

The Public Local Radio in Castilla-La Mancha: obstacles and challenges in the digital age

Las Emisoras Municipales de Castilla-La Mancha: obstáculos y retos en la era digital

As Estações Municipais de Castela-La Mancha: obstáculos e desafios na era digital

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Abstract

Public local radio is the focal point of this paper, and in particular a case study of Castilla-La Mancha. The objective is to evaluate the impact that digital tools have generated within its communications networks. Designed to offer a local public service, we explore both the obstacles and the challenges that are encountered when using available digital channels or seeking to access other new channels. A tried and tested mixed methodology (Chaparro et al., 2015) is applied,



combining quantitative -exploitation of public databases and a telephone survey- and qualitative -semi-structured interviews with managers of local radio- methods. The results lead us to the following conclusions: the main characteristic of the Public Local Radio sector in Castilla-La Mancha is its great vulnerability, despite the fundamental role that it plays in local communication networks. Only 37% of the 108 licenses are in operation. The radio frequency bands are underused and, in many cases, misused. Aside from some exceptions, there is a low level of content digitization and "exploitation" of digital resources. However, beyond the use of new tools emerging with the rise of on-line radio, virtual social networks and *podcasting*, the conclusions of the study are that Local Radio stations promote networking within municipalities and their social fabric, as well as their social cohesion.

Keywords: Public Local Radio Broadcasters; Public service; Indicators; Local radios; Digitalization; Proximity communication

Resumen

Este artículo pone su foco de atención en las Emisoras Municipales públicas (EMs), y en concreto en el estudio de caso de Castilla-La Mancha. El objetivo es evaluar el impacto que las herramientas digitales han generado en su entorno comunicativo. Concebidas para ofrecer un servicio público de proximidad, se exploran los obstáculos y los retos que se encuentran para usar los medios disponibles o para acceder a otros nuevos. Se aplica una metodología contrastada (Chaparro *et al.*, 2015), mixta, cuantitativa –explotación de base de datos pública y cuestionario telefónico– y cualitativa –entrevistas semiestructuradas a las personas al cargo de las radios–. Los resultados permiten concluir en los siguientes términos: el sector de las EMs en Castilla-La Mancha se caracteriza por una gran vulnerabilidad, a pesar del papel fundamental que juega en la comunicación de proximidad. De las 108 licencias concedidas, solo un 37% están operativas. Las frecuencias de EMs están infrautilizadas y, en muchos casos, indebidamente empleadas. Al margen de algunas excepciones, existe un bajo nivel de digitalización de contenidos y de “explotación” de los recursos digitales. Ahora bien, más allá del uso de las nuevas herramientas aparecidas con el auge de la radio *on line*, las redes sociales virtuales y el *podcasting*, el estudio permite concluir que las EMs fomentan el tejido asociativo y colaborativo de los municipios, así como su cohesión social.

Palabras clave: Emisoras municipales; Servicio público; Indicadores; Radios locales; Digitalización; Comunicación de proximidad

Resumo

Este artigo concentra-se nas Estações Municipais (EMs) e, especificamente, no estudo de caso de Castilla-La Mancha. O objetivo é avaliar o impacto que as ferramentas digitais têm gerado em seu ambiente de comunicação. Concebido para oferecer um serviço público local, exploramos os obstáculos e desafios encontrados pela Rádio Local ao usar os meios digitais disponíveis ou ao tentar acessar novos. É aplicada uma metodologia mista, quantitativa —exploração de banco de dados público e questionário telefônico— e qualitativa —entrevistas semiestructuradas com os responsáveis pelas rádios. Os resultados permitem-nos concluir nos seguintes termos: o setor de MS em Castilla-La Mancha é caracterizado por uma grande vulnerabilidade, apesar do papel fundamental que desempenha na comunicação de proximidade. Dos 108 outorgados, apenas 37% estão em operação. As frequências dos EMs são subutilizadas e, em muitos casos, mal utilizadas. Salvo algumas exceções, há um baixo nível de digitalização de conteúdo e "exploração" de recursos digitais. Agora, para além da utilização de novas ferramentas que decorrem do impacto da rádio

online, das redes sociais virtuais e do uso do podcasting, este estudo permite concluir que os EM promovem o tecido associativo e colaborativo dos municípios, bem como a sua coesão social.

Palavras-chave: Estações municipais; Serviço público; Indicadores; Rádios locais; Digitalização; Comunicação de proximidade

1. Introduction

The radio broadcasting industry is living through significant change to respond to the challenges entailed in the digital transition that is underway. Radio, a communications medium in which digital channels were pioneered, is consolidating this presence, above all locally (Martínez *et al.*, 2018). Incessant changes mean that both the communicative context and the elements that form it, are immersed in an authentic digital revolution (Oxford University & Reuters Institute, 2021; Piñeiro-Otero, 2015; Prata, 2009).

We are witnessing “the time of the great transformation of the radio” (Pedrero & García-Lastra, 2019), which is crossing the “boom” of the *on-line* format and responding to the demands of an interactive audience, who are every day playing a more active role in the consumption of content, the production of which is done in the context of journalistic convergence. Which is to say, the multidimensional process that, thanks to the take up of digital technologies, affects the technological, entrepreneurial, professional, and editorial fields of the communications media. It has for over two decades encouraged the integration of tools, spaces, working methods, and languages for the preparation of contents that are distributed through multiple platforms, through the languages of each one (Salaverría *et al.*, 2008). New opportunities have appeared in journalistic firms within this scenario of media convergence, characterized by integral renovation where the press, radio and television share services (Campos Freire, 2011), because business risk is diversified, business is widened to new sectors and synergies are exploited (García Avilés & García Martínez, 2008).

Technology has also diversified and multiplied broadcasting possibilities and listening to the radio through other devices such as computers and mobiles. Radio has benefitted from the opportunity (Soengas, 2013) of offering specific contents for specific audiences and questioning new forms of diffusion in the multimedia environment. Among the technological innovations that the radio enjoys because of Internet in the production and distribution of multiformat contents, Moreno (2018) highlighted that, as well providing audio, it is supported by images, and both textual and hypertextual information; the content is accessed in an interactive and asynchronous way, and the connections can be established through websites and mobile applications that the radio stations have developed themselves (listening in) and webs and feeds (*listening out*), podcasting services, social networks and propagated content on blogs, as a result of search engines and *newsletters*.

Local radio is also going through this process, although marked by their own singularities, such as its nature as a public communications channel dependent upon local councils. Councils have the authority to issue the licences for their management and at the same time hold responsibility for their operation. In this sense, the studies of professor Chaparro Escudero and his team COMAndalucía have raised questions over the concept of social profitability to which local radio in Spain has to ascribe, where their own social function distances them from the commercial parameters that guide private broadcasters (Chaparro, 1998; Chaparro *et al.*, 2015; Gabilondo, 2013; Sánchez-Hernández & Chaparro, 2019). In addition, its broadcasts are determined by content referring to its closest and nearest environment. Thus, the encouragement of public participation is among its aims and they present a basic defining characteristic, which is volunteerism, that predominates in the arrangement and implementation of their programs.

Since they emerged in 1979, at the dawn of democracy in Spain, their development has been characterized by instability, poor economic profitability, and precarious conditions of employment. It is now worth adding the impact of digitalization to these difficulties (Cebrián, 2008; Peñafiel, 2007; Ortiz, 2012).

Romero (2011) understood the fusion of radio-Internet as a new form of communication and one that is not exclusively seen as a complementary support. Transcending the merely technological is presented as one of the great challenges, something which Huerta (2002) and González and Salgado (2009) related to the need to transform content, languages, programming and programmes.

Quintana *et al.* (2017) observed that each platform exploits its strengths in the most effective way possible: webs and blogs serve as the main doorway to access broadcasters, the platforms to accommodate podcasts are linked more to the construction of communities and social networks represent the best space to capture new listeners.

The presence of the principal radio programmes on social networks is a verifiable fact. But that presence does not directly imply that they are exploiting all possibilities for interaction with listeners (Díaz & Segado, 2013, Piñeiro-Otero 2014a). The way that *radioformula* musical broadcasters and sporting spaces have managed to assemble large communities of *fans* in the context of Facebook may therefore be highlighted, whereas *Twitter* is more inclined towards generalist radio. According to Piñeiro-Otero (2014a, p. 101), the audiences that are articulated through social networks bring benefits in the medium term, both for the measurement of “repercussion, influence or *engagement* of a certain space in the context of *radiomorphosis* and for user and producer participation and interaction”.

The rise of *podcasting* – recorded content, stored on a server for *à la carte* consultation, both in audio and in video formats (Quintana *et al.*, 2017) – is revolutionizing ways of listening to radio and contributing to its own narrative based on transmedia arrangement of its content and on multiplatform strategies (García & Aparici, 2018). Alicia de Lara and

Elpidio del Campo (2018) detected recent use of interest when understanding that podcasts – “the radio of the 21st c.” – attract audiences and generate a loyal and participative public, especially when they combine audio (through such platforms as *iVoox*) and video (through *Youtube* and *Spotify*).

In turn, *podcasting* fits with the new forms of mobility through mobile devices and the appearance of specific apps for radiophonic use and consumption within the paradigm of convergence. Hernando (2016) described how each one of the applications possesses different characteristics depending on the ends for which it was created.

The near future brings challenges such as the generalization of *radiovision* (Cavia, 2016) and video-podcasts. Some authors, such as Chomón (2016) consider that the use of “local transmedia radio” represents an alternative in view of the reduction of neighbourhood spaces in conventional radio. Beyond these realities, there are still obstacles to overcome, such as encouraging the broadcasters to respond directly to the questions and reflections of their listeners (Díaz & Segado, 2013). Only in this way can local radio maintain a level of coherence with their founding spirit. In line with Chaparro and García (2012), local public radio, organized into networks in which civil society participates, plays a key role in response to local interests, as against the imposition of the discourse of globalization.

In relation with the studies produced at the University of Castilla-La Mancha, the region within which this study is circumscribed, the pioneering work of Antonio Laguna and his team stand out, who have mapped the communications media of this community over many years. In 2016, most of the 91 radio stations were of a private nature and belonged to consolidated firms such as SER, Onda Cero and Cope. From among them, 19 were situated in the province of Albacete, 31 in Ciudad Real, 14 in Cuenca, 6 in Guadalajara, and 21 in Toledo (Laguna *et al.*, 2016). In this census, little emphasis was placed on local radio, a typology which is at the centre of this investigation, giving continuity to earlier records.

A large part of the academic work is on the study of audiences and the mediatization of content in view of the potential of digital technologies. There are few studies that been motivated by an interest in knowing what is happening first hand, with the opinions of the workers and managers of local radio, and the obstacles and challenges that they face in the process of digitalization. It is therefore of interest to know how local radio is accessing this paradigm of change, which tools it is using and which present difficulties, which are the obstacles that they are detecting to respond to this challenge and whether digitalization really contributes to implementing its social function.

2. Objectives and hypothesis

Our case study on the local radio of Castilla-La Mancha involves some particular aspects, as it covers a very extensive region –79.461 km²–, with a low population density –2,035,505

inhabitants– that is highly concentrated in urban networks, despite its eminently rural nature, with areas that form part of the so-called *España Vacuada* or Emptied Spain (Molino, 2016). Its geographic dispersion is also linked to orographic difficulties, which have raised challenges in the past for radiophonic transmission. Besides these particularities, the methodology that is presented, developed on the basis of studies published for Andalusia (Chaparro *et al.*, 2015) or the region of Murcia (Sánchez-Hernández & Chaparro, 2019), is valid for the analysis of patterns of digital convergence in general and for local radio, in particular.

The main objective consists of measuring the presence of digital tools and their impact within the communications networks of local radio. We will explore those tools that have been of greater utility and will look in detail at the obstacles and the challenges when developing their incorporation or full use. In a parallel way, we will appraise those aspects that might be setting the trend in overcoming some limitations or in the consolidation of digitalization processes. Attention will be given to the way in which digital technologies contribute to the practice of journalism as a public service and to the stimulation of its social function. We have proposed three hypotheses, in order to guide this work. H1: local radio frequency bands are underused and, in many cases, improperly used; H2: there are cases that can serve as a model or reference for other EMs when surmounting obstacles and consolidating their digitalization processes; H3: technological innovation is contributing to the survival of the sector.

3. Census sampling and methodological design

In this study, a mixed quantitative and qualitative method was proposed that formed part of a broader investigation (Peralta *et al.*, 2022), in which the quality of the internal functioning of local radio was analyzed on the basis of five variables: management, social capital, territorial organization, infrastructures, and communications networks. The classification of these categories responds to the IRSCOM (*Indicador de Rentabilidad Social en Comunicación*) [Social Profitability Indicator for Communication] model, proposed by the COMAndalucía research group and through which the operation of these local radio stations is measured, assigning them a quality indicator in accordance with their adjustment to the *items* that were agreed for the definition of the indicator. That analysis demonstrated the vulnerability of the sector: from among the 108 licenses issued to local radio in Castilla-La Mancha, only 40 (37%) were operative; the application of this indicator yielded a “very low” mark, and some radio stations were in danger of closing down all together.

The need to look in greater depth at the communications networks was concluded from that work, one of the key variables of IRSCOM and that constitutes the objective of this investigation, because it provides substantial information on the use that local radio is making of tools linked to digitalization. The following steps were taken for the definition

of the methodological design. The basis of the first part was the official census of the Ministry of Economy and Business, which entails the listing of local radio licences issued in Castilla-La Mancha. The document showed a total of 108 licences destined for councils. The state of each was verified: operative, closed, with an inactivated licence or an outsourced service. This process was carried out through telephone calls to 108 municipal councils. In second place, we centred on the 40 operative radios, from which we requested information on the following *items* mentioned in IRSCOM: updated web/blogs (not only were they evaluated, but the extent to which they were updated, specifically in so far as it affected the programming schedule); on-linestreaming; the use or otherwise of podcasts as a way of sharing programming and their posting on Ivoox-type platforms; the use of social media (*Facebook, Twitter, Youtube, Linkedin*); the availability of instantaneous messaging applications, such as *WhatsApp* or *Telegram* to facilitate speedy access to radiophonic dynamics and the use of customized downloadable apps. (Table 1).

Table 1. *Items* analyzed to evaluate quality within the communications networks

COMMUNICATIONS NETWORKS		
Updated web/blogs (with programming schedule).	Yes	No
On-line streaming.	Yes	No
Use of podcasts and storage on specialized platforms.	Yes	No
Use of social networks.	Facebook Twitter Youtube Linkedin Others	No
Instant messaging applications (WhatsApp, Telegram).	Yes	No
Customized downloadable mobile applications.	Yes	No

Source: Authors' own work based on the [IRSCOM](#) indicator.

The following step consisted of rating the results, applying the same method used in earlier studies that followed the same IRSCOM indicator (Table 2). The minimum score for approval was fixed at 5 points and the maximum at 7. This last score indicated good quality and exploitation of the possibilities for digitalization processes.

Table 2. Weighting of the *items* under study

Updated web/blogs (with programming schedule).	1	Yes=1
On-line streaming	1	Yes=1
Use of podcasts and storage on specialized platforms.	1	Yes=1
Use of social networks.	2	1 point for each platform (max. 2)
Instant messaging applications (WhatsApp, Telegram).	1	Yes=1
Customized downloadable mobile applications.	1	Yes=1

Source: Authors' own work based on the [IRSCOM](#) indicator.

This part of the methodology was completed through a telephone questionnaire directed at the 40 operational radio stations (Table 3). The majority of the respondents held managerial posts at the radio station or were representatives on the Communications Committee of the Council, upon which the radio was often dependent. In small populations, the councillors with responsibility for Youth and Culture responded, both areas to which the local radio stations were attached. In a complementary way, from a more qualitative approach, 25 semi-structured interviews were conducted when it was considered of interest to scrutinize the case study in greater depth, because of its good use of digital tools or because they knew how to report the factors that prevented their use. The field work was completed between June and December 2019.

Table 3. Local radio stations currently broadcasting and early results.

Province	Local Radio	Updated website	On-line broadcasting	iVoox and podcasts	Social media	Instant messaging	Apps.
ALBACETE	Roble Radio	No	No	No	No	No	No
	Radio Minaya	No	No	No	No	No	No
	Nova Onda	Yes	Yes	Yes	Yes	No	No
	Chinchilla MT Aragón	No	Yes	Yes	Yes	No	No
	Radio Manchuela	No	Yes	No	Yes	No	No
	Radio Tobarra	Yes	Yes	Yes	Yes	No	Yes
	Radio La Roda	Yes	Yes	Yes	Yes	No	Yes
	Radio Montealegre	No	Yes	No	Yes	Yes	No
	Sol Radio	No	Yes	No	Yes	No	No
CUENCA	Onda Mota del Cuervo	No	No	No	No	No	No
	Radio Salero	No	Yes	No	Yes	Yes	No
	Radio Iniesta	No	No	Yes	Yes	Yes	No
	Onda San Clemente Radio	No	Yes	Yes	Yes	Yes	No
CIUDAD REAL	Onda Almagro	No	Yes	Yes	No	No	Yes
	Radio Daimiel	Yes	Yes	Yes	Yes	Yes	No
	Onda Malagón	No	No	No	No	No	No
	Radio Miguelturra	Yes	Yes	Yes	Yes	Yes	No
	Radio Centenario	No	No	No	No	No	No
	Pedro Muñoz FM	Yes	Yes	Yes	No	Yes	No
	La Maxi Radio	No	Yes	No	No	No	Yes
	Onda Joven Puertollano	No	No	No	No	No	No
	Radio Televisión Socuéllamos	No	No	Yes	Yes	No	No
	Radio Horizonte	Yes	Yes	No	No	Yes	No
	Emisora de Terrinches	No	Yes	No	Yes	No	No
Radio Temelloso	No	No	No	Yes	No	No	
GUADALAJARA	Onda Cabanillas	Yes	Yes	Yes	Yes	No	Yes
	Radio El Casar	No	No	No	No	No	No
TOLEDO	Fuensalida Radio	No	Yes	No	Yes	No	No
	Radio Illescas	Yes	Yes	Yes	Yes	No	Yes
	Radio Meseta	No	Yes	Yes	Yes	No	No
	Radio Puebla	Yes	Yes	Yes	Yes	No	Yes
	Radio Quintanar	Yes	Yes	Yes	Yes	No	No
	Radio Segurilla	Yes	Yes	Yes	No	No	Yes
	Onda Plana	Yes	Yes	Yes	Yes	No	Yes
	Radio Torrijos	No	Yes	Yes	Yes	No	No
	Radio Villacañas	Yes	Yes	Yes	Yes	Yes	No
	Órbita Radio	No	Yes	Yes	Yes	Yes	Yes
	Cu-Radio	Yes	Yes	Yes	Yes	No	No
	Onda Numancia	No	Yes	Yes	Yes	No	No
	Onda Viva Radio	Yes	Yes	Yes	Yes	No	Yes

Source: Authors' own work based on the [IRSCOM](#) indicator.

4. Results

4.1. General radiography of local radio in Castilla-La Mancha

As may be observed from Table 4, only 40 of the 108 frequency bands licensed by the Ministry of Economy and Business to the Autonomous Region of Castilla-La Mancha are operative, the greatest number of which are in Ciudad Real.

Table 4. Classification of the municipal broadcasters of Castilla-La Mancha.

Provinces	Frequency bands	Workers		Closed		Inactivated licence		Outsourcing	
Albacete	26	9	34.6%	5	19.2%	12	46.2%	0	0.0%
Ciudad Real	27	12	44.4%	8	29.6%	2	7.4%	5	18.5%
Cuenca	17	4	23.5%	5	29.4%	5	29.4%	3	17.6%
Guadalajara	5	2	40.0%	2	40.0%	1	20.0%	0	0.0%
Toledo	33	13	39.4%	10	30.3%	3	9.1%	7	21.2%
TOTAL	108	40	37.0%	30	27.8%	23	21.3%	15	13.9%

Source: Authors' own work based on the [IRSCOM](#) indicator.

Some councils, after trying to manage a local radio station, closed it, citing poor economic performance, an absence of qualified staff, or lack of interest. As much happened in places such as Gineta, Pozuelo, Riópar, Bienservida (Albacete); Alcoba de los Montes, Arenas de San Juan, Argamasilla de Alba, Ciudad Real, El Robledo, Horcajo de los Montes, Villarrubia de los Ojos and Viso del Marqués (Ciudad Real); Alberca de Zancara, Barajas de Melo, Cañete and Fuentenava de Jabaga (Cuenca); Azuqueca de Henares and Sigüenza (Guadalajara), and Camarena, Guardia, La Pueblanueva, Mentrída and Navalucillos (Toledo).

Some councils never activated their frequency bands because the network of local associations showed no interest. La Herrera, Munera, Ossa Montiel, Viveros, Lezuza (Albacete); Villahermoso and Villanueva de la Fuente (Ciudad Real); Cañete and Chillarón (Cuenca); Molina de Aragón (Guadalajara); Ajofrín, Belvis de la Jara, Calera and Chozas, Calzada de Oropesa, Cazalegas, Cebolla and Gerindote, Valdeberdeja (Toledo).

One of the most conflictive states from the managerial point of view is linked to outsourcing, a situation through which the councils delegate the production of content to third firms, something which is not contemplated in the law, as it concerns a municipal public service. Thus, the areas around Cuenca of Quintanar del Rey, Campillo de Altobuey and Mira acquired programming for *RM Producciones*. In Ciudad Real, the frequency band allocated to Aldea del Rey is used to broadcast *Radio Marca*, and likewise *Onda Mancha* through Llanos

del Caudillo and Manzanares. Other out-sourced radio stations are *Consuegra FM* and *Radio Mora* (Toledo).

Among the radio stations that are in operation, it is worth distinguishing between those that broadcast intermittently and those that broadcast continuously. Among the former, *Radio Centenario* (Moral de Calatrava), which only broadcasts one hour a day; *Radio El Casar*, also with scant programming under the direction of young volunteers, and *Onda Mota del Cuervo* (Cuenca), whose studio some older people only very sporadically visit. Among those that broadcast continuously, *Radio Horizonte* (La Solana) stands out, which began broadcasting in 1988; *Radio Daimiel* (Ciudad Real), which celebrated its 25th anniversary in 2020, and *Radio Chinchilla* (Albacete), one of the longest-lived, with over 30 years broadcasting.

Local radio stations are very sensitive to change of a political nature and to the personal persuasion of the mayor. Thus, *Radio Gineta* (Albacete) was opened because the old mayor of that locality and a radio lover, Enrique Pardo (PSOE), assumed responsibility for managing the licence. The mayor of San Clemente (Cuenca), María Rosario Sevillano (PSOE), tried to further *Onda Radio San Clemente* opening it up to Communications Media students. The last change of Government has also satisfied some demands of *Radio Iniesta* (Cuenca), whose managers had foreseen the implementation of some improvements.

4.2. Result of the global IRSCOM indicator

Having applied the weightings of the IRSCOM indicator (Table 5), the local radio stations were unable to accumulate the 5 points needed for approval, because the average was situated at around 3.5. This result, some way off the optimum number of 7 points, reflects their significant weaknesses. The radio stations from Toledo and Albacete scored the highest values, without approval. The case of Ciudad Real was the opposite.

Table 5. Average IRSCOM by provinces

Category	Albacete	Ciudad Real	Cuenca	Guadalajara	Toledo
Communications networks	4.1	2.5	3.2	3.5	4.4

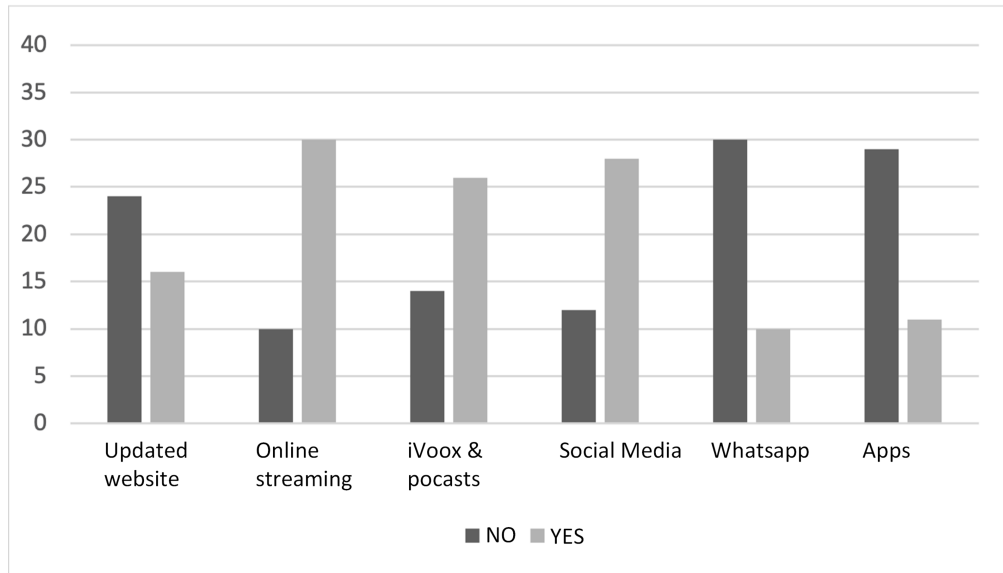
Source: Authors' own work based on the [IRSCOM](#) indicator.

4.3. Use of digital tools: a global perspective

In this section, the use that local radio makes of the most frequent digital tools within the radiophonic communicative networks is analyzed. The results (Graph 1) reflect that the sector is still at some distance from joining the digital revolution, as only 16 broadcasters

(40%) had an updated website. This variable, together with the mobile *apps* –11 (27.5%) have them– and instant messaging –*WhatsApp* was the most frequent, although only 10 (25%) offer this service– occupied the last posts. Better data were recorded for on-line streaming, which 30 (75%) radio stations had implemented; a presence in social media, which 28 (70%) had; and the handling of storage platforms and podcasting, a service that was maintained by 26 (65%).

Graph 1. Use of digital tools among local radio stations



Source: Authors' own work based on the [IRSCOM](#) indicator.

4.4. Webs and blogs

The situation of local radio stations that have an updated website or blog is as follows: radio stations from the province of Toledo occupy the leading position, as 61.5% of them consistently update these resources; followed by Guadalajara (50%), Albacete and Ciudad Real, in identical percentages (33.3%), and Cuenca (0%), where none of the broadcasters lend any attention to the matter.

This result is evidence of the difficulties that they are going through in order to update their activities and programming through the corporate website. There are many that do not have their own portal, for which reason users must access the websites through a link embedded in the webpage of the Council with which they are affiliated.

This scarce updating is also related with their very few templates. The interviewees repeat phrases such as “we can’t do any more” or “we don’t have the time”. Added to this is the fact that the programming for the radio requires permanent attention due to the changes taking place among people and collectives that drive new programme contents.

Even so, there is a generalized awareness of the importance of websites as presentation cards. Examples of efficient organization include *Radio Tobarra* (Albacete), with an Internet presence since 2004; *Radio Daimiel* (Ciudad Real), for its up-to-date programming, and *Radio Miguelturra* (Ciudad Real), whose website is used to present the biographic data of the people who manage their programmes.

There are the exceptions of long-lived and deeply rooted radio stations, which function well from the economic point of view, yet have no updated websites such as *Radio Chinchilla* (Albacete), whose workers, as Vicente Abujer argued, were unable to take on further tasks.

4.5. On-line streaming

In a good part of the provinces, the councils make no use of the advantages of online streaming. In Cuenca and Guadalajara, only half of all broadcasters use it (50%); in Ciudad Real, 58.3%; in Albacete, 77.7%, and in Toledo, in what constitutes an exceptional case, 100%. These percentages correlate with the fact that the province in which most active radio stations are registered, obtained the highest average IRSCOM indicator (4.4 points).

Numerous local radios are found in processes of technological improvement and even moving studios from the buildings that house them, in a clear tendency towards the modernization of their infrastructure. In this context, some advocate a transitory situation and “waiting”, at times too extensive over time, to access an integral and complete technological renovation. Councils such as Tomelloso and Puertollano (Ciudad Real) illustrate this situation, which have for months been awaiting the repair of their equipment to begin broadcasting again. *Radio Tomelloso* stopped broadcasting at the end of 2018 due to faulty equipment. The programmes were posted on *Facebook*, while the town council decided whether to opt for internet streaming to avoid investing in new infrastructure.

Radio Iniesta (Cuenca) is yet to implement online streaming. The same is true for *Radio El Casar* (Guadalajara), which is also very much on the margins, although not only with regard to this aspect, but across the wide range of all communication networks.

Other stations, on the contrary, have prioritized virtual streaming, such as *Onda Cabanillas* (Guadalajara) that, although it has had no official licence since 2018, has been streamed since 2017. This experience served its sponsors as a test bench subsequently to request the radio frequency band (107.7) which it complemented with on-line streaming.

4.6. Podcasts and storage platforms

65% of the local radio stations of Castilla-La Mancha generate podcasts and use digital content platforms such as *iVoox*. The radio stations of Toledo (92.3%) are the most active

in the creation of this type of resource, followed by the radio stations of Cuenca and Guadalajara, with the same percentage (50%). The radio stations based in Albacete (44.4%) and Ciudad Real (41.6%) are less likely to have them.

While some try to upload all the programming -not only cultural programmes, magazines and news, but also the recording of concerts and council plenary sessions-, the majority only incorporate content to which they attribute added value so that they last over time. Such is the case of *Radio Iniesta* (Cuenca), which chose to share interviews in the form of *podcasts*, and *Onda San Clemente Radio* (Cuenca), which only uploads specific topics. Differences are also appreciated here even between the local radio stations that offer unique and varied programming. In the province of Ciudad Real, while some radios (Almagro, Daimiel, Miguelturra and Pedro Muñoz) store and stream content through such platforms as *iVoox*, considering that they offer added value and a service to listeners, others (Moral de Calatrava, Porzuna and Terrinches), choose not to use podcasts, given their scarce programming and few staff.

A case of personal effect in favour of flexible programming and the implementation of the social function of local radio is the one that José Ángel Lorente, director of *Radio Tobarra* (Albacete) offers us, which since 2016 uploads all news items and events recorded live (meetings and concerts, among others). Its most recent challenge was to digitalize all of its broadcasting contents over the past 30 years.

Audience surveys to establish the degree of satisfaction with their programming are not usually conducted for local radio stations, for which reason podcasts play an additional role related with the records on numbers of listeners and downloads. Marga Velázquez, director of *Radio Daimiel* (Ciudad Real), observed that public service programmes and coverage of natural catastrophes, accidents, and electoral debates had a greater following than other types of programming. In the case of *Radio Segurilla* (Toledo) the podcast is used as a means of externalization, having outsourced both the edition and the broadcasting of the podcasts to a local firm.

4.7. Social media and instant messaging

The use of social media, including Whatsapp as an instant messaging service, is the most extensive among the items under study. At the head of the ranking are the radio stations of Toledo (92.3%), followed by Albacete (77.7%), Cuenca (75%), and radios situated in the provinces of Guadalajara (50%) and Ciudad Real (41,6%). The star social network among the radio stations is Facebook, although many have Twitter profiles and, to a lesser extent, accounts on *Instagram*, *Youtube* and *Linkedin*. Some have still not managed to open inroads within this digital territory, as is the case of the radio stations that the councils of Malagón, Moral de Calatrava and Puertollano (Ciudad Real) manage. It is surprising that some radio

stations with a degree of solvency, such as the councils of La Solana and Almagro (Ciudad Real), have not resorted to them

In general, the main shortcoming that was detected with the use of social media was that they are set up to replicate content more than as a true attempt to generate their own specific exchanges. This situation could be the cause of practically no interaction nor exchanges taking place with listeners that might let us test up to what point the public show themselves to be in agreement or otherwise with the contents that are promoted.

From among the social media with the option of instant private messaging, WhatsApp is practically the only one in use, but its use is much less extensive than *Facebook* or *Twitter*. The radio stations of Cuenca (75%) made most use of it, followed at a great distance by Ciudad Real (33.3%), Toledo (15.3%) and Albacete (11.1%). None of the radio stations of Guadalajara (0%) exploited this resource. The radio stations used the tool to pass on their own information from time to time, such as announcements and events on the council agenda, and invitations to listeners to share audio recordings as a way of participating in the programmes of the radio station. However, as many stations have no corporate mobile telephone beyond a fixed line, many of the people in charge preferred not to offer their personal number for that purpose.

4.8. Apps

Radio has been developed with options for inclusion in mobile telephony. Since Nokia set up Visual Radio in 2004, the possibilities of mobile technology have been explored through various initiatives to embed its own language and expressiveness within this medium. *Smartphones* and their applications constitute the main platforms for the expansion of mobile radio. Nevertheless, despite the various applications on offer from the main radio stations within Spain (Piñeiro-Otero, 2015), radioapps are still undergoing a process of adaptation and inclusion within this platform.

On this reflection, the number of radio stations in Castilla-La Mancha that have released their own downloadable *apps* for listening to radio broadcasts is still very reduced. As much is shown in the data: Guadalajara (50%) and Toledo (46.1%) are at the top of the list, followed by Albacete (22.2%) and Ciudad Real (16.6%). None of the stations have apps. in Cuenca (0%).

They are usually downloaded to tune into the radio from mobile devices and to facilitate daily tasks. Radio Tobarra (Albacete) combines this twofold usage. On the one hand, from the radio-station website, listeners can download the app. *Radiotobarramunicipal*, downloadable from Google Play Store, to tune into the radio. On the other, it is immensely useful for automated programming, which likewise addresses the scarcity of staff.

There are cases, such as the Porzuna (Ciudad Real) radio station where despite the presence of its app. MaxiRadio, “almost nobody uses it”, according to its director. Other radios have no customized app., but embed their own in the institutional ones. This is true for *Onda Cabanillas* (Guadalajara), which makes use of *CabanApp*, or *Radio Almagro* (Ciudad Real) that is embedded in *AlmagroTurismo*, a tourism website of the council. Various radio stations, such as *Radio Illescas* (Toledo), said that their apps. were under development, but have yet to be released.

5. Conclusions

The radio stations within Castilla-La Mancha may be characterized by a degree of vulnerability, despite the fundamental role that they play in local communication networks. The licences are not always compliant with the purpose for which they were issued. From among the 108 licences issued, only 37% are operative. It is a fragile scenery that weakens their capability for social cohesion. The first hypothesis is therefore confirmed: the frequencies are underused and, in many cases, incorrectly employed. This concerning panorama is motivated on many occasions following political change that takes place in town councils, as well as the lack of interest or availability of council resources. The fact that some radio stations remain operative, albeit in a precarious state, is on occasions thanks to the personal effort of their managers.

In so far as it refers to digital reconversion, none of the 40 stations under analysis reached approval status. From among the digital tools under examination, it had been confirmed that online streaming, the use of social networks, and the preparation of podcasts are those that attracted greater attention. Inversely, there are still only a few that have updated websites, *Apps* and *WhatsApp*.

Despite this weak context, in which the radio stations grounded in the province of Toledo and Albacete obtained the best results unlike the stations from Ciudad Real, which ended the ranking, the casuistry is very varied, and cases have been located that serve as a reference for other radio stations to surmount obstacles. These results confirm our second initial hypothesis.

The models to follow and that scored higher than or equal to 5 were in *Radio La Roda* and *Radio Tobarra*, from Albacete; *Onda San Clemente Radio* (Cuenca); *Radio Daimiel* and *Radio Miguelturra*, from Ciudad Real; *Onda Cabanillas*, from Guadalajara, and *Radio Puebla*, *Órbita Radio*, *Radio Quintanar*, *Cu-Radio* and *Radio Villacañas* within the province of Toledo. These radio stations use the new digital tools to expand local neighbourhood content through social networks, to digitalize their radiophonic archives, to use podcasts and platforms such as *iVoox*, and to facilitate radio communication of spaces organized by external collaborators from their own house, among other possibilities.

Together with that, the formulas for success are related with consideration of the radio stations as a public service, being valued and protected at the same level as other needs of citizenship. In the same way, the quality is related with the prioritization of professional standards over and above changes to dominant political parties, as well as the commitment to provide local information. These aspects have been fundamental, in the opinion of José Ángel Lorente, the manager of *Radio Tobarra* (Albacete), for the “permanence and longevity” of the radio station.

The qualitative results within these small environments uncover two kinds of standpoints towards the local radio stations, almost classifiable in the same way as ‘the apocalyptic and the integrated’ that Umberto Eco (Eco, 1964) foresaw in the case of neo-television and the future of the mass media. Thus, whereas Carlos Jesús Villajos, the mayor of Porzuna (Ciudad Real), held the opinion that some of his programmes had a “good level of acceptance” and were in addition fundamental for democracy and local communication, others, such as Carlos de la Osa, the person in charge of the Press Office of the Town Council of Tomelloso (Ciudad Real), thought that “nobody misses *Radio Tomelloso*” since its broadcasts have been interrupted due to technical reasons.

The third hypothesis was likewise corroborated, given that technological change is contributing to the survival of the sector and has been converted into a great ally in the face of numerous factors that are obstacles to their development, among which the lack of staff. Automatization and the use of digital tools can surmount some shortcomings and impact on the democratization of content, because of their online permanence and the different ways of accessing information, as well as for the work of local radio in following up the dynamics of local politics. For *Radio Tobarra* (Albacete), which has seen its budget cut by 50%, the process of automatization has been fundamental to compensate the minimal staffing levels and for live retransmission of municipal events.

In conclusion, the use and the implementation of the new tools and digital potential for radio presents challenges and obstacles. Each Council exploits their strengths at a different pace, so we cannot speak of a single pattern that is extendable to all cases as a function of the number of employees or the budget. In the sample, there are radios that, although managed by a single person, make use of practically all the survey variables, whereas others with a larger range of resources lend less attention.

It has been demonstrated in this study that digital tools are under-utilized. Many uses are merely testimonial and are still a long-way off from contributing to an in-depth digital revolution. In consonance with previous studies (Díaz & Segado, 2013; Piñeiro-Otero, 2015), we believe that EMs replicate some of the obstacles and limitations of broadcasters at a national level. In other words, radios have webs, but they are not always updated; they register profiles on social media, though merely as a gateway for the reproduction of programmes and without exploiting the *feedback* from listeners; they have instant messaging services, although they offer no original usage to interact with the public; they

resort to podcasts without playing with visual possibilities of podcasting, or celebrate multimedia without considering transmedia strategies.

We agree with those authors who pointed out that the qualitative leap forward has to transcend mere *simulcasting* (Romero, 2011; González & Salgado, 2009). A true revolution would imply that technology and content join hands to surprise and to involve the public, because of the originality and social utility of the programming, empowering their capabilities for interaction with the local community through radio and turning to new digital narratives with enriching strategies, such as the contributions of the transmedia-type.

However, beyond the use of the latest tools, we understand that the great potential of local radio is rooted in its contribution to foster non-virtual social networks. In short, they strengthen the network of associations and social cohesion. Economic benefits perhaps not, but they do build many others from the perspective of belonging to a community, especially in an area such as Castilla-La Mancha, an extensive territory with a faltering population. When councils pay no attention to local radio, arguing exclusively monetary reasons, we should recall that *Ley 11/1991, de Organización y Control de las Emisoras Municipales* (LOCEM) [Law 11/1991, on Organization and Control of Local Radio], protects local public radio with a view to enlarging the plurality of news reporting, guaranteeing the freedom of expression recognized in the Constitution.

Authors' contributions

Lidia Peralta-García: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project Administration, Supervision, Validation, Writing – original draft. Clara Sanz-Hernando: Data curation, Formal analysis, Investigation, Methodology, Supervision, Writing – review and editing. **Miguel Álvarez-Peralta**: Data curation, Formal analysis, Investigation, Methodology, Supervision, Writing – review and editing.

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