

Implementation of the analog switch off towards digital broadcast Jawa Pos

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ABSTRACT

Background: It is a common fact that the rapid development of technology influenced many aspects of the world, including mass communication. Television, as the most popular and familiar broadcast media in Indonesia, has experienced several changes due to the presence of advanced technology. One of the significant transformations is the transition from analog to digital broadcasting systems. The new era of digital broadcasting could improve the performance and quality of digital television itself.

Purpose: This recent study aimed to obtain an overview of the realization carried out by one of the local private broadcasting institutions in Banten, JPM TV. **Methods:** Using a qualitative case study along with in-depth interviews and observation as data collection techniques, this study examines JPM TV from various aspects in realizing digital TV broadcasts in Banten Province. **Results:** The study's findings highlighted that JPM TV strives to realize digital broadcasting by gradually replacing equipment with tools that support digital broadcasting and elements of human resources trained and prepared with special internal and external training. JPM TV also collaborated with LPPM (Mix Broadcasting Organizing Agency), namely Mix Metro TV. The ongoing process is coordinated with the government. Obstacles faced during the migration process are the socioeconomic conditions of the people who have not been able to support the digital broadcasting process, which is characterized by the difficulty of obtaining digital broadcasting at relatively low prices; besides that, it is also necessary to increase the capacity of Human Resources (HR) so that television shows are more comfortable to watch. **Implications:** One of the implications is that the government must innovate to provide incentives that can stimulate the readiness of the digital broadcasting ecosystem.

Keywords: Digital Broadcast; Digital TV; Analog Switch Off; JPM TV; Human Resources

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INTRODUCTION

Radio, television, and film broadcasts are examples of mass communication media, as well as newspapers and magazines, both of which are examples of print media (Cangara, 2020). According to Abdullah and Puspitasari (2018), “television is an audiovisual-based traditional media that has become part of the daily life of Indonesian people.” Abdullah & Puspitasari also said, “because of its audiovisual nature, it can present music, films, soap operas, variety shows, reality shows, and other programs by involving celebrities who become idols to the audience.”

Most people consider television as a basic need. Massive access to information broadcast on television has always been a treat for its viewers. Almost everyone, including children, adolescents, adults, and the elderly, watches television to quench their thirst for knowledge (Haqu & Erysyad, 2020).

Today, it is undeniable that the lives of Indonesian people are influenced by the presence of technology, one of which is television (Agussetianingsih & Kasim, 2021). From a social perspective, watching television is one way to spend free time, entertain yourself, get information, and exercise social control (Herawati, 2015). In addition, seen from other perspectives, such as politics, television is used as a forum for the holders of the political order to accommodate criticism, suggestions, and support (Valerisha, 2017). Meanwhile, from the economic side, television has a good impact on

the industry through advertisements or other programs that are broadcast directly or indirectly (Widyatama & Polereczki, 2021). Looking at these things, it can be said that television has a fairly important role in the development of the times; television has its charm so that it can progressively affect society’s social, economic, and political conditions, especially in Indonesia (Agussetianingsih & Kasim, 2021).

Currently, Indonesian television is undergoing a transformation from the era of analog to digital broadcasting technology. The broadcasting technology for digital television is substantially different from analog television. The use of digital television will cause media convergence to become more intense and sharp. In addition to influencing technology, this convergence will majorly impact the broadcasting industry’s social, political, and economic connections (Prabowo, 2012) Multiplexing Broadcasting Agencies (LP3M).

Advances in television broadcasting technology have the potential to improve performance and enable various activities to be completed more quickly, precisely, accurately, and efficiently, which in turn can increase productivity (Agussetianingsih & Kasim, 2021). Advances in television broadcasting technology have resulted in various technology-based activities, such as Fiber optics replacing Satellite News Gathering (SNG) for live broadcasts. The next step is to improve the quality of digital television broadcasts that offer various interactive communication functions

and services (Rozgonyi, 2019).

Since 1998, the United Kingdom and the United States have led the way in digital broadcasting, followed by several other developed countries. The distribution is most evenly distributed in European and East Asian countries, which are experiencing the most rapid development of digital broadcasting technology due to the commitment of the government (policy and investment) and industry (broadcasting, telecommunications, and hardware) to utilize digital broadcasting technology (Firdaus, 2020).

On August 13, 2008, Vice President Jusuf Kalla inaugurated the start of the digital broadcasting era in Indonesia at the soft launching of the field trial at the TVRI Auditorium, ushering in a new era in the history of television broadcasting in Indonesia (Wahyuni, 2014). Several entrepreneurs and television broadcasting stations tested digital television broadcasts in 2006. PT. Super Save Elektronik conducted a digital broadcast test on channel 27 UHF with DMB-T format (China) in April-May 2006, while TVRI/RCTI conducted a digital broadcast test on channel 34 UHF with DVB-T format in July-October 2006. (content broadcast). TPI/GLOBAL, TVRI 1, TVRI 2, RCTI, TELKOMVISION). The Indonesian Digital Television Consortium (KTDI) started broadcasting on UHF 46 channel in October 2008, with six television channels (Gultom, 2018).

The saturated analog television market is

one of the promoters of the development of digital television in Indonesia. The transition from analog to digital broadcasting systems has become a global technological (Mubarok & Adnjani, 2018). Since the mid-1990s, when the application of digital technology to television broadcasting systems began in Britain and the United States, other countries have competed to follow the development of digital technology by implementing simulcast (simultaneous broadcasting between analog and digital). There are also countries, such as the Philippines, that are changing digital broadcasting standards, which are being tested after finding some things that are not suitable due to the contours of the country's territory (ISDB-T becomes DVB-T) (Fachrudin, 2016) which is in competition level target the number of audience. It leads to the competition of dynamic, efficient and effective product. The era of digitalization television in existing and mobile television has been implemented soon after being officially launched by President Republic of Indonesia Susilo Bambang Yudhoyono on May 20th 2009. The migration process from analog to digital should be made to avoid the negative aspect of television. Digital Video Broadcasting-Terrestrial (DVB-T).

The era of world digital broadcasting produces television broadcasting services with multiple functions from each frequency channel, served by one television industry. NHK, for example, has one frequency channel (broadband), three digital television

broadcasting channels, and one High Definition television broadcasting channel (HDTV). Other private television stations, such as Fuji TV and Asahi TV, have one channel frequency (broadband) developed with many channels and interactive programs/data. Digital television broadcasting in Japan can transmit image data to cell phones, mobile televisions, computers, and other devices. The Early Warning System service, among others, provides information on natural disasters, evacuation routes, and the condition of victims.

Technically, analog television radio frequency spectrum bands can be used for digital television broadcasting. The ratio of the bandwidth of analog technology to digital technology is 1:6. So, if analog technology requires 8 MHz bandwidth for one transmission channel, digital technology with the same bandwidth (via multiplexing) can transmit as many as 6 to 8 channels for different programs at the same time (Tjahyono, 2006).

In this digital television broadcast, one analog slot can now be shared by 6 to 8 television channels simultaneously. There are currently three digital television broadcasting system standards in use worldwide: digital television (DTV) in the United States, digital terrestrial video broadcasting (DVB-T) in Europe, and integrated terrestrial digital broadcasting service (ISDB-T) in Japan. All digital system transmission system standards are based on OFDM coding system with MPEG-2 voice code for ISDB-T and DTV and MPEG-1 for DVB-T

(Nuryanto, 2014).

Digital TV uses sound and image equipment similar to video cameras (Nuryanto, 2014). Digital television is supported by receiver technology that can adapt to the surrounding environment. Digital signals can be picked up from multiple transmitters on the same frequency network, extending digital TV coverage. Thanks to this digital technology, television stations throughout Indonesia, including those managed by Community Broadcasting Institutions, Private Broadcasting Institutions, and Public Broadcasting Institutions, have switched to digital broadcasting systems, later known as Analog Switch Off/ASO (Hastjarjo, 2007).

ASO's deadline for discontinuing analog broadcasts was one of the most important factors in the decision to switch from an analog to a digital system. This decision was made to encourage technological progress and consider future benefits. All countries must transmit digitally by June 17, 2015, according to the deadline set by the International Telecommunication Union (ITU) or international telecommunications authorities (Ismail et al., 2019). The Indonesian government itself has established ASO for all television broadcasting institutions in Indonesia, with the hope of improving broadcast quality that is more stable and resistant to interference (interference, damaged sound and or image, ghosting, etc.), which in digital television broadcasts can only be obtained possibly "good picture" or "no picture at all (Oktariza & Kusrahardjo, 2015).

The process of implementing the transfer of television system technology in Indonesia is based on the Regulation of the Minister of Communication and Information (Kominfo) RI, Number 11 of 2021, Article 63, paragraph 2 states the ASO schedule is divided into three stages, namely Phase I no later than April 30, 2022, Phase II no later than August 25, 2022, and Phase III no later than November 2, 2022. The regulation refers to Government Regulation Number 46 of 2021 concerning Post, Telecommunications and Broadcasting (PP Postelsiar), in Article 72 paragraph 8, which is stated in Law No. 11 of 2020 concerning Job Creation. In order to assist in the implementation of technology transfer, the government conducts socialization. It prepares various facilities to increase public awareness and readiness for the coming era of Digital TV broadcasting (Sari, 2015).

Shin & Song (2012) stated, "although the growth of digital television shows a transition process that must be carefully planned, digital technology in the broadcasting business provides great opportunities for multidimensional progress. Broadcasting digitalization must be understood as a social phenomenon affecting the public, policies, services, and industry for the transition process to be successful. This understanding can be obtained from the transition process in developed countries in Europe and Asia that have successfully implemented digital television."

Of course, digital broadcasting also

applies to local broadcast TV managed by private broadcasting institutions, including the television station in Banten Province, JPM TV. The holding company of the Jawa Pos TV Group is still broadcasting as a private TV for the pride of the people of Banten. JPM TV Studio is located on Jalan Mayabon, No. 88 Cipocok Jaya, Serang City, Banten Province. JPM TV debuted in February 2010 with the nickname Air Radar TV Banten as a Banten regional television station that focuses on the interests and desires of Banten Province viewers. However, as the parent of the Jawa Pos Group Television Network, Radar TV Banten changed its broadcast name to Jawapostv on August 17, 2017, and then returned to JPM TV on April 1, 2021, with the composition of local content Banten 50%, 30% national content, and 20% archipelago content (a content submission from various network area members).

JPM TV is currently improving to implement the ASO program launched by the government. Following Ministerial Regulation 11 of 2021, JPM TV, which has received a license to organize digital broadcasting in the Banten 1 and 2 regions (covering the Pandeglang Regency, Serang City, and Regency, and Cilegon City), will enter ASO stage 1, which is no later than April 30, 2022. Various preparations must be carried out by JPM TV, starting from licensing administration matters, increasing human resource capacity, structuring management to broadcasting technology so that they can migrate from analog TV to digital

TV with DVB-T2 technology, digital video broadcasting - terrestrial second generation following government standards which refers to the standards set by the International Telecommunication Union (ITU).

Based on these things, the researchers launched a case study on the Realization of Local Television in Banten, Implementing Analog Switch off (ASO) Towards Digital Broadcasts on JPM TV. This research was conducted in order to obtain an overview of the realization carried out by JPM TV, and then after the description of the realization process is expected to provide recommendations regarding the process of changing from analog to digital system, both for JPM TV itself and other TV stations that are in the process of changing from analog to digital.

RESEARCH METHOD

This research method uses a case study approach; the constructivist paradigm is studied deeply (in-depth study) to its roots. Case studies concentrate on one particular unit, an individual, group, organization, or community (Prihatsanti et al., 2018). Researchers believe case studies can reveal information that other methods, such as surveys, cannot. Case studies generate knowledge through special understanding (Alwasilah, 2022).

This research process also used in-depth interviews and direct observation (observation) at JPM TV. Observation today has developed into a type of scientific method. The emergence

of observation as a scientific method certainly adds to the diversity of available data collection methods to explore global information (Hasanah, 2017). The sources selected in this study were News Production Executives, Marketing Managers, and the Director of JPM TV. The results of in-depth interviews and observations conducted during research at JPM TV were used to compile qualitative data. Qualitative data analysis was carried out by constructing the results of in-depth interviews and observations during research on JPM TV. Qualitative data analysis can be in the form of checking the validity of data based on certain criteria, namely based on trustworthiness (credibility), transferability, dependability, and certainty (findings come from data, not highlighting the researcher's knowledge in conceptualization) (Rijali, 2019).

RESULTS AND DISCUSSION

In Indonesia, television is one form of traditional media that still survives the onslaught of new media. According to a Nielsen survey, television remains the most frequently accessed medium. The increase in the number of national and local television stations from year to year, followed by an increase in the quality and quantity of broadcasts, shows the existence of television broadcasting media (Haqu & Ersyad, 2020).

One of the quality improvements made by broadcasters is the transition from analog broadcasting to digital broadcasting systems.

The picture and color quality produced by digital television is far superior to analog television (Ashrianto, 2015).

DTV, or digital television, broadcasts picture, sound, and data signals to television sets using digital modulation and compression systems. Digital television is a tool used to capture digital TV broadcasts and the evolution from analog to digital broadcast systems (Nuryanto, 2014). The main objective of designing and implementing a digital TV broadcasting system is to improve picture quality. In this regard, two distinct aspects require compromise. On the one hand, digital TV technology allows the transmission of images with high accuracy and resolution but also requires channel availability at very high speeds, reaching tens of megabits per second. Digital TV systems, on the other hand, are expected to produce clear and stable image reception without shadows or double images even when the receiver is moving at high speed (Nuryanto, 2014).

Currently, Indonesian television is transitioning towards the era of free-to-air/FTA digital terrestrial television broadcasting (free digital tv broadcasts). Terrestrial digital television broadcasts are free broadcasts transmitted terrestrially using digital technology and received by receiving devices. The transfer of technology in the broadcasting sector refers to a government decision represented by the Ministry of Communication and Information, which states that Indonesia will transition from analog to digital broadcasting technology

(hereinafter abbreviated as broadcasting digitization) with a gradual transition process using broadcast technology standards, Digital Video Broadcasting-Terrestrial Second Generation (DVB-T2).

In Indonesia, transitioning from analog to digital television broadcasts is ongoing and must be completed. The process of implementing the transfer of television system technology in Indonesia is based on the Regulation of the Minister of Communication and Information (Kominfo) RI, Number 11 of 2021, Article 63, paragraph 2 states the ASO schedule is divided into three stages, namely Phase I no later than April 30, 2022, Phase II no later than August 25, 2022, and Phase III no later than November 2, 2022. The regulation refers to Government Regulation Number 46 of 2021 concerning Post, Telecommunications and Broadcasting (PP Postelsiar), in Article 72 paragraph 8, which is stated in Law No. 11 of 2020 concerning Job Creation. In order to assist in the implementation of technology transfer, the government conducts socialization. It prepares various facilities to increase public awareness and readiness for the coming era of Digital TV broadcasting (Sari, 2015).

The government establishes a broadcasting digitization policy by considering the future benefits of applying digital technology to the broadcasting sector. Technically, digital broadcasting technology allows the arrangement of the radio frequency spectrum to increase the capacity of the transmission network to allow

the addition of television channels (SD/HD). All national and local broadcasting institutions carry out the transition from analog to digital television. One of the broadcasting institutions that transitioned from analog television to digital form is JPM TV, a local television owned by the people of Banten.

JPM TV, located at Jalan Mayabon No. 88 Cipocok Jaya, Serang City, Banten Province. JPM TV made its debut in February 2010, called Air Radar TV Banten, as a Banten regional television station that focuses on the interests and desires of Banten Province viewers. However, as the parent of the Jawa Pos Group Television Network, Radar TV Banten changed its broadcast name to Jawapos TV on August 17, 2017, and then returned to JPM TV on April 1, 2021, with the composition of local content Banten 50%, 30% national content, and 20% archipelago content (a content submission from various network area members).

The slogan carried by this television station is “Melihat Indonesia Sesungguhnya,” relying on local news compiled by all television station members of the Jawa Pos TV network. Featured programs from JPM TV, namely Nusantara Kini, a news program relayed simultaneously by Jawa Pos Group members throughout Indonesia.

JPM TV (Figure 1) is a private broadcasting institution (LPS) with a legal entity of PT. Wahana Televisi Banten has taken various steps to prepare for the transition from analog TV broadcasts to digital TV broadcasts, following the stages and pathways provided by the



Source: twitter.com/jpmtelvisi

Figure 1 JPM TV's logo

government. JPMTV has consistently completed these stages, starting from adjusting the licensing, especially the broadcasting operation permit (IPP) from analog TV to digital TV, preparing for a radio station warehouse permit (ISR), signing a cooperation agreement (PKS) with the Multiplexing Broadcasting Institution (LPPM) in preparing technology that supports DVB-T2-based digital broadcasting, capacity building for human resources, management and socialization to the public.

Since the end of 2021, JPM TV has been simulcasting (broadcasting digitally without interrupting analog broadcasts) on 60 UHF (analog) and 32 UHF (digital) channels through LPPM Metro TV in the Greater Jakarta Area. In addition, as a master station, JPM TV is supported by 52 regional stations (with 8 of them being digital stations), which are claimed to be able to reach the Indonesian public. It makes the JPM network one of the television networks with the widest coverage among any

television network in Indonesia.

JPM TV, the parent company of the Jawa Pos Group Television Network, continues to broadcast for 18 hours daily by presenting news and entertainment content. JPM TV is also available for streaming on Android-based phones through the JPM TV application. JPM Stream is a model for future television platforms, with the most channels (30) in Indonesia. The JPM Stream application makes it easier for the public to watch local Jawa Pos television broadcasts spread across 22 provinces in Indonesia (Saifudin & Rosilawati, 2020). It is a form of differentiation, innovation, and a solution related to improving Indonesian broadcasting, which is achieved by providing a variety of information easily through a mobile device application under the internet network. JPM Stream's new media business product also reflects the value of creative work that contains novelty and is full of creativity in responding to the challenges of the times.

The steps that have been and are being carried out by JPM TV in preparing to welcome ASO on April 30, 2022, can be described as follows; Licensing Adjustment. Based on Law no. 32 of 2002 concerning broadcasting which is enhanced based on Law no. 11 of 2020 concerning Job Creation, Government Regulation no. 46 of 2021 concerning Post, Telecommunications and Broadcasting (PP Postelsiar), Regulation of the Minister of Communication and Information of the Republic of Indonesia No. 11 of 2021, the revision of the Minister of Communication

and Information of the Republic of Indonesia Regulation No. 6 of 2021, all television private broadcasting institutions (LPS) are required to make licensing adjustments, from analog broadcasting operations licenses (IPPs) to digital IPPs. Licensing adjustments are made online by creating a SIMP3 or e-broadcasting account, kominfo.go.id, and an SDPPI Spectra web application account. These accounts are accounts that the institutional television LPS must own in completing licensing adjustments. In addition, the television LPS must immediately enter into a cooperation agreement (PKS) with the multiplexing provider broadcaster (LPPM) as a place in Mux where the LPS will broadcast. JPM TV has obtained permission for Simulcast Digital Broadcast Service Area Coverage Adjustment Number: B-1055/M.KOMINFO/PI.03.02/12/2019 and B-116/M.KOMINFO/PI.03.02/02/2020 with service areas of Jakarta, Bogor, Tangerang, Bekasi and Pandeglang Regency, Serang Regency/City, and Cilegon City. To broadcast this simulcast, JPM TV collaborated with LPPM Metro TV and ANTV. Currently, JPM TV has broadcast simulcasts (broadcasting digitally without stopping analog broadcasts) on 60 UHF (analog) and 32 UHF (digital) channels.

The next step, which JPM TV is currently carrying out, is to write or provide a letter to the Minister of Communication and Information of the Republic of Indonesia to state his readiness to migrate from analog television to digital and return (the term Kominfo, warehousing) radio

station permits (ISR) and returning the analog broadcasting operator license (IPP) which was later replaced with a digital IPP. The next most important step is technology transfer. Within the scope of broadcasters, technology transfer (analog to digital) is relatively easy. Almost all private television broadcasting institutions' (LPS) devices have digital technology and high-definition (HD) quality.

There is no difficulty for television stations to produce shows that can be transmitted via digital terrestrial transmitters. Suppose private television stations still use analog technology. In that case, there are only transmitters or transmitters, even though almost all transmitters or transmitters belonging to LPS television are already digital technology based on DVB-T, such as that of JPM TV. In contrast, the technology currently being used by the government is DVB. -T2. For this reason, before Law no. 11 of 2020 concerning Job Creation was ratified, associations of television broadcasting institutions and most private television broadcasters rejected the government's version of digitization due to 2 (two) things, namely DVB-T2 technology and the multiplexing system.

Meanwhile, the association of television broadcasters and most private television broadcasters want DVB-T and singleplex. The government's reason is that digital terrestrial television (DTV) in digital television technology will use a greater radio frequency spectrum band because digital technology has a ratio of

1:6. In contrast, analog technology requires a bandwidth of 8 MHz for only one channel, transmitted for six or even eight transmission channels of television stations at once using digital television technology with the same bandwidth (using multiplexing techniques). As a result, the government will receive more frequencies after analog terrestrial broadcasters return them.

If seeing these conditions, the problem is not the technology used by broadcasting institutions but the television equipment owned by the public as recipients of television broadcast programs. Most television sets, especially in Banten Province, still use analog technology. Even though some have changed to digital, they are still based on DVB-T, so they cannot enjoy digital TV broadcasts based on DVB-T2.

There are only two ways that people can watch broadcasts with digital TV technology. The two ways are the most efficient, namely: buying a new television with DVB-T2 technology which is, of course, quite expensive, or buying a set-top box (STB) or a receiver or decoder or converter that can convert digital so that broadcasts can be received on television sets analog.

This strategy of using STB is used by almost all countries, such as the United States; they offer discounts to citizens who buy STB. While in Japan and the UK, they give it away for free to low-income people, people with disabilities, and people living in remote areas (ITU, 2020). Indonesia took a similar step by providing set-

up boxes/STBs for low-income households. This STB subsidy is a concentrated effort by the government to improve public readiness to receive digital broadcasts. This government subsidy is in the form of procurement of STB in the market at a reasonable price ranging from Rp. 150,000 - Rp. 200,000.

However, considering the number of poor households in Indonesia, only some people can afford STB, especially during the post-Covid-19 pandemic, so buying a new TV set or STB is not a top priority. The distribution of STB promised by the government and the broadcasting institutions providing multiplexing is still far from what television broadcasters expect. People who desire to buy STB still need clarification about getting it because it is still very rare in the general market (not e-commerce), especially in the central and southern parts of Banten Province. It is certainly a hot topic of debate among stakeholders.

As service recipients, the general public must understand the transition to digital television. Socialization to the public must be carried out widely by utilizing all platforms to massively promote digital television with a personal approach (ITU, 2020). The government continues to socialize through various digital platforms, as well as the participation of the television industry, promotional tools, and academics in promotions to increase public understanding of the transition to digital television (Republik Indonesia, n.d.). However, public readiness is still low; most people need

to understand digital television; therefore, the government must innovate to provide incentives that can stimulate the readiness of the digital broadcasting ecosystem.

Coordination and communication are very important within the scope of government so that policies can be designed to meet targets and implemented with the right strategy. During the transition period, the government must develop a television industry strategy that leads to an informative broadcasting society. Given Indonesia's high socioeconomic inequality, government support in the form of incentives to provide additional equipment or set-up boxes, or innovative incentives, such as utilizing domestic industry support to produce broadcasting equipment, can boost national economic growth. A more targeted individual outreach strategy is expected to increase public readiness. Promoting inclusive cooperation between government and non-government institutions and the relationship between the central government and local governments must be optimized to achieve the target.

Apart from the above, an increase in Human Resources (HR) capacity is also needed, as the spirit of the transition from analog television technology to digital television. This increase in human resource capacity is to make television shows more comfortable to watch, with quality television shows. With digital television, competition between television stations is no longer about the quality of the picture viewers receives but about the quality and type of

content that television stations provide. Is the content presented of high quality and relevant to the audience segment? The ability of professional broadcasters implements planning and structuring in every television program production to produce quality programs at reasonable prices because the production process is precise or measurable (Fachrudin, 2016).

In this regard, JPM TV is gradually and continuously conducting various training for its human resources to present interesting content for its viewers, especially residents of Banten Province, to remain in the hearts of viewers. This training was conducted internally at JPM TV and externally through joint training with the Jawa Pos Group television station. Training materials cover program management, production, editing, social media, and market analysis. Furthermore, JPM TV provides flexibility in arranging work schedules so as not to interfere with each other for employees with the interest and ability to continue their education to the master's level.

Changes in the broadcasting system when analog broadcasting uses a transmitter or transmitter owned by JPM TV with available resources to broadcast digitally using a transmitter/transmitter owned by a multiplexing provider, the results and flow will certainly be different. According to the management model, there are three multiplexing techniques/models used in digital broadcasting in various countries in the world: (1) single operator

multiplexing model, where there is only one digital broadcasting multiplexing service provider, in this case, the government through LPP then LPS hires to carry out broadcasting activities; (2) operator multiplexing model, in which each existing LPS becomes its frequency manager and performs multiplexing for its LPS internal needs; (3) the hybrid multiplexing operator model, namely LPP and LPS which have qualified technological capabilities, is appointed as the multiplexing operator. Each multiplexing operator manages the frequency and broadcasting infrastructure to be used by the LPP or the multiplexing operator LPS and other LPS by renting frequency and infrastructure canals (Maulana & Hasfi, 2019).

Human resources from the transmitter are still used as company assets. However, their function is more aligned with the company's needs, namely, all work until broadcasts are transmitted when digital broadcasting becomes only up to the delivery of content according to the broadcast pattern from the master control room (MCR). The quality of the picture and sound emitted by the transmitter and will be received by the viewer is the responsibility of the multiplexing provider. Besides having human resources that are no longer used (HR at the transmitter's location), the broadcasting flow has also changed. For this reason, the broadcasting management of JPM TV has been reorganized in that section according to needs. The human resources that used to be in the transmitter are still used as company assets, but

their functions align with JPM TV's needs.

The first phase of Analog Switch Off/ASO socialization in Banten Province, with Banten 1 service areas (Cilegon City and Serang Regency/City) and Banten 2 service areas (Pandeglang Regency), was carried out on April 30, 2022. For JPM TV, internal preparations It is already done. But they are unclear with the audience or the community whether they are ready to migrate or not. In addition, the Jabodetabek service area, directly adjacent to the Banten 1, 2, and 3 service areas, will only be ASO on stage 3 or November 2, 2022. Almost all analog television broadcasts broadcast from Jabodetabek are caught in Banten. On the other hand, socialization carried out by the government, multiplexing providers, and broadcasting institutions is still constrained by space where socialization can only be done online (online) and on television shows.

This change is inevitable, and so is the broadcasting business world. With the enactment of the copyright law of this work, everything in it, including those related to broadcasting, will automatically participate, whether you like it or not. For broadcasting industry players, the transition to digital TV is analogous to leaving your own comfortable and complete home and renting someone else's house, which is not cheap. Not to mention that digital broadcasting technology requires special skills from its users to operate these devices, including repairing the damage. Expertise in this field is closely related to human resources, which must follow and synergize with digitalization.

In response to these conditions, JPM TV has taken several steps so that the people of Banten who are in the JPM TV service area want to watch digital broadcasts by conducting several webinars involving local governments, various community groups, students, and students. In this activity, a quiz was held with STB prizes. However, it is not considered very effective. So they also did some small-scale socialization through field crew activities. The private broadcaster JPM TV hopes the government and multiplexing providers will be more aggressive in socializing analog to digital TV migration. Local governments are also asked to play an active role because television viewing is not solely a broadcasting industry but is part of the public's right to obtain information.

CONCLUSION

The JPM TV Private Broadcasting Institution in Banten is ready to migrate to digital, in collaboration with the LPPM (Mux Organizing Broadcasting Agency), namely Mux Metro TV. The problem is that the digitalization process in Jabodetabek will only be ASO on August 25, 2022. As of April 30, 2022, Banten has to broadcast digitally, while Jabodetabek is still simulcast (analog and digital). Another problem is that some people think that free Set Top Boxes (STB) will be distributed, whereas free STB will only be given to poor people included in (DTKS) sent by post. Lack of socialization in the community, especially in Banten, centralized television

broadcasting socialization only by the Ministry of Communication and Information. Provincial, Regency/City Government, KPI, and KPID do not have budget space for Digital TV socialization. However, since April 9, 2022, JPM TV has stopped broadcasting analogs. JPM TV is changing the IPP (broadcasting license) from analog to digital. To expand information regarding this transition, JPM TV has taken several steps so that the people of Banten who are in the JPM TV service area want to watch digital broadcasts by conducting several webinars involving local governments, various community groups, students, and College students. The recommendation from this is to conduct this research based on the results obtained, especially in terms of human resource management, to conduct in-depth research related to human resource management due to changes from analog and digital systems.

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REFERENCES

- Abdullah, A., & Puspitasari, L. (2018). Media televisi di Era Internet. *ProTVF*, 2(1), 101-110.
- Agussetianingsih, B., & Kasim, A. (2021). Peran Desain Kebijakan: Digitalisasi Penyiaran Televisi di Indonesia. *Kolaborasi: Jurnal Administrasi Publik*, 7. <https://36.89.54.123/index.php/kolaborasi/article/view/5603>
- Ashrianto, P. D. (2015). Studi Kesiapan Lembaga Penyiaran Terhadap Penerapan Sistem Penyiaran Berteknologi Digital di Yogyakarta. *Jurnal Ilmu Komunikasi*, 13(2).
- Cangara, H. (2020). *Perencanaan & Strategi Komunikasi*. Rajawali Pers.
- Fachrudin, A. (2016). Dampak Teknologi Penyiaran Televisi Digital bagi Industri Penyiaran di Indonesia. *Visi Komunikasi*, 1.
- Firdaus, M. (2020). Analisis Kesiapan Industri Televisi Menuju Penyiaran Televisi Digital Di Masa Pandemi Covid 19 (Studi Kasus Tv Lokal Provinsi Bengkulu). *SENABISMA: Prosiding Seminar Nasional Bisnis Dan Manajemen*, 6(0).
- Gultom, A. D. (2018). Digitalisasi Penyiaran Televisi di Indonesia [Digitization of Television Broadcasting in Indonesia]. *Buletin Pos Dan Telekomunikasi*, 16(2). <https://doi.org/10.17933/bpostel.2018.160202>
- Haquq, R., & Erysyad, F. A. (2020). Eksistensi media televisi di kalangan remaja. *Jurnal Dinamika Sosial Budaya*, 22(1). <https://doi.org/10.26623/jdsb.v22i1.2228>
- Hasanah, H. (2017). Teknik-teknik observasi (sebuah alternatif metode pengumpulan data kualitatif ilmu-ilmu sosial). *At-Taqaddum*, 8(1), 21–46.
- Hastjarjo, S. (2007). Teknologi Digital dan Dunia Penyiaran. *Jurnal Komunikasi Massa*, 1(1), 35–41.
- Herawati, E. (2015). Etika dan Fungsi Media dalam Tayangan Televisi: Studi pada Program Acara Yuk Keep Smile di Trans Tv. *Humaniora*, 6(1). <https://doi.org/10.21512/humaniora.v6i1.3292>
- Ismail, E., Sari, S. D. S. R., & Tresnawati, Y. (2019).

- Regulasi Penyiaran Digital: Dinamika Peran Negara, Peran Swasta, Dan Manfaat Bagi Rakyat. *Jurnal Komunikasi Pembangunan*, 17(2), 124–145.
- Mubarok, M., & Adnjani, M. D. (2018). Strategi Sosialisasi Migrasi Sistem Penyiaran Analog Ke Digital Di Jawa Tengah. *Jurnal ASPIKOM*, 3(4). <https://doi.org/10.24329/aspikom.v3i4.215>
- Nuryanto, L. E. (2014). Mengenal Teknologi Televisi Digital. *Orbith: Majalah Ilmiah Pengembangan Rekayasa Dan Sosial*, 10(1).
- Oktariza, R., & Kusrahardjo, G. (2015). Rancang bangun platform sistem SFN TV Digital DVB-T2. *Jurnal Teknik Its*, 4(2).
- Prabowo, A. (2012). Era penyiaran digital: Pengembangan atau pemberangusan TV lokal dan TV komunitas? *Jurnal ASPIKOM*, 1(4). <https://doi.org/10.24329/aspikom.v1i4.27>
- Rijali, A. (2019). Analisis data kualitatif. *Alhadharah: Jurnal Ilmu Dakwah*, 17(33), 81–95.
- Rozgonyi, K. (2019). The governance of digital switchover of terrestrial television in the European union: The role of policy framing. *Journal of Digital Media and Policy*, 10(1). https://doi.org/10.1386/jdmp.10.1.67_1
- Sari, D. (2015). Pengaruh faktor-Faktor penerimaan masyarakat pada masa simulcast free to air TV digital. *Jurnal Penelitian Pos Dan Informatika*, 5(2).
- Shin, D. H., & Song, H. R. (2012). The switchover to digital broadcasting in Korea. *Technological Forecasting and Social Change*, 79(8). <https://doi.org/10.1016/j.techfore.2012.04.017>
- Tjahyono, B. H. (2006). Sistem Jaringan Penyiaran Radio dan Televisi Dimasa Mendatang. *Kajian Teknologi Informasi Komunikasi. Jakarta: Badan Pengkajian Dan Penerapan Teknologi*.
- Valerisha, A. (2017). Dampak Praktik Konglomerasi Media Terhadap Pencapaian Konsolidasi Demokrasi di Indonesia. *Jurnal Ilmiah Hubungan Internasional*, 12(1). <https://doi.org/10.26593/jihi.v12i1.2546.15-32>
- Wahyuni, H. I. (2014). Digitisation in Indonesian Broadcasting: Detriment or Advantage? Public Perspective Analysis on Digitisation in the Indonesian Broadcasting Context. *Media Asia*, 41(1). <https://doi.org/10.1080/01296612.2014.11689999>
- Widyatama, R., & Polereczki, H. Z. (2021). The Indonesia Policy on Television Broadcasting: A Politics and Economics Perspective. *Iranian Economic Review*, 25(4). <https://doi.org/10.22059/ier.2020.76100>