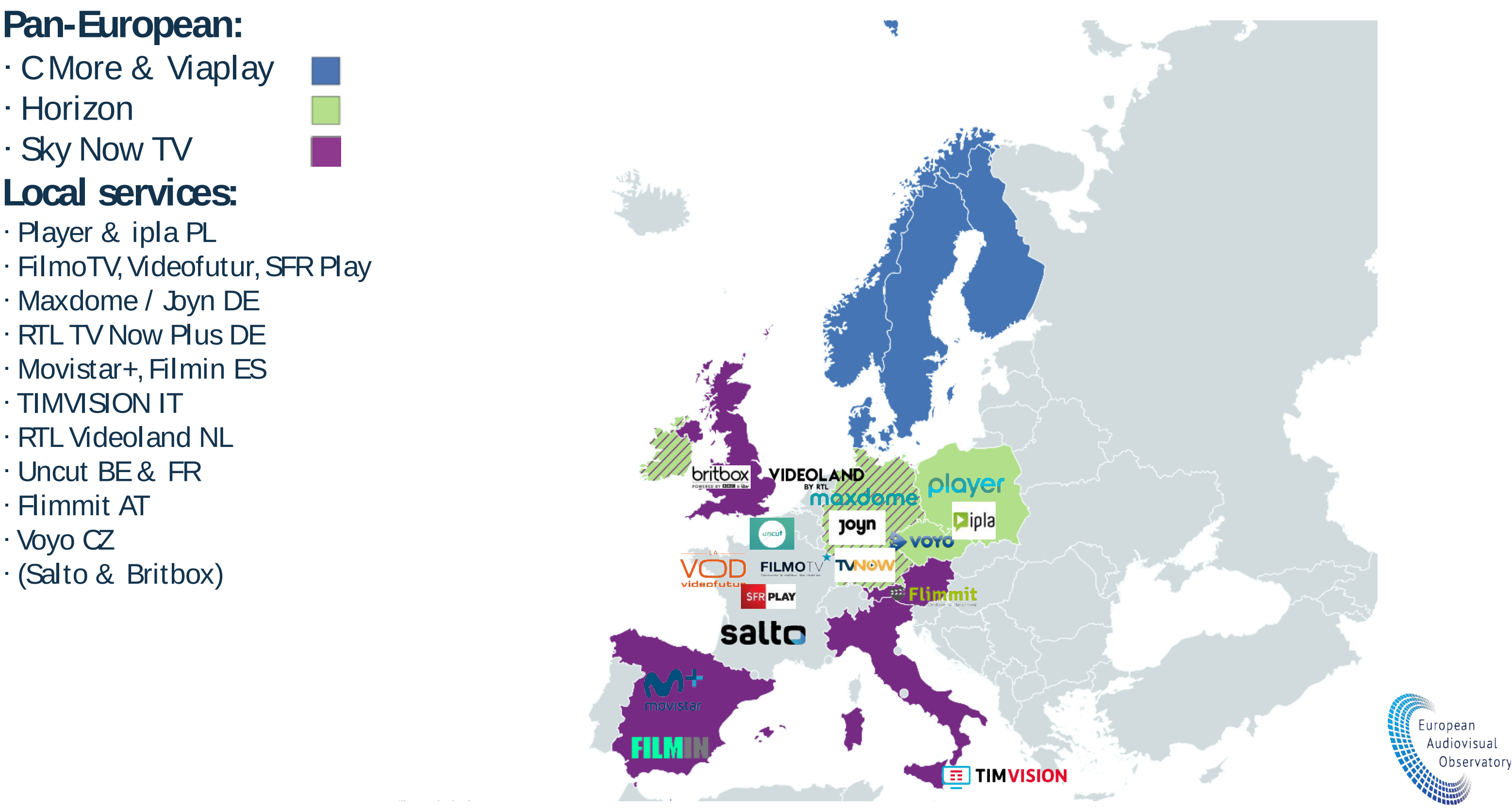
Netflix is the only one clearly positioned in the television of the future, aiming at developing for each customer a personalized television service.

Their first mover advantage on these OTT offers made them dominate this growing market (15% of PayTV revenues but 53% of the subscribers and 41% year on year growth). Initially suppliers or partners to the media industry, they have become competitors and generate local reactions and alternatives as described earlier.

SVOD becomes the main growth driver of the EU audiovisual sector with series their key asset. These powerful communication machines have generated strong impact in the market in just a few years: they are new leaders creating buzz (Netflix and Amazon which represent 74% of EU SVOD revenues[92]), an abundance of content, scarcity of users' attention, a rise in acquisition and production costs …and local players reactions in response with alliances and consolidations (broadcasters OTT projects Salto, Britbox, German joint venture Joyn, pan-European services C-More, Viaplay, Horizon, SkyNowTV).

[91] NPA September 2019

[92] *Trends on the EU VOD Market*, European Audiovisual Observatory, September 2019



European Audiovisual Observatory – Trend on the EU VOD Market – September 2019 – EUROVOD Venice

In the series market, Netflix is leading the game with 276 shows in production or development in 2019 compared to 95 for Amazon, 35 for Apple (but growing fast) and 22 and 10 for Facebook and Google, who are exhibiting more reasonable growth. In 2018 SVOD platforms have released a combined 300+ new digital originals- over 130 of these premiered-on Netflix alone[93]. Acquired content remains the biggest expense for Netflix (83%[94]) because part of the concept lies in an abundance of content where Apple (and Disney) communicates more on quality and less volume, even reintroducing one episode per week to limit the exhaustive watch of its content during a trial period (as opposed to the binge watching effect promoted by Netflix).

Both Netflix and Amazon produce shows internationally (54% and 35%) and acquire together 3000 hours of content per month, a clear new revenue stream for producers for a few years already. With the arrival of new platforms, Netflix market share has declined slightly but is compensated by a price increase policy. This expected new wave of OTT services can explain why Netflix made a recent partnership on cross-distribution with rival Canal+.

Disney+ (launching on 12 November 2019 in the US and already in a Beta test in the Netherlands since 12 September) is today considered as the most serious challenger to Netflix and Amazon with an estimated 19M subscribers by 2024. Netflix in this scenario would decrease its European 2018 market share from 54% to 42%[95].

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[93] Parrot Analytics 2018

[94] Ampere Analysis at Series Series July 19

[95] Digital TV Research September 19

The strength of its brands and of its franchises (Disney, Marvel, Star Wars, Pixar, Fox family-titles like The Simpsons) will bring tentpole marketing campaigns competing with new and more fragile franchises launched by Netflix.

Player	Estimated 2019/2020 original content budget[96]
Netflix	$13bn (85% of the overall content budget)
Amazon	$6bn
AppleTV+	$6bn
Disney+	$1bn + own huge library (Disney invest overall $24bn in content)
Hulu	$2,5bn (trend depending on Disney's strategy)
HBO	$1 to 2bn (before ATT's merger, ATT invest overall $14bn in content
Main UK channels	$3bn (2017)
Britbox	Less than $100M + TV shareholders content
Salto	Announced €135M + TV shareholders content

2.3.3. Role of national and European institutions

2.3.3.1. General Overview

With its important budget per episode impossible to finance by one single European broadcaster, animation has started co-productions years ago. The cinema industry is also highly dependent on co-productions with a European convention setting up a framework for all countries to work smoothly together. With high end series, fiction is following the same trend, but there is no convention to regulate international agreements, even if many sources of financial support exists at European, national and regional levels.

However, the main difference between series and feature films is the iterative development aspect of series. Contrary to feature films, each stage of series creation and broadcasting occur several times before the work is fully finished. The scripts of each season are not all written in advance and might take into account some feedback of the previous season before being written. The same goes for the production and broadcast: these steps will occur again for each season before the series is fully finished. Furthermore, series are directly broadcast on TV or OTT platforms (Netflix, Amazon Prime Video, Apple Video….), making their distribution and marketing strategy or their distribution rights management very different too.

As a consequence, modern series tend to have a specific financing mix: when classic audio-visual projects such as documentaries or feature films are usually financed by public funds and TV private or public TV Channels, modern series tend to require extra financing (20-40% or higher for premium

[96] Based on articles in Yahoo Finance, Variety and local UK and France press

productions) from private investment, and most of the time the private investor is an Over-The-Top (OTT) or an International TV channel or distributor actor for high end projects.

Therefore, modern series need specific support and financing schemes which are different from the ones dedicated to feature films and more traditional TV programs. However, there are almost no institutions or public funds which are exclusively dedicated to series: most of the public support for series are inherited from the ones dedicated to feature films, and only a few programs have been recently created specifically for that matter. We will present below the main existing public support scheme from which series can benefit.

Series Creation Phases: an Iterative

Iterative process:
evaluate what worked or not in the previous season and apply findings to the next

	Scriptwriting Phase 3-9months - 10-40k€	Development Phase 6-9 months - 50-300k€	Production Phase 3-6months - 100-1000k€*episode	Distribution Phase > 12months - XXXX€	**New season?** Depending on the success
Definition	Script Writing Phase is, when the scenario of Series, including the technical breakdown and dialogues is written down. Milestone: Script	The development phase includes all the steps before starting the production (pilote, creating storyboards, preparing a production schedule, casting, financing plan …). Milestone: Ready to go into production	Production phase is the period when the shooting takes place, images/animations are created. It's the phase with the highest costs. Milestone: Produced episodes	The distribution includes the broadcasting of the series, but also translation, dubbing marketing, securing right distribution, international distribution negotiations, etc… Milestone: Distribution deals	
Support Objectives :	**Scriptwriting support:** • Help script writers creating qualitative and original stories by providing them enough funds to focus only on their work. • Allowing Production companies to take more risks, by making them pay only a part of the script writing phase • Support projects corresponding to certain expectations: technical innovation, cultural aspects, expected market success….	**Development support**: • Help projects which seem relevant on their artistic aspects and/or their potential market success • Limit the financial risk taken by producer when they finance the project • Increase the quality and ambition of the production • Influence the way the project will be made thanks to the criteria which have to be respected to acquire the funding: language, cultural aspects, business… • Co production and presale contracts to finance the project	**Production support:** • Help projects which seem relevant on their artistic aspects and/or their potential market success • Increase the quality and ambition of the production by allowing more spending • Influence the way the project will be made thanks to the criteria which have to be respected to acquire the funding: language, cultural aspects, business… • Business-oriented funds (most of time regional ones) will provide grants to bigger projects in order to attract activity in their area and to stimulate the audiovisual sector.	**Disitribution support:** • Help the series project goes international after a local success (dubbing, translation…) • Increase the market success of the series by financing a wider marketing campaign	
Type of Support :	• Selective • Repayable loan • Direct Subisdies • Avg value of the grants: 3-10k€	• Selective • Direct Subisdies, 40-100% of costs • Avg value of the grants: 20-150k€	• Selective or Automatic • Direct subsidies, 20-60% of costs • 15-30% Cash Rebate	• Selective or automatic • Direct Subisdies	

Peacefulfish, based on information gathered on institutions website and info collected

2.3.3.2. Main Public support Schemes

Eurimages Member States have already perceived the strong trend in favour of series in the audio-visual sector. Almost all of them have at least one public support that series can benefit from, with a few exceptions that will be presented later.
In Appendix 6, a mapping of the public supports dedicated to series available in each Eurimages Member States can be found.
In Appendix 7, the main automatic and selective support programmes for series are further described.

Now, we will present the most important points to know in order to understand how public support works for series.

There are 2 main categories of support:

- Automatic support: to receive automatic support, the project only has to comply with a set of criteria clearly stated in the guidelines of the support, and once the compliance has been confirmed, it will receive the funding.
- Selective support: to receive selective support, the project, like in automatic support, must comply with some criteria, but this time a jury will evaluate some aspects of it (cultural and artistic quality, success potential…). Only a few projects will then be selected to receive the funding support among those complying with the criteria.

The financial support can come in different forms- the main ones are:

- Repayable loan: a free loan repayable under conditions of income/profit.
- Tax relief / Cash Rebate: a part of the “eligible costs” spent during the production can be refunded to the production company. The definition of these “eligible costs” are defined in the guidelines.
- Direct subsidies: based on the financing and spending plan, the public fund provides an amount of the required funds, with some conditions of course.

In order to receive public funding, the criteria to comply with, the objectives pursued by the institutions, can be sorted into two main categories:

- Cultural Criteria (see the grey frame below for more details):
  - These criteria will evaluate the artistic quality or cultural interest of the projects.
  - The objectives are various: promote local/minority culture and patrimony, support artistically edgy projects, defend the cultural exception and cultural diversity…etc.
- Business/Economic criteria:
  - These criteria will evaluate the activity the project will bring to the local audio-visual sector and its potential market success.
  - The objectives are: support local talent and professionals of the audiovisual sector by attracting more activity, attract investment in the local economy, raise interest in the local cultural patrimony by showcasing it in the series and attract tourism, make profitable investments with public funds.

<u>Cultural Criteria for public support:</u>

- **<u>Cultural profile</u>:** it is a list of mandatory criteria the project must respect in order to receive support. These criteria can be, for examples:
    - The original language of the film
    - The nationality of the producer and/or co-producer
    - The financial share of the producers having a permanent residence in the country/region providing the found
    - The country where the project will be released first

⇨ Most of countries applies this kind of rule in their selection process, the goal is to support local production that would be firstly aimed at national auditors. It makes even more sense when a support program goal is to promote specifically a minority and cultural diversity.

- **<u>Cultural test</u>:** the applicant will have to comply with a minimum of conditions or reach a minimum score to be eligible for public support. In this case, all the aspects of the cultural test are not mandatory, but the applicant have to follow a certain amount of them. Most common criteria are, for examples:
    - The action takes place in the country/region of the fund for the most part
    - The language used in the original version is an official language of the country/region fund
    - Some artistic content directly linked to the production are linked to the region of the fund (music, character, literature references, historical figures…)
    - Some of the most important people working on the project come from the region of the fund (producer, scriptwriter, main character actor, director….)
    - Local historical events are presented in the project

⇨ The cultural test is most of the time the first condition to comply with before going any further in the selective support process. It serves both objectives of cultural influence of the country/region of the fund and their will to target mainly local audio-visual professionals. However, cultural tests tend to refer more to a European culture than a very local culture, making things easier for European co-productions looking for public support.

2.3.3.3. *Different Scale of actions of the public institutions*

After reviewing most of the public funds supporting series among the Council of Europe State Members, it appeared that, depending on their scale of action, they tend to have different roles and objectives which will be described here briefly.

Example of Transnational Funds, key actors stimulating co-productions in Europe:

Creative Europe – MEDIA – Co-production funds:

- **What is it?**
  The MEDIA sub-programme of Creative Europe supports the EU film and series financially in the development, production and promotion of their work. It focuses on projects with a European dimension and/or employing new technologies.

  It also helps European films and audiovisual works including feature films, television drama, documentaries and new media to find markets at European and International scale. Furthermore, Creative funds training and series or film development schemes.

- **Support Programs for series:**
  - EU - MEDIA Support for TV Programming of Audio-visual EU Works
  - EU - MEDIA Support for Development (Slate Funding)
  - EU - MEDIA Support for Development (Single Project)

➔Creative Europe – Media is a key actor (8,7 M€ in 2019) in Europe supporting European medium to high-end series productions by bringing extra financing to projects already supported by local public funds and in need of extra financing to reach their full potential.

Nordisk Film & TV Fund:

- **What is it?**
  - Established in 1990, and based in Oslo, Norway, Nordisk Film & TV Fund's primary purpose is to promote high quality film and TV productions in the five Nordic countries (Denmark, Finland, Iceland, Norway and Sweden), by providing support for the top-up financing of feature films, TV fiction/drama series and creative documentaries.
  - Nordisk Film & TV Fond is funded by 18 partners; the Nordic Council of Ministers, five national film institutes/funds and 12 public service and private TV stations within the region.
- **Support Programs for series:**
  - Production funding for TV fictions / series;
  - Funding for dubbing;
  - Funding for strategic development (only upon request by the Fund)

➔Nordisk Film and TV Fund is an interesting and efficient initiative that allowed the Nordics to produce quality content by increasing co-productions and distribution opportunities.

National public funds, close to the national administration and film commissions:

- At the National/Federal level, the central public funds tend to have a wider range of support programs and more funds reserved for series creation and audio-visual projects in general
- In charge of developing the cultural influence of the country, they are more likely to support riskier projects, with higher artistic value and originality, and projects in their early stage (scriptwriting, development, new talents…)
- They are closer to the central administration and film commissions, so they have greater political influence on the audio-visual sector.
    - The members of the jury selecting the projects which will receive public support tend to also be important actors in the audio-visual sector in the country.
    - They may be able to more easily unlock new funds or advocate for new kind of support programs
- They are the first public funds to contact for new productions willing to launch projects in the member countries.
    - They oversee the application of bi-national or multi-national co-production treaties
    - They monitor the national cash rebate program when there is one.
    - They can provide contacts and information to producers willing to shoot in specific areas of the country or have close ties with the public institution in charge of these missions.

Regional/Local Funds

- More business oriented, Regional funds will take less risk and tend to support projects already backed-up by the central public fund or big market-oriented projects
- Their objectives are to increase the attractiveness of the region for audio-visual investments and tourism, through tax incentives and specific criteria to receive the funds
    - Example: to receive support from the city of Prague, the city must be presented by its name and some monuments be on screen.
- They might have minor programs to promote local culture specificity (language, cities, historical figures…) and talent.
- Local funds are crucial contacts for location scouting, as well as providing an up to date data base of the best shooting places in the region, help with administrative procedures and providing contacts and services to facilitate the work with local professionals who could be employed.

2.3.3.4. Countries not supporting series

- Only a few countries are not providing public support to series creation at all among the Council of Europe members States: Albania, Bosnia and Herzegovina, Serbia, Bulgaria and Russia
- These countries tend to provide low public investment to the audiovisual sector in general in recent years.

- However, in the last 5 years, many countries who were not supporting series production have set up at least one support programme, notably a cash rebate programme.
    - For example, Ukraine has set up a Cash Rebate programme in 2019
- What may prevent these countries from supporting series productions can be the difficulty in changing the laws concerning Audiovisual public support.

2.4. Countries close ups and diversity

2.4.1. Overall situation

This OTT revolution and series growth is happening with different intensity in Europe. Where connectivity is the lowest, OTT platforms had less influence like in Poland where the national TVs still drive the audience and produce local fiction for local tastes without big changes in commissioning for the moment. Pay TV is more reactive there, accompanying the development of Netflix (*"1983*" is their first Polish production targeting local audiences) and developing a new demand for Polish crime series ("*Blinded by the Light"* for HBO, *"Illegals"* for Canal+ Polska).

In general, with the growth of Netflix and their local production roll-out almost everywhere and the following roll out of Amazon with similar strategies, local broadcasters also are progressively starting to produce quality series stand-alone or in co-productions.

Some countries, like the UK, the Nordic countries or Germany had already started co-productions for different reasons and are accelerating with the streamer's competition (Germany initially more to reduce costs whereas the UK and the Nordics identified very quickly the opportunity to develop international sales). They were followed for a few years by Spain, France and Italy (boosted by the success of "*La Casa de Papel", "Bureau des Légendes"* or "*Suburra*") and Eastern Europe is now making the first moves. The smaller countries (for instance Finland or Portugal) or smaller channels (like ARTE) have understood for years the interest of going international to increase their budgets for better national content.

Now it is time to think "glocal" (global + local): developing fictions targeting their local audiences but with a potential on the international markets, especially with the expanding international streaming services. In some cases, like Israel, local can be seen almost as a pilot case servicing an international project as the main objective (see the upcoming country case study about Israel).

The series having success most of the time address universal questions to everyone but within local and authentic context. The European plurality is a force because there is so much local context and also so many different ways to treat universal themes.

In the next part, we will describe 6 countries best practices to be inspired from: the unique creative system in Denmark, the rise of series co-productions in the UK, Israel's Drama Nation branding, the Belgium innovative catch up on series, the French political shake up and the "dizi" phenomenon in Turkey.

2.4.2. Best practice countries: DK, UK, Israel, Belgium, France

2.4.2.1. The Unique Creative System in Denmark

Rapidly, Denmark has been identified on the international scene as an exceptional series creative environment with master shows like "*The Killing", "Borgen"* or "*The Bridge*" (co-produced with SVT). This has been the result of writing positioned in the centre, which is the key for successful long running series. Without big budgets available, the focus has been on contemporary stories and a new dark genre has been created "Nordic crime", also developed in the other Nordic countries with similar approaches. These shows have generated many worldwide original and format sales (even in the US with *"the Killing"* for instance) and inspired other "small" countries to have international ambitions if the story is good and the budget not necessarily at the US standards (i.e. Belgium case hereunder).

Danish PBS DR has been a key driver in this trend, jumping from 17 series in development in 2017 to 50 in 2018. The internal organization is optimized to develop writing quality with the PBS mission in mind, viewing the world thru other's eyes and helping its audiences to understand its role in society (current developments include for instance themes like domestic violence – *"A Family Matter"* -, terrorism risk – *"When the Dust Settles"*-). The channel produces internally and works with independent authors. When a short script generates interest from DR, authors are then integrated into DR's production teams so that there is a very synergetic and efficient collaboration.

Authors are paid for their work even if the series isn't produced and this enables a clear quality focus from the very first development phases, an element often missing in the European TV industry, often influenced by cinema and its "film director centric" approach.

Private competitor TV2 has a similar focus for its series but externalizes its production. With 10 series per year and half of them being "high end" with increased budgets, co-productions and pre-sales happening with Netflix and C-More, but the split of windows and territories is becoming more problematic as TV2 now has its own SVOD service to serve (TV2Play).

To stimulate creativity at the country level brought by digital, Vision Denmark is a creative business alliance which has been set up between all creative industries (digital, TV, cinema, gaming, XR…). In parallel, Create Denmark takes care of collective negotiations notably with OTT platforms to provide talent with better deals and defend their rights, for instance with a limited period of holdback by platforms.

2.4.2.2. The rise of series co-productions in the UK

UK high-end TV production is at record levels, benefiting more jobs and producers. Investment has doubled since 2014, rising to £1,7bn in 2018 (+59% of produced hours) [97] making the UK the biggest high-end series producers in Europe[98]. International revenues (sales abroad and money spent from overseas broadcasters in UK productions) have specifically jumped 90% since 2013.

[97] British Film Institute, COBA (Commercial Broadcasters Association), PACT (Producers Alliance for Cinema and Television) – studies September 19

[98] The production and circulation of TV fiction in the EU28 - Television and VOD, European Audiovisual Observatory, Strasbourg, 2019

This booming sector is fuelled by a surge in co-commissions / co-productions where broadcasters and OTT platforms collaborate at an early stage of the production (16 in 2014 jumping to 30 in 2018). OTT platforms have also increased their commissions from 2 in 2014 to 18 in 2018. And the trend is accelerated in 2019 with Netflix alone producing 50 titles for an investment of 453M€[99].

These collaborations mean greater budgets for more ambitious shows with international appeal: *"Chernobyl"* (Sky and HBO), *"Gentleman Jack"* (BBC and HBO), *"Fleabag"* (BBC and Amazon), "*The Night Manager*" (BBC and AMC), and the upcoming *"Dracula"* (BBC and Netflix).

Since 2014, 32 broadcasters and SVODs have partnered with UK PSBs with BBC being the biggest co-commissioner (450 hours of drama per year). OTT players benefit this way from the established expertise of BBC in storytelling and production, and the BBC benefits from much higher production budgets by keeping their editorial integrity.

This increasing demand has created a scarcity of available talent and a spend per hour that has risen by 36% since 2014 with an average show now costing £2,3M an hour. Of course, production values have also increased as has the international sales potential of these series, but costs have nevertheless increased thus forcing the market players to find solutions to scale their industrial capacity, for instance, with training plans or regulation (like the demand from British Commercial Broadcasters Association COBA to reform the existing apprenticeship system).

Studio space is also becoming scarce. With 40 productions just for Netflix alone, the OTT giant has decided to secure a permanent production base with a deal to take over Shepperton Studios, in this way getting more autonomy from producers and potentially developing direct access to talent.

Maintaining this audio visual growth for the whole industry and for each of its players is an even more important challenge in the post-Brexit economy as many international media groups have their headquarters in the UK and may now reassess this choice.

2.4.2.3. Israel, the Drama Nation

Another example is Israel and its leading series export strategy under the "Drama Nation" flagship brand. In an environment with few channels (Keshet) and two pay-tv operators (Yes and Hot) all with limited budgets, Israeli producers have for years considered exports as an essential revenue stream and authors become "showrunners", as they develop expertise to address with much sensitivity the universal human choices and drama contextualized in a modern life context and combine it with realistic management of production constraints. Local production skills and numerous natural sets enable them to also produce at competitive costs and timelines.

They took advantage of the opportunity during the US scriptwriter strike in 2007 to develop fast sales capabilities in the US with powerful, original and creative themes fitting with the network's differentiation needs, then taking the leadership in fiction format imports to the US (15 Israeli series- more than UK exports). Israeli format adaptations have generated worldwide successes like *"Homeland"* (adapted from *"Hatufim*") or *"In Treatment"* (*"Be'Tipul"* from HOT in 2005) with its French adaptation expected for 2020 (ARTE) and being the 40th local format adaptation after its HBO format kick off in 2008. Current series are co-produced, like *"Fauda"* (Netflix & Yes) or *"Possessions"* (Canal+ & Yes, 2020).

[99] Article advanced-television.com 20 September 2019, Royal Television Society Conference speech of Reed Hastings, Netflix's CEO

With the new OTT platform demands and also a new generation of international series producers and talents all over Europe, this expertise on exports will be challenged. Initiatives like the Franco-Israeli co-writing residency for drama series, or collaborations between producers like the Drama Team and the Federation Entertainment partnership should sustain the leading Drama Nation position in this global race.

2.4.2.4. The Belgium innovations in series development

French-speaking Belgium came late to the series stage. Used to accompanying the film industry in co-productions mainly with executive producers skills and financial benefits (tax shelters), there was not clearly editorial expertise for series until 2013 when PSB RTBF, the only commissioner for series in French-speaking Belgium, anticipated the growth of OTT usage and their high end series needs and decided to develop with Fédération Wallonie Bruxelles a dedicated fund considering writing as the priority with a whole set of measures to make it possible for independent producers to considerably reduce and even erase their risk at the development stage. Their focus is on local stories highlighting people and communities' singularities in very moody artistic treatments to satisfy both local audiences and series addicts abroad.

The success of *"La Trève"*, locally, but also on FTV in France and Netflix have proven the efficiency of this strategy and the current goal is to deliver 4 series per year.

In parallel, training on writing and production tools are developed to support the whole ecosystem and truly make Belgium an innovative series leader. RTBF's colleagues of the Flemish part (PBS VRT) had more experience in fiction and their next move could be to join forces with RTBF for a co-production together which would be a first between the two channels.

2.4.2.5. Political shake up in France

With strong public support for the film and the audio-visual industry via many public funds (national, regional) and support rules set up by the French state agency Centre National du Cinéma et de l'image animée (CNC), high-end series have also been identified as a priority for the coming years. Hence, OTT usage is growing fast after a slow start and Netflix today gathers more subscribers than Canal+.

In parallel, after years of domination of US series on TV, local productions now have the lead (more than 88 of the best 100 audiences of primetime TV were French productions in 2017, compared to only 37 in 2013) offering real opportunities to local producers. More than everywhere else, the problem lies in increasing production values in order to compete against OTT series and sustain the whole ecosystem in order to avoid US monopolies from platforms and defend the cultural exception, considered as a political priority.

CNC today supports series with dedicated funds and the intention is to go further and accompany the high-end segment with international expansion ambitions. Several reports from professionals notably recommend to enable private funding and reorganize the sector with more transparency and aligned interests between all players. The claim is also to put writing at the centre of the process, in a country historically dominated by the film director and used to a highly subsidized cinema economy whereas the series producer needs successful sales to produce and audience success of on its season 1 to be able to produce a season 2 which usually brings in the first profits[100].

The first dedicated measures to series represent, for the moment, only 5% of the fiction funds, but aim at growing and pinpointing exclusively high end series problematics: focusing on originals and not adaptations, supporting a season 2 before closing the financing rounds with the channels so that the season 2 can be on the air less than 18 months after season 1, supporting more of the series having from the beginning international partners and also upcoming measures to help writers in their development phases.

These measures are aligned with the commitment of French PSB FTV to develop series at the international level with the Alliance agreements between FTV, ZDF and RAI, the French Italian recent series fund announcement or locally with the project of Salto, competing against Netflix with FTV being a dynamic co-founder. They take place whereas the new audio-visual laws announced for late 2019 will revise many rules in the TV and production sectors in order to increase competitivity of local players and include OTT players in this framework, for example with investment quotas in production.

2.4.2.6. The “dizi” phenomenon in Turkey[101]

Lastly, Turkey is an example of a country having developed a specific format finding huge worldwide viewership, but not necessarily in Western Europe or in the US.

What Turkey produces for television are not soap operas, or telenovelas, or period dramas: they are “*dizi”*, sweeping epics with each episode usually running up to two hours or longer. Every dizi has its unique narratives, its own original soundtrack, and can have up to 50 major characters. They tend be filmed on location in the heart of historic Istanbul, only using studios when they must.

With dizis, Turkey is second only to the US in worldwide TV distribution – finding huge audiences in Russia, China, Korea and Latin America. At present, Chile is the largest consumer of dizi in terms of number of shows sold, while Mexico, then Argentina, pay the most to buy them.

The success of this format began with 2006’s *“Binbir Gece”* (1001 Nights) which was sold in almost 80 countries. But the real kick off was with *“Magnificent Century”*, claiming when it first aired in Turkey in 2011 one-third of the country’s TV audience. The foreign press called it an “Ottoman-era Sex and the City” and compared it to a real-life *“Game of Thrones”*. It had multiple historical consultants and a production team of 130, with 25 people working on costumes alone. *“Magnificent Century”* has been seen by more than 500 million people worldwide. It was the first “dizi “bought by Japan.

Since 2002, about 150 Turkish “dizi” have been sold to more than 100 countries, including Algeria, Morocco and Bulgaria. The international success of dizis is just one sign of the way new forms of

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[100] Dominique Boutonnat report for the French government, December 2018, and Alex Berger’s report for the French CNC, 2019

[101] Article from the Guardian Sept19, *Adapted from New Kings of the World: Dispatches from Bollywood, Dizi and K-Pop by Fatima Bhutto*

mass culture from the east – from Bollywood to K-pop – can challenge the dominance of American & pop culture in the 21st century.

By 2023, expectations of worldwide sales are $500m, downsized by the recent loss of the Middle East market. Remake rights, expansion in Latin America and the opening of western Europe – notably Italy and Spain – should compensate and raise these formats' awareness in Europe.

2.4.3. National measures to frame OTTs development:

OTT platforms tend to be out of the traditional parameters of economical regulations of the audiovisual sector, such as quotas and taxes. These regulations' goal is to redistribute the benefits and foster a sustainable and healthy audiovisual sector. Consequently, European states are now taking measures to frame OTTs strong growth in order to settle new rules for sustainable balance between all actors. We will present below the four main action levers that states have been traditionally using to regulate the audiovisual sector, and show how OTTs are impacted or not by these regulations and what states are doing to change the situation. Given the highly political nature of the subject, which is under the spotlight right now, it is difficult to go into too many details and we encourage readers to follow future developments closely. The objective of this part is to give some key elements to understand the situation.

- <u>Tax content providers' sales revenue to support the creation of new content:</u>
    - Most countries have a national audiovisual institution in charge of providing public support to audiovisual projects, and its funds, or a part of them, are coming from a tax on audiovisual broadcasters' sales income
    - However, OTTs, which are content providers of a new kind, tend to be out of the scope of the guidelines for these taxes, which have been set up, for the most part, before the internet even appeared, or at least before its explosive growth.
    - Therefore, OTTs don't pay such taxes: this represent an important loss of income, especially when they are capturing a growing portion of the broadcasters' total audience share and by doing so, threatening the level of advertising income

⇨ Countries are now changing the regulations around this tax, in order to include the OTTs in the guidelines. This is also a good occasion to update partially obsolete regulations and provide new common ground for both Internet and traditional TV broadcasters.

- <u>Example: France</u>
    - In France, where new laws are being discussed to regulate the audiovisual sector, there is a plan to reduce the TVS (Tax on Video Services) for all broadcasters, but in the meantime to include OTTs in the tax base. For now, streaming and VOD platforms are only taxed at 2% versus around 5-6% for TV broadcasters.
    - This law also plans to tweak the rules concerning advertising on traditional TV channels in order the make them more competitive with Internet actors, who can have precisely targeted advertising for example.
- <u>Example: Canada</u>
    - Canada is thinking of extending the Quebec tax (TVQ at 9,75%) that has already been set up for OTTs and streaming platforms to the rest of the country.

- Prevent large companies with a digital activity (especially FAANG) from dodging corporate taxes in the country where they operate:
    - It is well known that international companies, and especially FAANG-like companies with mainly digital activities, tend to dodge corporate taxes with complex tax optimization, exploiting loopholes and competition between countries.
    - Google, Amazon, Apple and other FAANG-like companies are increasing their activity in the audio-visual sector, even when it was not their core activity from the start. This generates unfair competition between traditional audiovisual actors of the sector who are complying with tax laws and these new ones who have the resources to navigate around the tax laws.

⇨ States are taking measures to make sure FAANG-like companies will pay corporate taxes. The first goal of these measures is of course to increase state revenue, but also to bring fair competition between players.

- Example: France
    - France is working on a "taxe GAFA" ("FAAG tax") to tax international digital companies making most of their revenue with advertisements, based on their local turnover.
    - For now, Netflix isn't included in the guidelines because it doesn't have advertising activity, but we could expect an enlargement of the scale of this measure.
    - Even if this measure isn't directly aimed toward the protection of the audio-visual fair competition, it could bring a positive side effect.
- Example: Europe
    - Germany or Italy are following the French initiative with similar taxes, and now it is being discussed at the European Union level to establish new European guidelines.
    - The USA which at first criticized this approach is now thinking of adopting a similar one.

- Investing in local productions to benefit from some advantages and agreements
    - Broadcaster licenses are often linked to obligations like investing a significant part of their sales revenue in national audiovisual productions. In return, they usually can benefit from advantages, such as a shorter media window before being allowed to broadcast a feature film or greater access to public funding.
    - OTT platforms do not have to apply to such TV licenses and with their US origins they were initially more likely to invest in English speaking productions made in the US, Canada or the UK and finance their original series and films alone.
    - However, OTTs are perceiving the appeal to viewers of locally produced series and films, so they are increasingly considering investing in local productions.

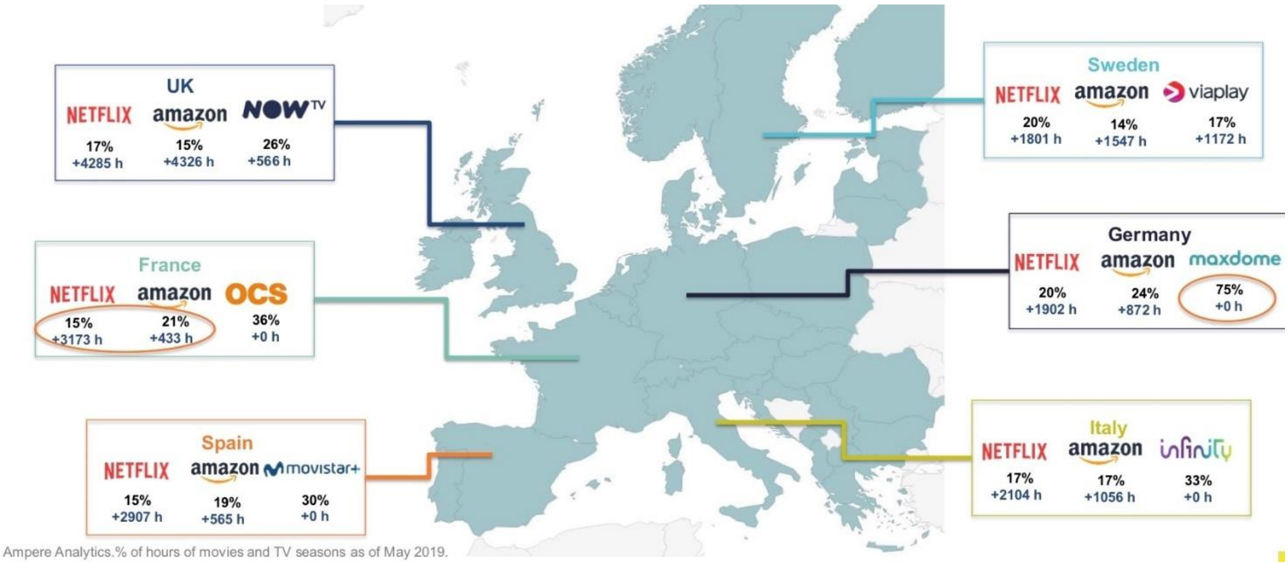
⇨ States, institutions and corporations are now thinking of finding ways to commit OTTs investment in local production

- Example: France
  - In France, broadcasters complying with the rule of local investments can benefit from a better audio-visual window timelines and receive public fund support.
  - Now the regulation is changing, especially the window before a feature film can be broadcast on SVOD platforms for companies complying with the agreement, in order to raise the interest of OTT platforms. In the new agreement (“Loi audiovisuelle 2020”), OTT platforms would have to spend at least 16% of their sales revenue made in France on French productions.

- Quota: Obligation to have a percentage of local production in the catalogue:
  - One other way to support local production is to set up a quota of locally produced work in the catalogue of broadcasters. Many countries have such regulations, but they mostly apply to traditional TV broadcasters.
  - With their international nature, and mostly US origins, OTTs tend to have a large catalogue of international series and films that they produced in English or bought in different countries. Consequently, they often don’t comply with the quota.

⇨ States tend to make these types of quotas mandatory also for OTT platforms. This fits with their goal of having a wider offer of locally produced series and films, because, as said before, it is what the viewers are looking for and it is reinforcing the local production economy.

- Example: France
  - In France, TV Broadcasters must have 60% of their broadcast work produced in Europe, and 40% in French language.
- Example: European Union - Audiovisual Media Services Directive (AVMSD)
  - In November 2018, the EU finalized the revision of the AVMS Directive
  - This revised directive is setting up minimum quota of 30% of European production in the catalogue of SVOD platforms and they must assure “prominence” (good visibility) of such content. They have 2 years to comply with it. The Graph following underlines the expected gap of local content needed to be fulfilled by OTT players. They can of course just buy European content and circulate it but local demand is so high that local production is also going to be stimulated.
  - This would only be a minimum, and members States might set up higher quotas for SVOD services located in their country (and distributing in other European countries who will have to comply with these quotas).



Estimated percentage of local content proportion per platform and country, to be compared to the 30% quota fixed by the AVMS directive.

Source: Ampere Analysis, Series Series keynote July 2019

➔ An increasing number of measures are being taken to check the growth of OTT broadcasters and make sure traditional TV broadcasters are treated equally, but the revamp of the old-fashioned regulatory, quota and tax framework will take some time. Another aspect of the high growth of OTT broadcasters is the recent production cost inflation as Netflix, Amazon or HBO are making the studio prices of the skyrocket by exploiting most of the talented workforce available to produce more and more costly series. Faced by this inflation, traditional audio-visual actors have had difficult times keeping up.

Key Findings of Chapter 2

In the last few years, European media markets have been deeply affected by new demands from TV users migrating to multi-screen, personalized and non-linear video usage. New non-linear offers sustained by strong marketing and massive content investments have almost reached 10% of users' TV viewing shares and are currently growing everywhere with positive but different growth rates between countries.

Prioritized by Subscription Video On Demand (SVOD) new entrants, International Series have been used to build differentiation and loyalty to their services in all age groups. Local free broadcasters, pay TV, and telecommunication operators have also joined this trend to compete against the SVODs and retain their audiences in particular based on their viewers growing interest in local stories. "Glocal" (local stories made for a global audience) premium series with international distribution potential have thus become a growing strategical segment in the European media market.

Local producers and distributors have addressed this booming demand but have also had to face several challenges to benefit from this opportunity. OTT platforms (global providers such as Netflix or Amazon) tend to impose new business models considering producers as servicing companies, grabbing all rights and ownership in return for higher upfront payments.

In these new business models, talents become scarcer for other media players because they can be captured directly by platforms through exclusive contracts. Distributors may also see their sales revenues in danger of falling because worldwide rights deals can be done directly by platform players or media groups which can internalize all aspects of the deal.

On their side, broadcasters can't finance projects on their own anymore due to higher budgets and as such, are trying new strategies to join forces (including co-productions, joint ventures, and alliances) opening to producers a new central position as coordinators of these international co-operations. This dynamic market will be even more stimulated by the upcoming arrival of new players such as Disney+ or HBO Max who are themselves reacting to Netflix or Amazon's threats of predominance.

Institutions start to support this segment at the European, national and regional levels but with far less support than in the cinema industry. Tax shelters or the European Commission's Creative Europe - Media Sub-programme support are nevertheless becoming essential financing mechanisms in these projects. Development phases still remain fragile, but they are very important in achieving full international potential. Some countries' best practices are leading the way: the recent French political impulse, the Belgian initiatives financing almost 100% of the development phases, or the Danish focus on the writing phase, all of them aiming to find growing international sales opportunities as already addressed by the UK or Israel media industries. Institutions work fiscally and at the legislative level with quotas, obligations of investment in local production and taxation on SVOD services, currently in discussion or in deployment as permitted by the AVMSD (Audio-visual Media Services Directive).

3. Analysis of the series sector needs

This part analyses the key levers for European players to develop their series with healthy business rules and sufficient regard for diversity and cultural pluralism. But before, here are a few case studies showcasing some of the new production rules for success.

3.1. Commercial and editorial practice and needs

3.1.1. Case studies with insights:

- *"La Casa De Papel*" phenomenon (English title "*Money Heist*")

For three seasons, "*La Casa de Papel*" is the story of a team of eight criminals holding 67 hostages at the Royal Mint of Spain as they print the billions of Euros with which they hope to eventually abscond.
From the start, "*La Casa de Papel*" was a hit with viewers in its native Spain. More than four million viewers watched its premiere, almost double the number of its closest competitor. The multi-dimensional characters, the narrative tension, the unique design and sets, the special attention to female characters made an innovative turning point for Spanish TV, with some journalists comparing the show to Quentin Tarantino's *"Reservoir Dogs"*.
Though it was created for Spain's Antena 3 network and intended as a limited series, its popularity and worldwide potential caught the eye of Netflix, which acquired it, re-edited it (from 70min to 52min per episode), dubbed it, and began streaming it in December 2017. "*La Casa de Papel*" soon became the service's most-watched non-English-language series. In April 2018, it even topped *"Stranger Things"* streams in the US and worldwide. Its success also prompted Netflix to sign a global production deal with "*La Casa de Papel*" creator, Alex Pina, and is credited with helping the streaming service to become a worldwide phenomenon, with brands creating special events and fans developing huge social buzz. In fact, "*La Casa de Papel*" is doing something even bigger: it's setting the bar for TV dramas that can appeal not just to its culture of origin, but to everyone.
And this was initially a local broadcaster production proving European creativity in writing and producing, but also the risk for broadcasters is to lose this credit as the show is in everyone's mind as a "Netflix Original". Since then, Atresmedia (the owner of Antena 3) announced on 20 September 2019 during the San Sebastian International Film festival the creation of a content factory with Telefonica-Movistar to produce films and series with international ambitions as an alternative to OTT productions.

- ***"Midnight Sun / Midnattssol/ Jour Polaire***" - 2016

A 8x1 hour high-concept thriller from Mårlind & Stein (*"Bron/Broen"*), starring French actress Leïla Bekhti ("*The Prophet", "All that Glitters*") and Gustaf Hammarsten (*"Bruno", "The Girl With the Dragon Tattoo"*).

Synopsis: Kahina Zadi (Leïla Bekhti), a French police officer, travels to Kiruna, a small mining community in remote northern Sweden, to investigate a brutal murder of a French citizen. With the help of Swedish DA Anders Harnesk (Gustaf Hammarsten), they are faced with new killings and the initial murder which turns out to be the tip of the iceberg.
Kahina and Anders come to realize that behind the killings is a ten-year-old secret conspiracy involving many of the town's inhabitants. Kahina finds herself confronting a ruthless serial killer, always one step ahead, a macabre plan, and her own painful past.

"Midnight Sun" is a typical Pan-European co-production:

- Two producers : Atlantique Productions (French group Lagardère Studios) and Nice Drama (Swedish group NENT)
- Two main broadcasters being commissioners and co-producers : French Pay-tv Canal+ and Swedish PSB SVT and a distributor enlarging sales to other territories (Studio Canal)
- A mix of European, French and Swedish public support (Creative Europe, CNC, Filmpool Nord)
- A mix of French and Swedish talents for a Swedish & French story

Insights: a successful co-production project

The producers managed to onboard and align two major broadcasters with different goals (a public TV with social impact, pay-tv with action and disruption for edgy subscribers), managing to keep the ownership of the series and net receipts on its exploitation after recoupment of the distribution advance by Studio Canal. Channels got great local impact and, thanks to their coproduction shares, generated revenues from sales.

- ***"The Bureau / Bureau des Légendes***" – 5 seasons, 2015- on going

5 seasons x 10 one-hour episodes

"The Bureau" is a tense thriller set in the most secret of secret services, giving a unique view of the ordinary lives of agents accomplishing extraordinary jobs. A modern spy tale in a modern John Le Carré world.

Synopsis: Within the French secret service, known as the DGSE, operates a clandestine branch of undercover agents. Dispatched under false identities to hot zones all around the world, their mission is to seek out and identify potential trouble sources. The fabricated identities these agents adopt to fulfil their mission are called Legends. They must be completely undetectable, like ghosts infiltrating a highly elaborate system. The surreptitious lives they lead are not their own, but the centre of The Office of Legends a.k.a The Bureau.

"The Bureau" is written and directed by film director Eric Rochant (*"Möbius", "Mafiosa"*) and star Mathieu Kassovitz (*"Munich", "Amélie Poulain"*...). It is produced by French American Alex Berger and distributed by new successful producer/distributor Federation Entertainment.

The New York Times "A gripping European Thriller"

«The Bureau is moody, cynical and stylish, with the pace and disjunctive tics of an art-house film. The Bureau" builds its tension more slowly and elliptically than many American shows. A series that is consistently smart and understated".

Insights: a successful local Original with international success

The producer managed to deliver one of the top franchises of Canal+ for years and at the same time kept ownership, and filled the financing gap thanks to risk-taking new entrant Federation Entertainment distributor and developed the brand at the international level with worldwide sales in Europe but also in the US (AMC).

The series is also a model of organisation inspired by US showrunning methods. To guarantee premium stories and one 10x1hour per year (for 4 years and soon 5), the production has organized a very formal collective writing method (baptised ADES "Atelier d'Écriture Structuré" method) and built a combined management showrunner (being also the film director) and producer Alex Berger who is taking care of production financing sales and brand awareness.

- ***"My Brilliant Friend/ L'Amica Geniale"*** - 2018

One season, 8 episodes of 50 minutes

"*My Brilliant Friend*" is a RAI Fiction-HBO and TIMVISION series and a Wildside-Fandango Production. It is produced by Lorenzo Mieli and Mario Gianani for Wildside and by Domenico Procacci for Fandango (who initially brought the rights), in collaboration with RAI Fiction, TIMVISION and HBO Entertainment, and in co-production with Umedia. This series received support from Creative Europe. Oscar-winning director Paolo Sorrentino and Jennifer Schuur are the executive producers. Fremantle is the international distributor in association with RAI Com and this production has achieved sales in more than 50 territories.

Synopsis
"My Brilliant Friend" is the adaptation of the first book of Elena Ferrante's successful quadrology. It is the long, passionate story of a Neapolitan friendship. World War Two has ended and two young girls from a working-class neighbourhood, Lila and Lenù, form a bond that last years, accompanying their growth, dreams, difficulties, crossroads in life, choices and different destinies. It's a strong, stubborn bond that never breaks.
The people around them are lively, generous, angry, supportive and savage: families, fathers and mothers, husbands and wives, sons and daughters, neighbours, allies and enemies.
Part of its success is in its setting, in all its different aspects: places, habits, customs and everyday routine. The unmistakeably Italian world of working-class Naples is brought to life in all its splendour and is the focus of the series: immersing the audience in the atmosphere of the time required an unusual effort on settings, casting and language options. Choosing the cast especially with two heroines took director Saverio Costanzo eight months and about 8,000 auditions to find them. Choosing dialects as the series language made the setting of the story plausible and was accepted for the first time by HBO and RAI.

Elena Ferrante constantly took part in the screenplay alongside Costanzo, Francesco Piccolo and Laura Paolucci, adding notes and stepping in with original tips that fit well into the context of a series.

In summary, it is a series born of the Italian literary tradition and its ability to tell universal stories.

A successful series
"My Brilliant Friend" was on air in Italy on Rai1 from 27 November 2018 to 18 December 2018. It got unique average viewing figures of 7.1 million and 30% of the audience share. On RaiPlay, Rai's catch-up service, episodes averaged 5.3 million views after being up for just six weeks.
The series had a great success also abroad with best performing foreign language drama on Sky and excellent critics. A season 2 is now in production.

Insights

- This series is a unique, creative example of private and public broadcaster collaboration, making possible great production value (30M budget) serving the novel without compromise, and the universality of its themes in a strong and preserved local identity.
- It also shows that local broadcasters can achieve world class productions in accordance with their tradition of public service- in this case, narrating Italy and the diversity of the country's territory. It is a way to deliver the best quality to its audience, export the Italian audio-visual soft power while managing to keep their local budget, thanks to international production financing (RAI paid less than half of the overall production budget).

- ***"Cannes Confidential"*** (under development)

DRAMACORP
A BETA FILM COMPANY

A 10 x one-hour
"blue-sky" crime procedural
(2020)

Created by Chris Murray (BBC *"Midsomer Murders"*, Acorn TV's *"Agatha Raisin"*) and Patrick Nebout (Canal +/ SVT's *"Midnight Sun"*, TV4-ZDF's *"Agent Hamilton"*), *"Cannes Confidential"* is a 10 x 1 hour high-concept "blue-sky" detective series revolving around the sparring attraction between gutsy, no-nonsense detective Camille Caron (early 30s) and charming international conman Harry King (mid 30s) when they are thrown together to solve crimes on the French riviera.
The series aspires to *"Moonlighting"* in terms of wit and character, *"The Night Manager"* in terms of style and scale and *"La La Land"* in terms of look and tone.

Insights
"Cannes Confidential" is an atypical set-up, paving the way for a new wave of European projects:

- It is the initiative of one producer (Dramacorp, a Beta Film Group company) with no main commissioning broadcaster. The producer has identified a marketing and editorial gap in the marketplace, with the increasing lack of "lighter" crime series for European and international audiences. This way, the producer retains control of the development for as long as possible, so as not to depend on one main commissioning broadcaster. The development is funded internally until the project is ready to be shopped/pitched to the market as a compelling package. The idea is to build the financing plan around two big pre-sale/coproducing broadcasters and limit the number of editorial voices around the table, then complete the financing through International distribution MG, tax incentives (France's 30% TRIPP), and potentially smaller deficit financing by the distributor or a studio.
- The product of a unique collaboration/partnership with a local public player (City of Cannes). A series filmed entirely in Cannes, boosting the local/ regional economy as well as film TV production industry, jobs and infrastructure. This win-win partnership between the city and the production company illustrates how series projects can involve local economical and institutional partners in Europe. With so many brands and places of interest to explore, this approach has attraction potential on the international market.
- A new generation of European series, with a simple pitch and proposition, shot in the English-language, involving a mix of European talents (UK writer, Scandinavian director) but avoiding the "Euro-pudding" risk.

3.1.2. Focus on four main issues

3.1.2.1. The US copyright model now expanding in Europe and setting up new rules

Apart from the recent international segment, series are dealt with like any scripted content with the local broadcasters: either with an independent, external producer (sometimes it is even an obligation to protect independent producers like in France or Italy) or internally, and this is still the case today for most programming. In many cases the broadcaster finances the majority of the production (even from the beginning), with specific writing funding. The production deficit-financing is filled by public support and/or residual distribution deal while the production margin is left for the producer. The real part of the negotiation lies in the rights left to the producer, for him/her to generate revenues on the Intellectual Property (IP) through international sales, format sales, other windows like SVOD, etc. In many cases, the predominance of the broadcasters financing leaves little to the producer if anything (in this case, the producer is a supplier).

With high end series, the broadcasters can't finance the necessary higher production value by themselves. This is where producers have an opportunity to increase their role in the project by being the intermediary, setting up the financing round and distributing percentages of the upcoming revenues in function of the importance of each player (rights claimed per window and territory, arrival in the project, and consequent risk assessment). The producer is then the main project manager of the series, he/she is responsible for seeing the project through, maximizing the monetization of it (for the partners he/she gathered) and for his own venture. Producers with the capacity to cover the deficit-financing (until the money is paid back, oftentimes from a second season or international sales) are privileged. Because of this, it is important to develop co-productions with a "richer" producer as a financial partner, be part of a group (independent or not), or to investigate new financing tools (for instance, Venture Capital funds like IPR.VC in Finland already spending 26% of their funds on series). The more they finance these gaps and take risks, the less they give away (in percentages) to partners, and therefore the more revenue they make if it is well executed. This brings more investment capabilities, the ability to take more risks on the next production and so on.

On the other side, broadcasters get to keep a percentage of the IP rights and that percentage increases if they use internal production capabilities with a capacity to financially engineer these productions and use also an internal distribution entity: Canal+, for instance, orders international series from external producers but also from its internal production companies (present in 6 territories). When possible, they also give mandates to their distribution company to sell rights out of the Pay-TV footprint (just like HBO does, as an editor, a producer and a distributor). The result is that that they can benefit from the series rights for their channels (while maintaining good editorial control at a good price) and from monetization by the distributor(s) all along the sales cycle of the series.

This opportunity for producers is partially endangered by the models utilized by one of their most important new clients, namely the OTT platforms. These platforms commission series differently. They either:

- purchase the series before or after production (still 83% of the hours of TV seasons on Netflix)
- coproduce with other broadcasters and keep exclusive rights for a list of territories (increasing between 2017 and 2019 from 3,8 to 6,6% of the hours of TV seasons on Netflix)

- or produce entirely for themselves and usually calling these series “originals” (even if there are many cases baptized this way and being in fact a co-production or even a purchase. For example, “*La Casa de Papel*” was initially an Antena 3 production, “*Call my Agent*” is the French FTV production *“Dix pour Cent”*). On Netflix, this category has jumped from 5,6 to 10,2% of the hours of TV seasons in 2019 and benefits from the biggest marketing pushes of the platform.[102]

In this last case, they usually claim the full rights to it (all windows and territories, in perpetuity) like studios in the US have done for years (the full period of copyright). So, once the deal is done with the producer, there is no chance for extra revenues. Hence a better margin on the production budget is usually conceded to include all these missed revenue opportunities. This model is not new, it is also applied in US studios’ output deals with the most sought-after talents in Hollywood (actors, scriptwriters, and film directors).

This is what may also happen for European talents, where OTT platforms would negotiate these agreements with writers (including the literary industry), directors, demanded technicians (like directors of photography) and bypassing producers. Some OTTs start to have these discussions in the market with the (rarely experienced) showrunners, or start to take over production facilities which could be the beginning of a studio model.

Of course, there is no way to ban these practices but if talents have fair alternatives, they will be independent and have multiple clients (like showrunners have done in the US). In addition, there are several negotiations taking place, one example being in Denmark (Create Denmark union) between the unions and platforms to shorten the rights licensing and leave more IP to the local talents[103].

In a continent where the authors rights collection system prevails, switching to a model with no long-term revenues would need to re-evaluate the overall business models in place (and the survival of some players like independent distributors) and imagine compensations for several players in the ecosystem to enable fair and growing business for each. Measures could be discussed at collective levels, like unions, to avoid unbalanced negotiations between small players (like independent producers) and giant platforms.

3.1.2.2. Talent protection and growth

Writing is crucial in series projects, especially in this very demanding international series segment. More so than in cinema where the film director is usually a guarantee of success. For this, authors need to benefit from training, resources and motivation to deliver the best work in a close partnership with the producer and the film director. While these conditions have been negotiated for years in the US by the local unions (the Writers Guild of America[104] most notably), the situation in Europe is rather fragmented, the importance of writing is often under-valued and authors regularly complain about job insecurity, instability of income, and poor revenues (if not unpaid work).

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[102] Ampere Analysis Series Series July 19
[103] http://createdenmark.dk/
[104] Download the WGA code of working rules at https://www.wga.org/members/membership-information/constitution/working-rules

What do writing tasks represent and what is the profile of a standard European TV author[105] ?

Over 30,000 contracts are signed each year for the writing and directing of 11,600 episodes of television fiction and 1,700 feature length films in Europe (26 countries). This copyright material is at the base of an industry that employs more than 1.2 million Europeans.

The profile of a median audio-visual author is:

- 46 years old, Master's Degree, has been working as an author for 16 years.
- working 45 hours a week and 80 % of his or her income is generated as an audio-visual author: €19,000 after tax, to be compared with $73,090 in the US[106].
- 85 % of audio-visual authors work freelance; 36% of the audio-visual authors are female

Audio-visual authors, by definition, create copyright/author's rights by creating original work.

Varying considerably from one Member State to another, authors generally have two main sources of income:

- upfront payments at contract signature or during the life of the contract. This can include their work in creation, payment for the transfer of rights to contractual counterpart, advance payment, or a buy-out for share of future exploitation revenues

- subsequent secondary payments for repeat screenings of the work (e.g. share of exploitation revenues), and compensation for copyright exceptions.

This essential second source of income stems from two major rights that are collectively managed and result in secondary payments for audio-visual authors in Europe: cable retransmission (Directive 93/83/EEC superseded and modernized by the 2019 Copyright Directive) and private copying in the countries where levies exist. On a country by country basis, other secondary rights are administered collectively and result in additional payments that are rather important for TV broadcasting in particular (on-demand uses, video sales, rental and public lending, educational uses, etc.).

Secondary payments provide a continuous stream of income to audio-visual authors over the years, based on the success of their work. They even out their income flow in a very unstable environment, and often produce an income in later stages of their careers.

[105] Research commissioned in 2018 over 26 European countries and 3217 participants, by BVR Services GmbH from CuDOS at University of Ghent on behalf of FERA – Federation of European Film Directors and FSE – Federation of Screenwriters in Europe, with the financial support of AIPA, ALCS, VG Bild Kunst, LIRA, Norsk Filmforbund, SAA, SACD, SGAE, SSA

[106] 2018 Bureau of Labor Statistics – Average annual wages Writers and Authors

What problems do international series bring to the stage?

The main issue is just to consider more than ever the important role of writing in these very demanding formats that satisfy both local and international audiences.

The arrival of OTT platforms has introduced more revenue opportunities, fast decision-making, a real value attributed to authors (today most platforms' talent deals are done with authors), and also a competition from the advanced US industry used to evolve production processes and specific rules.

- Hence, the necessity of more investment in this phase: in Europe, series budgets usually dedicate 5 % for writing (3,9% in France, around 6% in Germany) while US series invest 10%. All players involved in a production should provide for and finance this crucial stage better. More investment means adjusted payment of the authors for the work they provide. In some territories, like France, authors usually just get payment advances on their upcoming rights (and no monthly fee during their development work on a full-time basis). It is then common for them to get 10% of their fees for effectively more than 50% of the work being done, as most of the fees are split on a long period during which they no longer act (production, release).

  Some development work is not even paid (which is also true for film directors) and puts them at risk in the event the project is not greenlighted by the commissioner. This is discouraging risk-taking on creativity. Some countries (DR in Denmark, ZDF in Germany, YLE in Finland, etc.) have developed interesting practices to address this, for example, ensuring authors a monthly payment during the development period (to be reimbursed by the new commissioner to the one that paid in case he/she has not greenlighted the project).

  There would be an interest to share and try adapting them to improve the author's overall treatment and maximize investments during the upfront writing phase. There is also a need to include authors in the negotiations with OTT platforms (as described in the previous chapter). As pointed out by several interviewed producers and authors, collection of royalties on author's rights by collective management societies provides less revenues and transparency when compared to US WGA rules.

- It is also a very demanding new format with a lot of skilled worldwide competition using different, innovative methods to ensure solid and scalable character/plot writing. The more long and complex the series is, the less it is possible for one author to embrace it all. Collective writing with strict organization is used in advanced industries like in the US or the UK and have started to be used in continental Europe (i.e. Nordic countries or *"le Bureau des Légendes"* with its "ADES" method).

  Different models exist and have proven their efficiency (the US model relies on a duo showrunner/producer whereas some European configurations prefer a trio between a "head writer", film director, and producer). There is therefore more need than ever to train European authors on the subject of collective writing and "showrunning" (or "head writing") and adapt to these new methods. In doing so, we will no longer have two categories of writers: the over-demanded ones with experience and methods (like the UK showrunners) and the others lost in these new rules and missed opportunities.

  With a convergence happening between cinema and series, accompanying the numerous European film talents in this series world is a real challenge, but also a clear opportunity.

This is true of film scriptwriters but also of film directors sharing many common points with authors.

Finally, training should also include the English language as many potential showrunners' careers need fluent English to guarantee efficient communications with producers/commissioners and, more generally, international crew members; in countries like Italy, for instance, this is an obstacle .

- In ecosystems more complex than local traditional commissioning, authors should be more involved in the overall production process and collaborative with the film director and producer in order to create their series in the best conditions. Many authors complain they don't really get to discuss their projects with commissioners. Oftentimes, however, they are reluctant to go on stage and take part in on set rewritings during production as their contracts do not mention it. Again, all these processes are perfectly well explained and adhered to in more advanced industries. For years, US guilds have negotiated in transparency the rights, work timing and obligations of each stakeholder to produce the highest quality content with minimal delays, striving to meet the demand for one season per year.

Sharing best practices, running collective negotiations, and publishing guidelines all together (authors, film directors, producers, commissioners, even distributors) would be important steps for European talents to seize this market opportunity, work better together and to be considered more than just "suppliers cheaper than the States", given that European audio-visual industries have been among the best in the world thus far.

3.1.2.3. The need for European platforms to ensure competitiveness and pluralism

With the growing importance of OTT platforms in Europe and the arrival of new ones (AppleTV+, Disney+, HBO Max, Peacock, etc.), each country setting up local rules for its media environment will have to take into account and apply the same rules and obligations to avoid unfair competition.

Local implementation of the European AVMS directive will, for instance, be the occasion for each country to apply a minimum level of European content exposition and re-evaluate its positions towards authors rights, protection of independent production, or investment in local productions. Obligations for investment in local production is under implementation in several countries, e.g. France, preparing for a minimum of 16% of local revenues to be invested in local production with its new audio-visual law.

In the US, foreign producers and media groups must comply with local rules. Europe needs to develop a reciprocal rule, taking into account the importance it accords to cultural pluralism and the protection of authors rights.

But this isn't enough to guarantee a fair new media environment. Scalability is a clear necessity so that bigger local platforms can emerge and benefit from similar volume to be able to obtain similar business conditions and capable of producing produce competitive high-end series. Reciprocally, authors and producers need more than 2 giant clients to build their activities in fair conditions.

Today, the advantage is more on the side of OTT players. In the UK alone, Netflix and Amazon made €1,24bn revenues with their SVOD services, more than twice the revenues by all local channels' SVOD/catch up services. Netflix has more subscribers than Sky, and Netflix and Amazon have over 3 times more online content than BBC iPlayer and Sky Now TV.

It is high time to react and PSBs can play an important role here as there is less competition amongst themselves when compared to private media (Mediaset and RTL operate for instance commercial channels in several countries). They can also negotiate specific budgets with their respective authorities for "political" projects and they usually have significant dialogue with and valuable access to the network of local talents. Most of the time, they are also editorial leaders in their countries where they can launch trends. Successful territories with their series on the international stage often have a powerful local PSB behind the scenes (BBC, DR, SVT, ZDF).

This is why the first set of initiatives emphasises the important participation of PSBs:

- Alliances on co-productions, like the one between FTV, RAI and ZDF. By screening projects together and going in on them with at least two commissioners, costs are divided by two and budgets can increase to serve production value. Another example is Nordic12, gathering Nordic broadcasters with similar objectives.
- Development of platforms also involving other local (commercial) broadcasters to develop SVOD services with possible business models, mixing SVOD and advertising revenues (like the HULU service in the USA, the upcoming French service Salto, LOVESTV in Spain, or Britbox involving BBC and ITV in the UK). ARTE is even proposing to set up a streaming service bringing together the "best of European public channels" in multiple languages, with an initial focus on documentaries and magazine programming but including fiction at a later stage.

In addition, there are several private capitalistic moves from local media groups in order to get bigger internationally (for example, Mediaset taking 10% in Prosieben), enlarge their advertising networks (i.e. joint venture between competitors RTL and Prosieben), or develop SVOD offers (Discovery and Prosieben launching Joyn service).

Being able to work together, with or without capitalistic links, in order to create alternatives to American OTT players in European TV audiences and especially for the youngest audiences is a serious issue for Europe in order to develop its media industry and preserve its pluralism. series may be one part of the solution as co-productions pave the road to international cooperation.

Key Findings of the chapter 3.1

As highlighted in the several cases studies presented in the report, there is a need from all players to work at the institutional and European level to ensure fair conditions and growth in this strategic segment, in compliance with European values on cultural pluralism and freedom of expression.

Preserving content ownership for producers as much as possible in global productions involving OTT platforms is a primary challenge, as platforms models dictate full copyright transfer (as inherited from US studio methods) and acceptable only where unions have precisely negotiated all the conditions necessary to defend talents and producers. As author's rights prevails in Europe, this requirement has to be adapted and integrated in collective negotiations with platforms.

With international series giving more importance to the development and writing phases, transparent and fair commercial and working rules should be established between all stakeholders. This is in order to achieve high quality at optimized costs and enable writing talent fair compensation and living means, which today are far below US standards. This implies investment is needed more in the early stages, along with training and development (notably the new "showrunning" role) and adaptive financial treatments.

The ability to avoid monopolies on OTT/SVOD distribution by a few US OTT platforms is also a condition to preserve European cultural pluralism and enable fair conditions for producers and other stakeholders. Current alliances initiated by allied TV companies for shared production and local OTT platforms projects are paving the way and should be further encouraged.

3.2. First Analysis on the Impact of the Public Support Systems series

The series production sector is quickly changing, new measures are being taken by public actors at different levels and private companies are reshaping their strategies. Even if most of the series support programs are very recent and no in-depth analysis has been made already on their impact, it is possible to perceive a few trends and relevant points. This report collects feedback and figures from a few public funds (the regional fund Pictanovo in France, Canada Media Fund, Creative Europe MEDIA, the Estonian Film Institute and the Finnish Film Foundation), a sample of Eurimages representatives (through an online questionnaire), and other various actors of the sector (see interviews list). The goal of this part is to sum up the impact of public support on series production, what the trends are and what is still lacking.

- The series sector is in a concentration phase: fewer projects are being made, but each of them require more funds than before in order to reach the new quality standards, set by the "high-end series" of the big content providers (HBO, Netflix, Amazon, etc.).
    - For example, the Canada Media Fund told us they are reducing the number of projects they support, but are granting more money for each in order to keep up with the standards of big content providers. This is a trend we have perceived in much of the feedback.

- Most public funds for series are not funded enough to support high end series in Europe, and the new standard of high end series tends to make top financing from private investors mandatory.
    - The financing mix of public fund + National Broadcaster is no longer adapted to ambitious high-end series projects. These types of projects now tend to require a top financing of 20-40% from big private international broadcasters (HBO, Sky, Netflix, etc.)
- The development phase does not receive enough public funding, even as the phase where it could be the most efficient and where private investments are lacking because of high risk.
    - The development phase is critical to build the basis of a high standard project and subsequently attract investment.
    - This phase is less capital intensive in comparison to the production phase, but it's a riskier phase because everything must be written from scratch, or almost. That's why private investors or broadcasters poorly finance development. The financing is consequently missing for many projects, which must be scaled down or abandoned.
    - Most of the contacted funds are willing to increase the budget allocated to this phase. For example:
        - The Estonian Film Institute refocused all its budget for series support on development, considering there was enough private funding on the market for production, and the priority was to make the projects good enough to attract these private investments.
        - The Finnish Film Foundation decided to refocus its budget for series towards script writing and development, where it can have a greater impact at lower costs than production support (9 series supported in production in 2018 vs only 2 in 2019).
- Some criteria of the selective support program tend to be maladapted to series and might need to be reworked, for instance with the cultural criteria and business success expectations trade-off.
    - As it has been explained, most support schemes for series are inherited from feature film supports. Consequently, the cultural aspect tends to be largely preferred over the business success expectations of the project.
    - However, series (which are by nature iterative creations) needs to obtain a minimum market success to persist to a next season and so on.
    - That's why some selective criteria may need to be reassessed in order to include more commercial aspects important for series success.
- Cash rebate mechanisms (pay-back on production expenses in the country/region) have been largely adopted, and some countries have implemented it very recently (for example, Ukraine in 2019). It's a relevant mechanism to attract audio-visual projects of all kinds and it is easy and clear to use for production companies. However, some issues must be looked at:
    - The grant being paid (except in rare cases where a percentage is paid in advance based on spending expectation) once the production has been completed, it cannot replace all other kind of supports, especially those coming in at earlier stages of the

projects or production support paid in advance. Experienced producers with a lot of financing support do not care so much, but smaller ones might need the cash to pay for the production, and if it comes after completion, they might run low on cash for the production phase and have to reduce their ambitions.
  - If all European countries implement this, then it won't be a differentiating factor anymore, and countries might be tempted to increase the rebate percentage to become more attractive than their neighbour.
  - The European Commission is evaluating the impact of this mechanism on the market and might not renew its authorization depending upon whether they consider this unfair competition. So, there is still a risk that such ambitions would be removed.

- Co-production and co-development seem to be success factors for ambitious series:
  - It makes the financing phase easier by opening new sources of public support (Creative Europe, co-production agreements, support from national public funds of each of the involved countries, etc.)
  - It increases the chances of the series to reach an international audience by, of course, being planned to be broadcasted in each country involved in the co-production. Also, because of its multinational form, thinking of a narrative accessible to a more diverse audience.
    - For example, Nordisk Film and TV Fond allowed the Nordics (Denmark, Finland, Iceland, Norway and Sweden) to produce high end series, reaching an international audience and making this region attractive for private funding too.
- Some producers tend to have difficulty clearly understanding how public support works for series (and the procedures) are often too heavy and slow in a market where things are going faster and faster.
- Producers from low production capacity countries (in terms of audio-visual production and public funding in the sector) tend to have great difficulties in obtaining investments and financial backing. There are just a few transnational measures right now that are aimed at them.
  - For example, Creative Europe mainly does top financing on already well-developed projects in need of extra funding to allow them to reach their level of ambition.

Key Findings Chapter 3.2

Public support's impact analysis shows that most of the funds for series are not large enough to support high-end series in Europe. In a growing number of countries, fewer series are, in fact, supported, but those that are receive higher levels of individual support.

The development phase is underserved, even if it's the phase where public intervention could be the most efficient and where private investments are lacking because of its high risk.

Some criteria of selective support programs tend also to not be adapted to series and might need to be reworked taking into account the cultural criteria and business success expectations trade-off.

Cash rebate mechanisms have been largely adopted as it is a relevant program to attract audio-visual projects of all kinds and it is easy and clear to use for production companies. However, it cannot replace early stage support of the projects. Furthermore, the European Commission is always reassessing its authorization due to unfair competition risks. Finally, co-productions seem to be the key success factor for ambitious series as they boost international cooperation on creativity, financing and distribution.

Producers tend also to have difficulties understanding clearly how public support works for series and the procedures are often too complex and slow in a market where things are going faster and faster.

Apart from a few countries (mostly the Nordics) that have seized the international co-production institutional support opportunities, producer form countries with smaller production capacity tend to feel especially underserved and blocked in their international projects.

3.3. European production stakeholders' overall needs and options

In this report, we have underlined the international series opportunity for European producers and local broadcasters. It is also a necessity to develop European leadership in this segment as it is growing and progressively cannibalizing the interests of audiences for traditional local productions and broadcasters. In our different analyses by country, by player and with concrete examples, we can identify a number of growth levers and threats to circumvent in order to take up the challenge.

- Adapt our industries to this new demanding and growing segment by developing new writing, line production and production financing methods. Co-productions are a key lever to encourage in our fragmented markets.
- Define and communicate clear and transparent rules to better share the value together with authors, producers, distributors, broadcasters and also the new overseas entrants from the OTT world. Be transparent about the ownership shares, the splits of costs and revenues, the obligations and rights of each (as the unions did in the US).

- Financially supporting the growth by preserving pluralism and including all countries. PSBs may have a leading role in this mission.

A set of industry findings, insights, and suggestions collected during the interviews and in the documentation (both concrete and long term) will be further developed and classified in the next parts. Even if it is clear that not all of them fall within the scope of the COE and/or Eurimages missions, these points are intended for all the stakeholders of the audio-visual sector to raise awareness on the existing challenges to deal with and opportunities to seize. For the recommendations specifically for the Council of Europe and Eurimages, please refer to chapter 4.

3.3.1. Seizing the AI opportunity for the media sector and avoiding its potential risks

- benchmarking the most ethical AI codes and practices in use in the industry and making them available for the media industry and stakeholders in order to adapt media laws.
- establishing a body of certification to ensure a fair use of AI in media. Certification is challenged by some algorithms being hidden for technical and business purposes. These algorithm codes are intellectual property, owned by someone.
- increasing education and awareness among the media ecosystem's stakeholders on AI. Cooperation between them should be encouraged through workshops to share best practices and the use of common certified tools.

3.3.2. Developing a common cultural identity

<u>Promotion & training</u>

- Organizing mixed stakeholders think tanks of editorial subjects of interest for Europeans (like the one "Inspired by Neighbours" initiative in Copenhagen)[107]
- Sharing and promoting tools to understand market demand (data mining, A/B testing of pilots, focus groups) gathered and promoted by a "creative series agency"
- Training on the series market practices especially for low production capacity countries

<u>Legal framework</u>

- Carefully controlling quotas with respect to real time methods
- Measuring and boosting cross border circulation and portability implementation
- Encouraging full optimization of media chronology (ultimately eliminating piracy and maximizing content exposition)

[107] http://cphfilmfund.com/en/storytelling-seminar-what-unites-and-separates-us-in-europe/

- Rethinking the single territory model with the development of international distribution models. Upcoming discussion on geoblocking rules should aim to protect content revenue potential without limiting content circulation.

3.3.3. Catching the international series market opportunity

Moving the industry towards a more efficient production model (repositioning of writing in the middle and adopting new processes based on international best practice). Initiatives can cover:

- Financing guilds & unions in order to inform them on the production of guidelines/white papers to be promoted and transformed into "industry rules": transparent relations setting up rights and obligations for players, including IP management and success fees, as seen in the US WGA agreements.
- Financing could come from unallocated collective rights. The alternative could be to allocate this mandate to the Society of Audio-visual Authors (SAA).
- A "best practice" web platform detailing full series financing and marketing strategies through case studies, thus breaking down silos between countries and between authors, producers, distributors and commissioners.

⇨ Specifically:

- Authors:
  - funding them at the early stage development phases
  - reinforcing their statute with Minimum Guarantee writing fees (based on budget excluding producers' share, with a minimum and a cap) during development phases and success shares. Fragmentation of talents requires more here than other Union collective negotiations.
  - training in collective writing and showrunning models to avoid talent scarcity and star system disadvantage. Addressing existing scriptwriters and the new generation separately.
- Producers:
  - funding development phases and maybe authors through this financing
  - funding production phases without committed broadcasters (alone or in co-production), especially for small or independent producers before they sell on or find a bigger co-producer who will sell to platforms and take care of the line production
  - training of cinema producers migrating to the series process
  - establishing measures to help producers preserve the ownerships of their series, for instance with:
    - conditional public support in co-production projects

        - special "gap funding" to avoid sacrificing their remaining rights to a distributor or a platform,
    - networking and marketplace dedicated to co-production projects

- Distributors:
    - creating a dedicated fund for international productions, helping them to intervene upfront
    - encouraging producer and distributor consolidation to align interests: method to be determined (training, incentive, addition of support, etc.)

- Commissioners from TVs and platforms:
    - training and workshop needs
    - waiving domestic production quotas when applicable (in local laws)
    - specific module about AI also involving product managers of TVs platforms

3.3.4. Preserving cultural pluralism in the member States

- Increasing co-production volume to sustain local players' platforms and guarantee a multiple player market:
    - evaluating and adapting funding processes on green lighting, payment and non-selective principles.
    - creating a similar tool for series co-productions as the European Cinema Convention for co-production
    - developing mini treaties between European countries? E.g. France/Canada, Italy or between regions like Centre/Pays de Galle or Réunion/South Africa
    - sharing local funds operational initiatives developing efficiency and encouraging local adoption instead of duplicating only tax credit/cash rebate models (i.e measures from Plan series CNC, fonds série Wallonie, Creative Denmark)
    - developing networking and market places created by start-ups (like Midpoint in Central Europe or Film Market Hub in Spain)
- Creating a more favourable regulatory environment to facilitate the consolidation of European players and alliances (Alliance FTV RAI ZDF to be copied by other groups of broadcasters like Pay TVs, Southern & Eastern Europe alliances, etc.
- Tracking anti-competitive practices (incl. AI usage and AVMSD implementation)
- Making sure gender diversity (with bonus incentives on funding) is implemented

4. Recommendations for the Council of Europe and Eurimages

Five types of recommendations are presented hereunder:

1) Recommendation 1: Mandating Eurimages to build competence on Series

Interviews we have conducted for this report indicate high expectations from stakeholders about a possible role for Eurimages in this growing series market. Therefore, Eurimages could be mandated to build competence in this area and granted the necessary budget to do so. Eurimages could organise a conference with partners about this report.

2) Recommendation 2: Setting up a legal framework for series co-productions

We have seen in this report the importance of increasing series budgets for European broadcasters to compete against OTT propositions. This phenomenon is quite new as the growing importance of OTT players took place only 2-3 years ago.

The most efficient solution is to increase the number of series co-productions, which today are far below the level co-productions of the cinema industry (only 9%[108] of series are co-productions, compared to 22% of feature films). Eurimages is uniquely capable of handling this mission as it did so successfully in the cinema industry. In order to facilitate cooperation and co-production in the series sector, a new convention for series, inspired by the Council of Europe Convention on Cinematographic Co-production (revised) could be envisaged.

Eurimages could be mandated by the COE to draft a proposal for a COE convention on series co-production in collaboration with interested member States.

3) Recommendation 3: Supporting innovation and risk-taking in series development

We have shown in this report the importance of script writing and the development phase which is much higher for series than it is in the cinema or local fictions. In this new paradigm, the producer is the main player. The producer is usually the stakeholder without high capital resources unless he/she is part of a large media group. We therefore recommend financially assisting independent producers specifically at this stage. The impact we expect is on three levels:

- There will be more international projects, also from low production capacity countries where national broadcasters are much below international series budget requirements.
- Independent producers will play an important role in this growing segment thus preserving European pluralism.
- Eurimages objectives of cultural diversity would be secured thanks to specific selection criteria.

The development support would focus on producers from member States willing to develop co-produced series projects. The Focus would be to support producers in their creative development but also for their marketing tools to pitch projects at the international level. For example, the

[108] Source: The production and circulation of TV fiction in the EU28, Report published by EAO (2018)

scheme could allocate to them 50-100k€ (depending on their project) with an objective to cover 25% to 50% of their development costs .
It could be complementary to other transnational development support funds such as Creative Europe-Media or the Nordic Film & TV Fund, by focusing on independent producers willing to produce riskier but also more artistically innovative series with international distribution potential. This way, Eurimages would fulfil its commitment to supporting cultural diversity in the series sector, which can be more business driven than film for reasons explained earlier.

4) Recommendation 4: Proposing terms of trade for series production in member States inspired by international best-practice and encourage collaborations

This report has underscored the importance of process, transparency and equity between the different players to develop successful series projects and economic growth for each. We therefore recommend that Eurimages contribute to the establishment of standardised terms of trade for series production in member States by promoting dialogue between professional representative organisations (such as EBU, ACT, FERA, etc.) inspired by international best practices.

This can be done via several simultaneous actions, to be discussed and shared with partners at all levels, from the supranational (European Commission) to the professional organisations.

We suggest also to develop further collaboration and expertise by sharing concrete editorial and business practices, training programmes, offer and demand on coproduction projects. Eurimages could be mandated to centralize these pieces of information and promote them via different online tools such as an online marketplace and an online marketing & data services platform.

5) Recommendation 5: Raising awareness on the impact of AI in the Audio-visual sector.

Eurimages could assist the Council of Europe to be fully informed about the role and players of AI in the audio-visual field and its associated impact on data protection, freedom of expression and cultural diversity in this context. The purpose of awareness raising is to build credibility and ensure Eurimages is seen to be proactive and diligent in protecting members' interests. Eurimages should make sure that the role of AI in the series sector is taken into account in the work of the Council of Europe.

So far, AI has been driven by commercial interests mainly to guide consumer decision-making and to target advertising. Only recently have we realized that some of the AI usage must be regulated. A governance system is definitely needed to improve the trustworthiness of AI.

We recommend that the Council of Europe consider the new creation of a governing body for a media AI certification. It will screen and use the existing codes of ethics and similar publications and base its scrutiny on generally accepted principles.

The concept of AI certification is essentially a stamp of approval. Certified companies using AI are regarded as trustworthy, which makes certification desired.A certification body would gather the best AI ethics codes and practices in use in the industry. They are made available to the media industry and stakeholders, even law makers who need backing for new media laws. It should be noted that establishing a body of certification to ensure fair use of AI in media is challenged by some algorithms being hidden for technical and business purposes. These algorithm codes are intellectual property, owned by someone, which means revealing them is highly unlikely. The certification standard must take this hidden AI-element into consideration.

5. Appendices

5.1. Appendix 1: Algorithms

Introduction to algorithms

Content recommendation, among a multitude of other things, is based on algorithms. Algorithms are updated on a regular basis as more data becomes available, which brings up the need to implement a machine learning model. These models will change significantly over time and they must be monitored to ensure that the intended goals are reached, and appropriate data changes are implemented.

Algorithm is a term often misused. The word algorithm comes from the name of al-Khwarismi, an early mathematician, and it is generally understood to mean the code which drives intelligent computer systems. For the purposes of this study, we will use the word algorithm to stand for a well-defined computational procedure. It takes numerical data (a value, or set of values) as input and produces some value, or set of values, as output. An **algorithm** is thus a sequence of computational steps that transform the input into an output.

Validating algorithms

If the core data changes (as it does over time), the algorithms will change as well. As the machine learning models are employed, there is an ongoing need to have control groups against which to monitor the models, re-train, and measure the impact on a regular basis.

All AI systems work around the clock and they need a continuous data flow, otherwise they will be working with obsolete data, resulting in a poor performance. AI models also need continuous development and testing, which brings up the need for human intelligence to participate in it.[109]

Algorithms that explain themselves

Other ways to make AI more trustworthy are coming from advances in AI itself, particularly in the area of explainable AI, or XAI. The XAI program from the Defence Advanced Research Projects Agency (DARPA), based in the US, is working on more interpretable algorithms. The goal is an AI solution that can explain its rationale, strengths, weaknesses and convey how it will act in the future. A growing number of enterprises will want to open up AI's black box and make AI's decisions more transparent, interpretable and provable. They'll also need to anticipate when algorithms will require auditing. In the future, we expect some governments to make some level of interpretability a regulatory requirement.[110]

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[109] https://www.pwc.com/us/en/services/consulting/library/artificial-intelligence-predictions-2019.html
[110] **https://www.pwc.com/us/en/services/consulting/library/artificial-intelligence-predictions-2019.html**

5.2. Appendix 2: AI and Advertising

AI in Advertising (Programmatic advertising)

Commercial VOD-platforms' raison d'être is to turn profit from the content production and distribution. Monetizing is done in various ways, the main sources of income being subscription sales and advertising revenue. This is mainly achieved by programmatic advertising, which relies heavily on AI. Advertising has shifted massively from wanting to reach as many viewers as possible to wanting to reach only the viewers that matter. The need to reach the target audiences on several different platforms and mediums has created programmatic advertising.

Online adverts are highly targetable, and the pricing is based on auctions. This "real time pricing" favours advertisers who also support platform loyalty by providing relevant advertisements. AI is used to deliver advertisements to the target audiences, but at the same time, estimating advertising costs and revenues has become complicated.

Programmatic advertising goes beyond individual platforms; the target audiences are reached on several different services simultaneously. User data is crucial in reaching the key audiences.
In many cases, collecting enough relevant user data can be challenging, for example, connected TV and cross-screen campaigns yield little user data for the advertisers to make better educated decisions on how to best reach and address a desired audience.

One example of a technology service provider is Amobee Inc., which offers an end-to-end programmatic buying and selling platform for premium video inventory. The data marketplace is designed to help advertisers overcome certain challenges by mapping individual devices and cookies to anonymized households for connected TV and cross-screen targeting. Amobee claims to give advertisers access to more than 60,000 always-on audience segments to create targeted campaigns for connected TV.[111]

Another example of an AI-powered analytics solution to gain intelligent automation is Guavus. It's AI-based service provides real-time customer experience analytics, predictive analysis to automate network troubleshooting, and marketing insights. The world's largest mobile data network operator, Chinese Jio, will use Guavus to create a new digital experience (for its more than 300 million subscribers) in a portfolio which includes on-demand films, animation series, and short films delivered in mobile format. A client's view is described as: "But they're not just fishing for us, they're giving us the ability to fish."[112]

[111] https://www.rapidtvnews.com/2019081657010/amobee-launches-connected-tv-multiscreen-advertising-data-marketplace.html?utm_campaign=cicely-tyson-joins-duvernay-project-for-own&utm_medium=email&utm_source=newsletter_2211,
[112] https://www.rapidtvnews.com/2019082257059/jio-joins-guavus-on-ai-powered-analytics.html

5.3. Appendix 3: Thumbnails on Netflix

Personalized and auto-generated thumbnails on Netflix

Thumbnails are the small, static promo images which appear in the programming guide. They are intended to illustrate the essence of the content and market the program, thereby maximizing the viewing. An image thumbnail can have a huge impact on the likelihood that someone will click on a video and watch. For example, two different artistic image thumbnails based on the user's past preference for romance would present sweet smiles, or for a thriller, serious and dramatic looks.

Using thousands of video frames from an existing movie or show as a starting point for thumbnail generation, Netflix annotates these images then ranks each image in an effort to identify which thumbnails have the highest likelihood of resulting in your click. These calculations are based on what others who are similar to you have clicked on. One finding could be that users who like certain actors or movie genres are more likely to click thumbnails with certain actors or image attributes.

For example, for the same *Good Will Hunting* movie, one user identified as a comedy fan would be shown a Robin Williams (comedian) thumbnail, whereas another user identified as a romantic comedy fan would be shown a kissing thumbnail featuring Matt Damon and Minnie Driver. While not perfect, Netflix's algorithms suggest that such level of personalization based on user profile characteristics increases probability of click thru rates.

The data pool to choose the page thumbnails is enormous. A one-hour episode of a series has over 86,000 static video frames. These video frames can each individually be assigned certain attributes that are later used to filter down to the best thumbnail candidates through a set of tools and algorithms called Aesthetic Visual Analysis. This is designed to find the best custom thumbnail image out of every static frame of the video.

Netflix Annotation— Netflix creates meta data for each frame including brightness, number of faces, skin tones, probability of nudity, level of motion blur, and symmetry.

Netflix Image Ranking — Netflix uses the meta data from above to pick out specific images that are highest in quality (good lighting, no motion blur, probably contains some face shot of major characters from a decent angle, don't contain unauthorized branded content, etc.) and are most clickable.

In order to know whom to target these custom-generated thumbnails at, Netflix tracks the following data:

- number of movies watched, number of minutes of each show watched
- % of completion for every video or series
- number of upvotes, which movies were favourite, etc.
- % of overall watch content that is attributable to any specific show (level of affinity that a user has to a specific show or related cast members)
- any seasonal or weekly trends related to a user's level of engagement[113]

[113] *Source:* www.becominghuman.ai.

5.4. Appendix 4: Youtube Filtering

YouTube and Offensive Content

YouTube, a Google-owned site, removed more than 8 million videos during the last quarter of 2017. Machine learning technology played a big role in deciding which videos to take down.

According to YouTube, machines (rather than humans) flagged more than 83% of the now-deleted videos for review. And more than three quarters of those videos were taken down before they got any views. The majority were spam or porn.

Machine learning—or AI, involves training algorithms on data so that they become able to spot patterns and take actions by themselves, without human intervention. In this case, YouTube uses the technology to automatically spot objectionable content.

Videos containing “violent extremism” are banned on YouTube. Only 8 % of such videos were flagged and removed in early 2017 before 10 views had taken place. After YouTube started using machine learning for flagging in the middle of the year, more than half of the videos removed for violent extremism have fewer than 10 views.

The use of AI on YouTube has implications for the freedom of expression. The use of machine learning does raise serious questions about content being taken down that should stay up—some depictions of violent extremism, for example, may be satire or just reportage. Several news organizations, such as Middle East Eye and Bellingcat, found out late last year that YouTube was taking down videos they had shared, depicting war crimes in Syria. Bellingcat, which played a key citizen-journalist role in investigating the downing of Malaysia Airlines Flight 17 over Ukraine in 2014, found its entire channel suspended.[114]

[114] Source: https://www.weforum.org/agenda/2018/04/ai-is-now-youtube-s-biggest-weapon-against-the-spread-of-offensive-videos/

5.5. Appendix 5: AI in Production

Script evaluation, predictive AI	Location scouting	Production budgeting	Production planning	Production hardware
AI can be used to predict success based on the following: celebrity status of the cast, genre, budget, length, and key plot events. AI can identify weak signals and trends on social media = predictive analysis tool Past box office performance is sometimes added into data.	Using data to help determine where best to shoot a movie set. This includes physical environment in reference to production scene requirements, such as day vs. night shoot, weather conditions, logistics, and so on. Even regional and national production incentives can be part of the data gathered. Scouting also involves possible shooting restrictions, such as using drones for aerial shoots and permits needed in production.	Includes above and below the line production costs, venue, flights and accommodation costs, set props, and all properties used in production. For example, if costume designer needs a certain dress brand, knowing the exact cost helps and AI can say where the dress is located in a warehouse. Budgeting can also include information on product placement.	Scheduling, locations, production logistics, actor and crew availability, etc. Automated metadata tagging, voice recognition, preparing for special effects to be added in post-production.	Cameras; robot-controlled cameras with face recognition, automated tracking, motion capture.

5.6. Appendix 6: mapping of public support for series

Country	National Fund Supporting series	Regional Fund(s) Network Supporting series	Script Writing Support	Development Support	Production Support	Distribution Support	Cash Rebate / Tax Refund	Strong International Ambition	Cultural and/or commercial Priority
Albania									Cultural
Armenia					X				Cultural
Austria	X	X			X				Both
Belgium	X	X	X	X	X		X		Both
Bosnia and Herzegovina									Culture
Bulgaria									Culture
Canada	X	X	X	X	X			X	Both
Croatia	X				X		X	X	Commercial
Cyprus	X						X		Commercial
Czech Republic	X	X	X		X		X	X	Both
Denmark		X	X	X	X				Both
Estonia	X	X			X		X		Both
Finland	X		X	X	X	X		X	Both
France	X	X	X	X	X		X	X	Both
Georgia	X				X		X		Cultural
Germany	X	X	X	X	X	X		X	Both
Greece	X						X		Commercial
Hungary	X						X		Commercial
Iceland	X			X	X		X		Both
Ireland	X			X	X				Both
Italy	X	X		X	X		X		Both
Latvia		X					X		Commercial
Lithuania	X						X		Commercial
Luxembourg	X				X				Cultural
Montenegro	X						X		Commercial
Netherlands	X						X		Commercial
North Macedonia	X				X				Cultural
Norway	X	X	X	X	X			X	Both
Poland	X	X			X		X	X	Both
Portugal	X			X	X		X		Both
Romania	X						X		Commercial
Russian Federation									Cultural
Serbia									Cultural
Slovak Republic	X			X	X		X		Both
Slovenia	X						X		Commercial
Spain	X	X		X	X				Both
Sweden	X	X		X	X		X	X	Both
Switzerland	X			X	X				Cultural
Turkey	X			X	X				Cultural

Mapping realised by directly consulting public institution websites of each member State and if necessary, contacting them.

5.7. Appendix 7: Definition, objectives, criteria and examples of public support:

Cash Rebate/ Tax relief
Description:

- Cash Rebate/Tax Relief/Tax Rebate are different names for the similar automatic support mechanisms
- Cash Rebate Mechanism is a refund of usually around 15-25% of eligible costs spent in the country by the production company in charge of an audio-visual project.
    - The eligible costs are defined in the guidelines of the Cash Rebate, as well as the percentage of the cash rebate, and it might come with a maximum refund
- The payment of the cash rebate can occur in two instalments, around 30% before the production start, based on spending estimation, and the rest comes once the production is complete.
- Otherwise, the payment occurs in one time, once the production is complete and all the eligible spending has been certified.
- Most cash rebate mechanisms work for both feature films and series production
- However, the cash rebate mechanism presents a few risks:
    - If all European countries are implementing it, then it won't be a differentiating factor anymore, and countries might be tempted to increase their rebate percentage to become more attractive than their neighbour.
    - The European commission is currently evaluating what the impact of this mechanism is on the market and might not renew its authorization if it considers these practices unfair competition or unhealthy measure

Criteria:
- The (co-)production company must be registered in the country providing the cash rebate and/or pay taxes in the country
- The percentage of cash rebate might vary based on:
    - cultural criteria/cultural test
        - example: does the movie promote local culture or language? Does it reaches required level at the cultural test?
    - the amount of spending?
        - example: do the local expenditures reach a minimum threshold?
    - the type of project:
        - example: some countries will favour high-end series projects with a higher rebate percentage.
    - Local Business activity criteria:
        - Example: How many local professionals (actors, technicians, etc.) have been employed for the production?

Objectives:

- Cash Rebates/Tax Relief are made to entice international co-production and facilitate local production by reducing the production costs in order to develop local audio-visual talents and activity.
- Promote local culture and landscape through audio-visual projects in order to attract tourism and increase cultural influence.

Examples:

- Croatian Cash Rebate:
  - =>http://filmingincroatia.hr/en/production_incentive/rebate_for_film_and_tv_production
  - Interesting extract:
    "cash rebate has been raised to 25%, with additional 5% for productions filming in regions with below average development."
- French Tax Rebate for International productions (TRIP):
  - => https://www.cnc.fr/web/en/tax-rebate
  - Interesting extract:
    "The tax rebate amounts to 30% of the following pre-tax expenses:
    - *Salaries and wages paid to French or EU writers, actors (up to the minimum set in collective bargaining agreements), direction and production staff (wages and incidentals) including the related social contributions.*
    - *Expenditures incurred to specialized companies for technical goods and services.*
    - *Transportation, travel and catering expenditures.*
    - *Accommodation expenditures.*
    - *Depreciation expenses."*

Script Writing Support

Description:

- Script Writing Phase is when the scenario of a film/show (including the technical breakdown and dialogues) is written down.
- Script Writing support programs may also include "idea development" or synopsis creation, which is the very early stage of writing
- Different kinds of script writing support exist:
  - Refundable rate-free loans provided to a writer or a team of writers
    - The average value of this type of loan is around 5-10k€
  - Script writing subsidies (based on a certain percentage of the cost) paid by a production company
    - For example, a production company selected an author synopsis and wants him/her to write the script in the 3-4 months to come. The production company can apply for Script Writing Support and receive (for example) 50% of the total estimated costs.

- Sometimes, the author will have to provide information on the advancement of the project, and the institution providing the support can provide help in kind (contact, network, information, training, workshops, etc.)
- This type of support is already there for feature films and has been recently opened to series projects. However, some countries (such as Canada, France, and the UK) developed specific Script Writing support specifically tailored for series needs.

Criteria:

- All these supports are selective, meaning a jury will evaluate applications based on certain aspects before providing the funding support. Sometimes there is a limited amount of money available per time period, or a limited number of projects that can be supported.
- Cultural Tests
- Language employed in the script
    - Most of the time, countries' public funds won't support a script that is not written in the local language.
- Original and Artistic aspects of the project (evaluated by the jury)
- Background of the author
    - Experienced author for High-End Project support?
    - For support systems designed to encourage diversity, does the author belong to a minority, are they a woman, young author, etc.?
- Does the author of the script have their rights protected?
    - Most of the time, when the funding is provided to a production company employing a script writer, the author must be allowed to keep the rights to what he/she wrote if the project doesn't go further into production phase.
- Respect for specific format conditions, such as the number of episodes per season, the length of each episode, etc.

Objectives:

- Help script writers create qualitative and original stories by providing them enough funds to focus exclusively on their work
- Allow production companies to take more risks by making them pay for only a part of the script writing phase
- Support projects corresponding to certain expectations: technical innovation, cultural aspects, expected market success, etc.

Examples:

- Story development grant of the FFF Bayern:
    - =>https://www.fff-bayern.de/en/funding/funding-schemes/story-development.html
    - Relevant extract:
      "The grant is awarded as a conditionally repayable, interest-free loan. It can amount to up to 70% of the calculated project development costs. The maximum rate for theatrical and television films is 100,000 euros. The maximum rate for a series is 150,000 euros. If production funding is granted for the project, the loan is

credited against this amount. Producers with a registered office, branch office, or place of business in Germany are eligible to apply."

- Film Fund Nord – Script Development grant:
  - => https://www.nfi.no/sok-tilskudd/dokumentar/manusutvikling-dok
  - Relevant extract*:*

    Purpose:

    "With the grant scheme, we will stimulate the development of manuscripts of high artistic and professional quality."

    .§ 2-4. Grants for the development of ideas and manuscripts

    "The grants will also contribute to a professional and strong environment for audio-visual production in Norway; to Norwegian audio-visual productions having a strong position among children and young people; and, will over time, contribute to achieving the goal of gender equality in the film industry."

Development Support

Description:

- The development phase includes all the steps preceding production (writing the script, creating storyboards, preparing a production schedule, casting, etc.).
- Development support grants are reserved for producers, their value depending on the ambition of the project, and are usually part of a wider program leading to Production Support.
- The producer may have to provide information on the advancement of the project, and the support might be paid in several instalments as milestones are reached
- Public institutions can provide help in kind (contact, network, information, training, workshops, etc.)
- It can be a repayable tax-free loan (depending on the success of the project) or a direct subsidy.
- The average value of this support is between 20-150k€
- This type of support was already in place for feature films and has been recently opened to series projects. However, some countries (such as Canada, France, and the UK) established development support specifically tailored for series needs (just like script writing support).

Criteria:

- Most of these supports are selective, meaning a jury will evaluate applications based on certain aspects before providing the funding support. Sometimes there is a limited amount of money available per time period, or a limited number of projects that can be supported every year or semester.
- Cultural Test
- Language employed in the series
- Originality and artistic aspects of the project

- Background of the author and producer
- Detailed and realistic planning
- Respect for specific format conditions, such as the number of episodes per season, the length of each episode, etc.
- The production company must show the proof of at least 50% of external financing (private investment, loan, etc.)

Objectives:

- Help projects that seem relevant on their artistic aspects and/or their potential market success
- Limit the financial risk taken on by the producer when they finance the project
- Increase the quality and ambition of the production
- Influence the way the project will be made, following the criteria necessary to acquire funding (language, cultural aspects, business, etc.)

Examples:

- Film Fund Nord - Development of drama series by market assessment:
    - =>https://www.nfi.no/sok-tilskudd/dramaserier/markedsvurdering
    - Relevant extract: *"This scheme will help Norwegian producers to carry out development work beyond what the viewing platforms alone can finance, and with a degree of predictability that gives the industry room to manoeuvre. This is to strengthen the artistic quality of the projects at an early and decisive stage, as high quality is a prerequisite for Norwegian series to compete with the offer of major international productions, both here at home and beyond Norway's borders."*
- Screen Ireland - Television Drama Development:
    - =>https://www.screenireland.ie/funding/development-loans/television-drama-development
    - Relevant extract*: "This funding enables Irish producers with a track record in TV Drama production to originate live action TV drama projects. This scheme aims to provide opportunities for Irish talent to create original drama content."*

Production Support:

Description:

- Production phase is the period when the shooting takes place, and images/animations are created. It's the phase with the highest costs.
- It's the most common type of support granted to series projects. Depending on the public fund's nature and objectives, the criteria and value of the grants can vary greatly.
- It can be a refundable tax-free loan (depending on the success of the project) or a direct subsidy.
- This type of support was already in place for feature films and has been recently opened to series projects. However, some countries (such as Canada, France, and the UK) developed Production support specifically tailored for series needs.

Criteria:

- Most of these supports are selective, meaning a jury will evaluate applications based on certain aspects before providing the funding support. Sometimes there is a limited amount of money available per time period, or a limited number of projects that can be supported every year or semester.
- Cultural Test
- Language employed in the series
- Originality and artistic aspects of the project
- Background of the author and producer
- The production company must have a partnership with one or two broadcasters
    - Most advanced Institutions require a TV broadcaster and a Digital Media Broadcaster (SVOD platform most of the time)
- Detailed and realistic planning and spending estimations
- Respect for specific format conditions, such as the number of episodes per season, the length of each episode, etc.
- Depending of the type of support (high end project or a more artistic project), the production might have to show the proof of at least 50% of external financing (private investment, loan, etc.)
- The production company will often have to spend a percentage of the granted support in the country/region providing the funding (usually at least 100-125%)

Objectives:

- Help projects which seem relevant on their artistic aspects and/or their potential market success
- Limit the financial risk taken on by investors when they finance the project
- Increase the quality and ambition of the production by allowing more spending
- Influence the way the project will be made, following the criteria necessary to acquire funding (language, cultural aspects, business, etc.)
- Cultural diversity-oriented funds (most provided at national level) will provide grants to projects of all sizes and ambition levels, after a selection based on cultural and artistic criteria
- More business-oriented funds (mostly regional ones) will provide grants to bigger projects. The objectives here are to attract productions and international co-productions in their area, stimulate the audio-visual production activity, and increase local professionals' skills

Examples:

- Film Scotland - Broadcast Content Fund
    - =>https://www.creativescotland.com/__data/assets/pdf_file/0010/55297/Broadcast-Content-Fund-FINAL-August-2018.pdf
    - Relevant extract:*"The Broadcast Content Fund aims to help the sustainable growth of Scotland's broadcast production sector, encouraging the development of new projects, the scaling up of already successful activities and the production of commissioned programmes.*

The Broadcast Content Fund is one of the key new measures being taken to ensure that by 2022/23:

a) Production spending in Scotland is doubled; and
b) Scottish production company growth is increased to boost the number (from two to six) reaching the UK top 50 with turnover greater than £10m."

- Canada Media Fund – Aboriginal Program
  - => https://www.cmf-fmc.ca/getattachment/f97a30a2-282b-4dc5-9008-cb58c995a079/attachment.aspx
  - Relevant extract:
    "Eligible Projects (see section 3.2) in the Aboriginal Program must be convergent, meaning: they must have an eligible Television Component (see section 3.2.TV) and accompanying multi-platform content that meets the criteria set out in section 3.2. Eligible Projects under this Program are administered under a selective process where the CMF[115] evaluates applications according to an Evaluation Grid (see section 2.4). Eligible Projects may receive funds subject to per-project Maximum Contribution amounts (see section 2.3) and other specified limitations."

Distribution Support:

Description:

- The distribution includes the series broadcasting, translation, marketing, securing of rights distribution, etc.
- It can be a refundable tax-free loan (depending on the success of the project) or a direct subsidy.
- Not a very common support for series among public funds, because series enter the production phase when they are already backed-up by a broadcaster in charge of the distribution
- This type of support is already in place for feature films and has been recently opened to series projects.

Criteria:

- All these supports are selective, meaning a jury will evaluate applications based on certain criteria before providing the funding support. Sometimes there is a limited amount of money available per time period, or a limited number of projects that can be supported every year or semester.
- This type of support usually comes into play as additional financing for projects already backed by a public fund (criteria will be the same as those for production support)
- The production or distribution company might have to show the proof of at least 50% of external financing (private investment, loan, etc.)

[115] Canada Media Fund: Main Federal Audio-visual Public fund in Canada

Objectives:

- Help a series project go international after a local success
- Increase the market success of the series by financing a wider marketing campaign

Examples:

- CNC[116](France) - Grant for the promotion and sale of audio-visual program abroad
  - => https://www.cnc.fr/professionnels/aides-et-financements/multi-sectoriel/exportation/aides-a-la-promotion-et-a-la-vente-a-letranger-des-programmes-audiovisuels_190726

Relevant Extract:
“Support for promotion and sales is managed according to two methods of granting aid: automatic and selective. Four types of eligible expenses are eligible for selective assistance: website, web marketing, style guides and special operations (promotional, part of a strategic plan to launch a work). In both cases, the aid is intended to cover part of the costs incurred by production or distribution companies (including broadcasters' subsidiaries) in promoting their audio-visual works abroad. The aid granted may not exceed 50% of the costs, excluding VAT, incurred by the company. For each beneficiary company, the total amount of aid granted by the CNC may not exceed €220,000 per year.”

[116] Centre National du Cinéma et de l'Image animée : National Center for Cinema and Moving Images. (France)

5.8. Appendix 8: Interviews list

Interviews	Contact	Activity	Country
About Premium Content	Emmanuelle Guilbart	Distributor	France UK
Altres Studio	David Troncoso	Producer	Spain
ARTE	Olivier Wotling	Broadcaster	France/Germany
C+	Francoise Guyonnet	Producer / Distributor	Europe
Cabinet Andrus Ansip/digital single market	Marie Frenay/Tauno Tohk/eric Peters	Public	Europe
Calt Production	Hervé Quennec	Producer	France
Canada Media Fund	André Ferreira	Public	Canada
Canal+	DominiqueJubin	Broadcaster	France
Cannes Séries	Myriam Rousta	Institution	France
CNC	Vincent Leclerq, Director	Public	France
CoE	DG Democracy /2 people	Institution	Europe
CoE	Yannick Meneceur	Institution	Europe
Copenhagen Fund	Thomas Gammeltof	Producer	Denmark
Creative Europe	Lucia Recalde, Emmanuek Joly	Public	Europe
CSA	Lucile Petit & staff	Institution	France
DR	Marianne Bennetzen	Broadcaster	Denmark
Drama Corp	Patrick Nebout	Producer	Sweden
EBU	Jean-Pierre Evain	Insitution	Switzerland
Endemol	Nicolas Coppermann	Producer / Distributor	France
Endemol	Lars Blongren	Producer / Distributor	Europe
EPC	Alexandra Lebret	Association	Europe
Estonian Film Cente	Edith Sepp	Public	Estonia
European Audiovisual Obeservatory	Gilles Fontaine	Public	Europe
Federation Ent. & Oligarchs productions	Alex Berger, Producer Bureau des Légendes	Producer	France
FERA	Pauline Durand Vialle	Association	Europe
Film Market Hub	Andrea Giannone	Service	Spain
Finnish Film Foundation	Lasse Saarinen	Public Fund	Finland
Fisher King	Matti Halonen	Producer	Finland

Interviews	Contact	Activity	Country
France Television	Nathalie Biancolli	Broadcaster	France
French Writers Guild	Denis Goulette	Association	France
FSE	David Kavanagh	Association	Europe
ICA	Nuno Foseca	Public Fund	Portugal
IPR.VC	Timo Argillander	VC	Finland
KPN	Tim Schutte	Platform	Netherlands
Lagardere Aito Media	Ilkka Hynninen	Producer	Finland
Lagardere Studio	Christophe Thoral	Producer	Europe
Lithuania Film Centre	Rolandas Kvietkauskas	Public	Lithuania
Lucky Red	Stefano Massensi	Producer	Italy
Midpoint	Katarina Tomkova	Service	Czech Republic
Nordic Film & TV Fond	Petri Kemppinen	Public	Norway
Orange Content	David Kessler	Platform	France
Pictanovo	Marianne BEAREZ	Public	France
Polish Film Institute	Irena Strzałkowska	Public	Poland
RAI	Eleonora Andreatta	Broadcaster	Italy
Romania Film Centre	Alex Traila	Public	Romania
RTBF	Sylvie Coquart	Broadcaster	Belgium
RTVE	Mar Diaz	Broadcaster	Spain
TV2	Katrine Vogelsand	Broadcaster	Denmark
TVN	Oriana Kujawska	Broadcaster	Poland
UFA Fiction	Marc Lepetit	Producer	Germany
Ukbarfilmes	Pandora Da Cunha Telles	Producer	Portugal
YLE	Jarno Koponen, Jaakko lempinen	Broadcaster	Finland
ZDF	Simone Emmelius	Broadcaster	Germany

5.9. Appendix 9: Glossary

Terms	Explanations
AI - Artificial Intelligence	Simulation of human intelligence processes by machines, especially computer systems. They include learning, reasoning and self-correction. More details: https://en.wikipedia.org/wiki/Artificial_intelligence
AVOD	Subcategory of VOD: advertising, or ad based, video on demand. It is free to consumers, but they will be subject to advertising.
AVMSD	The Audio-visual Media Services Directive governs EU-wide coordination of national legislation on all audio-visual media, both traditional TV broadcasts and on-demand services
CMF	Canada Media Fund: Main Federal Audio-visual Public fund in Canada
CNC	Centre National du Cinéma et de l'Image animée : National Center for Cinema and Moving Images. (France)
Creative Europe	EU programme supporting European cultural and creative sectors and audio-visual works. The MEDIA subprogramme support specifically audio-visual works
Machine Learning	Application of AI that provides systems the ability to automatically learn and improve from experience without being explicitly programmed
Metadata	A set of data that describes and gives information about other data. More details at: https://en.wikipedia.org/wiki/Metadata
Non-linear media	Contrary to traditional linear media such as Radio or TV, non-linear media is a form of media that can be interacted with by the consumer, for example by selecting shows to watch through a video on demand type service, playing a video game, clicking to pause, or watching at any time. More details at: https://en.wikipedia.org/wiki/Non-linear_media
OTT	Over-The-Top: a term used to refer to content providers that distribute streaming media as a standalone product directly to viewers over the Internet, bypassing telecommunications, multichannel television, and broadcast television platforms that traditionally act as a controller or distributor of such content (Examples of OTT: Netflix, Amazon Video, Hulu). More details at: https://en.wikipedia.org/wiki/Over-the-top_media_services
Recommendation Algorithms/Systems	System that seeks to predict the "rating" or "preference" a user would give to an item. They are primarily used in commercial applications. The user will first be shown items that the system considers relevant for the user (and in accordance with the service provider strategy). More details at: https://en.wikipedia.org/wiki/Recommender_system
Script	Scenario of a film/show, including the technical breakdown and dialogues
SVOD	Subscription Video on Demand. The consumer can watch as much content as desired at any time from the catalogue of the content providers, for a flat rate per month

VOD	Video on Demand. More details at: https://en.wikipedia.org/wiki/Video_on_demand
PBS	Public Broadcasting Services

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