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The role of innovation labs in advancing the relevance of Public Service Media: the cases of BBC News Labs and RTVE Lab

Abstract

As part of their social function, Public Service Media (PSM) organizations are devoted to innovation. In this context, a number of European PSM outlets have created laboratories based on the implementation of products, services and formats for multiplatform audiences. Our research focused on two case studies: a) BBC News Labs (UK) and b) RTVE Lab (Spain). We applied both quantitative and qualitative methodologies. We used content analysis techniques to examine products generated by the two laboratories between 2013 and 2017, quantifying and classifying each one according to categories related to the type and nature of the innovation. We carried out ethnographic research using participant observation over five days in each laboratory, both in London and Madrid. We also conducted open-ended interviews with five professionals at the BBC and three at RTVE, as well as with the head of *EBU's Media Strategy & Development* department. Our results show that BBC News Labs implements a global innovation strategy through the design and engineering of products that facilitate journalists' work. Projects include speech-to-text software, prototypes for voice recognition and text analysis, chatbots and object-based media. On the other hand, RTVE Lab focuses on designing and producing interactive formats, multimedia narratives and social media content, with an emphasis on experimentation. The findings reveal the main barriers and incentives to innovation within each lab and show how the transfer of innovation could increase the diversity, universality and quality of their overall output.

Keywords

Public Service Media, innovation, media labs, transfer of results, universalism.

1. Introduction: universal mission of Public Service Media

The change of paradigm in the models of consumption of information and entertainment as a result of the advent of digitalization has obliged media companies to continuously renew their production, dissemination and commercialization processes. Media organizations are therefore facing disruptive changes in the industry structure, consumer habits, professional practices, and business models (Storsul & Krumsvik, 2013).

Public Service Media (PSM) organizations are essential to ensure the principles of universality, independence, responsibility, openness and transparency and therefore must be

socially responsible (Głowacki & Jackson, 2013). Nowadays, PSM outlets are immersed in a technological transformation and have barely taken advantage of the interactive resources offered by social media, mobile devices and user participation, among other resources, to improve their commitment to quality and universality (Iosifidis, 2010). Both professionals and academics are attempting to revise the goals, structures and resources of PSM organizations in order to face the vertiginous technological change and to redefine their mission in the current media scenario (Bardoel & d'Haenens, 2008).

PSM organizations play an essential role in the civic cohesion of democratic societies. However, their function is increasingly coming under scrutiny. Governments and regulators are assessing what the essential functions of PSM organizations should be, as they still represent a valuable and positive investment in terms of their political, social and cultural outcomes as well as their economic impact (Jakubowicz, 2010).

The universality of PSM organizations comes from the public duty of providing broad programming that achieves the aims of informing, inspiring, entertaining and attracting broad sectors of the whole of society, which represents the heterogeneity of contemporary audiences (Moe, 2008). This dissemination of messages intended for all citizens supports the notion of universality, as it contributes to spreading a range of content among all sectors of society regardless of age, sex, religion, race or cultural background.

In recent years, the concept of universality has been challenged by the rapid increase in commercial channels, social networks and platforms for the distribution of audiovisual content on the Internet (van den Bulck & Moe, 2017). As some scholars (Głowacki & Jackson, 2013; van den Bulck & Moe, 2017) argue, PSM organizations must attend to minority interests, marginal cultures or educational values of a very diverse nature that exist in society through personalized services adapted to the different sectors of the audience.

In a growing competitive context, PSM outlets must innovate if they want to differentiate themselves from other organizations, adapt to changes in the audiovisual market and improve their corporate reputation, among other objectives. Therefore, we believe that the question of how PSM organizations respond to the transformations in the media environment arising from digitization and changing societal needs and expectations can be best understood as an issue of innovation in a wider sense.

Thus, we argue that the commitment to innovation should be led by PSM organizations, taking into account their universal role and public service to the citizen. Technologies offer PSM organizations the opportunity to better perform their function and serve the audience in a variety of ways. In addition, if PSM organizations do not take advantage of the opportunities offered by technologies in order to innovate, they may be relegated to an uncomfortable position of letting leading commercial media outlets consolidate as the key players in their field and become increasingly irrelevant.

2. Implementing innovation in PSM organizations

Innovation has become a necessary strategy for the media to take advantage of opportunities and anticipate competition from other players in key areas such as new products, newsroom organization, content distribution and business models (García-Avilés *et al.*, 2018b). Through effective management, public media organizations can promote measures that contribute to developing innovations in processes, structures and equipment, with achievements that improve content quality, income sources, audience figures and brand image (Küng, 2008).

Media innovation could be defined as “the capacity to react to changes in products, processes, and services through the use of creative skills that allow a problem or need to be identified and solved in a way that results in the introduction of something new, which adds value to customers and thereby fosters the viability of the media organization” (García-Avilés *et al.*, 2018a, p. 31). Media outlets are developing strategies that respond to disruptive changes

in the industry, as they need to act strategically in order to improve their editorial processes, business models and organizational structures.

Academics are also turning their attention to internal processes implemented in news organizations. Lucy Küng (2013) examines how media companies cope with this change of culture, which was brought about by the implementation of innovation. She argues that “the barriers between content creation and technology have broken down” (2013, p. 34). Therefore, innovation requires solid management that integrates both people and resources in the processes of change in areas related to organization, production and distribution.

Dogrueel (2014) looks at media innovation from a different angle. She not only focuses on product- and process-related aspects, but also includes “user-sided appropriation processes [and] the combination of different innovation dimensions (e.g. organizational, technological or design-related aspects)” (Dogruel, 2014, p. 62). Thus, innovation does not have to be limited to a new product, technology or content, but can also be based on a new combination of previously existing ideas, processes or resources.

PSM organizations were founded with the aim of serving the interests of citizens and therefore part of their social function is translated into experimentation with technologies and their commitment to innovation in order to ensure the highest quality in their audiovisual products. PSM outlets boost innovation in order to differentiate themselves from the competition and improve their corporate reputation without losing sight of their essence of public service (Głowacki & Jackson, 2013, p. 10). For this reason, over a dozen European PSM outlets have created innovation laboratories in recent years that focus on launching new products and tools, as well as on experimenting with technologies and storytelling formats (Zaragoza & García-Avilés, 2018).

The British Broadcasting Corporation (BBC) implements a global strategy of innovation based on the research, design and implementation of new technologies both for content broadcast by radio, television and online, through any mobile device. Its Research & Development Department is structured in several units with a technological profile, such as Connected Studio, Taster and News Labs, which comprise more than 200 professionals. Radio Televisión Española’s (RTVE) innovative commitment is focused on its RTVE Lab, which is dedicated to applying new technologies and creative processes in order to develop new ways of telling stories.

3. Objectives and methodology

In this study, we analyse how two European PSM organizations, the British Broadcasting Corporation (BBC) and Radio Televisión Española (RTVE), focus their innovation strategies in laboratories organized into multidisciplinary teams. Likewise, we identify the level of knowledge transfer from the innovation laboratories to the other sections of both public service corporations as a way to foster the PSM outlet’s universal mission. We pursued two main objectives: a) to analyse the nature and work procedures of innovation departments in European PSM organizations, and b) to evaluate the reach of the innovative outputs within other departments of the PSM outlet. As a result, two research questions are raised:

RQ1. Is innovation implemented as a strategy reflected in the work procedures and outputs of these laboratories?

RQ2. Does innovation transfer promote the universal mission of PSM organizations in the current media environment?

We selected two case studies of innovation laboratories that are among the most prestigious among European PSM outlets according to some authors (Küng, 2013; Sádaba, García-Avilés & Martínez-Costa, 2016): a) BBC News Labs, dedicated to the production of formats and tools as a unit of Connected Studio; and b) RTVE Lab, integrated in the Department of Strategy and Business Development of Interactive Media.

We combined both quantitative and qualitative methodologies. We used content analysis techniques to examine the products generated by the two laboratories between 2013 and 2017, quantifying and classifying each one according to categories related to the type and nature of the innovation. A coding analysis sheet was prepared for each project, specifying its elements, areas involved, launch date, main objective and results obtained.

We carried out ethnographic research using participant observation over five days in each laboratory, both in London and Madrid. We also conducted open-ended interviews with five professionals at the BBC and three at RTVE, as well as with the Head of EBU's Media Strategy & Development.

4. Results

4.1. BBC News Labs

4.1.1. Origin and objectives

The BBC is not only a reference as a PSM organization in Europe but also leads innovation in the global scenario. Indeed, article 65 of its 1922 Royal Charter states that the purpose of its research and development included the pursuit of innovation as part of its public service function (Collins, 2007). The Research and Development department, directed by Adrian Woolard, and its Future Experience Technologies section, launched BBC News Labs in May 2012. The laboratory is devoted to driving innovation in news services. Its basic function is to create innovative and effective tools for online news consumption. They develop journalistic formats that “streamline the production tasks of journalists in different media, as well as devices to improve the user experience of their news and explore the intersection of journalism, technology and data” (Woolard, 2018).

This laboratory emerged as an initiative to identify and solve the needs both of the audience and BBC workers. Laura Harrison (2018), the head of Connected Studio, explains that they organized meetings and workshops in order to create an open community, to change the way the organization worked, and the way news was produced. In the first instance, the laboratory was created to disseminate the advances of the Research & Development department throughout BBC News and to serve as a link between both departments. Therefore, it works closely with the innovation professionals of the BBC's Research & Development department and the technicians of BBC News Products and Systems, which is responsible for the technological part of the news. Approximately 50% of its funding comes from BBC News and the other 50% originates from the BBC's Design & Engineering.

According to its director, Robert McKenzie (2018), the main objectives of BBC News Labs are “to take advantage of the BBC's talent and creativity to drive innovation, generate opportunities for story-based journalism, support the transfer of innovation to production, promote standards to collaborate with the media and increase the innovative value of BBC News.” McKenzie (2018) claims that the BBC has strategically marked these priorities for its public service, “because there is a commitment to improvement; also because the budget of the BBC is declining and we need to increase audiences.” Regarding the purpose of BBC News Labs in offering higher quality products, McKenzie (2018) states: “part of my job is to make the BBC attractive, because the BBC is not an antiquity, but a corporation at the forefront of innovation.”

4.1.2. Structure and operations

The laboratory has a multidisciplinary team with a technological profile composed of 18 professionals located at the Central Laboratory of Broadcasting House in London. The team is led by Robert McKenzie and Miles Bernie, a journalist and an engineer who share the decisions and overview all projects. All members of the laboratory are software engineers, except for two journalists and a social media manager, and they work as project managers,

designers and developers. According to McKenzie (2018), News Labs looks mainly for “multitasking professionals, although we try not to categorize anyone.”

Andy Conroy (2018), head of Research & Development, explains that they have implemented a “1 + 1 system, where nobody directs, since decisions are made by both directors.” Bernie reports to the technical side and McKenzie to the publishing side. McKenzie (2018) emphasizes that they work in “stream teams, that is to say temporary teams, that do not specialize in a field but that know all the tools that the laboratory handles.” And they also develop projects in “work packs” with external companies.

The BBC News Labs’ team works with colleagues from other sections of the Research & Development department, which is composed of 200 workers distributed between the South Laboratory and Central Laboratory headquarters in London and the North Laboratory in Salford. Therefore, coordination of production processes is essential. According to Woolard (2018), projects are initiated both by the corporation and the laboratory, such that managers and employees are able to contribute with their own ideas. Their main activity focuses on innovative software and content creation projects, which cover enriched content, facial or voice recognition, language technology and content reuse in different formats.

According to McKenzie (2018), workflows in the News Lab are flexible and agile, such that the professionals can decide what type of content and format they will experiment with or what the best tools for each project are. McKenzie (2018) defends the effectiveness of having journalists and engineers working together: “If you want to be at the cutting edge, you must have these kinds of teams, because if not, the engineer will go his way and do something extraordinary; then, the journalist will do something even better, but they do not combine and all their work will have been in vain.”

Production processes require regular meetings to evaluate the status of projects. Each team meets daily on an informal basis, and formally once a week. In addition, they organize four annual meetings to evaluate the progress of the projects and two annual meetings to review the results with the corporation. The criteria that are applied when developing a project are based on improving the user experience, product quality and corporate reputation. Likewise, BBC News Labs professionals emphasize that their work is conditioned by external factors such as the economy, the market and technology.

The results of each project are internally evaluated through qualification systems, tests and presentations, and many of them are distributed through BBC Taster for the audience to test and evaluate (Woolard, 2018). Madiana Asseraf (2018), director of EBU Media Strategy & Development, argues that BBC News Labs is a pioneer in innovation both nationally and internationally because “it has an innovative culture rooted within the organization and has obtained recognition from the audience.”

4.1.3. Concept and development of innovation

Managers’ views on innovation make it possible to conceptualize the way in which processes and objectives are developed at BBC News Labs. Woolard (2018) states “innovation is creating something that can be delivered in a scalable way.” On the other hand, Harrison (2018) argues that innovation consists of “doing something new to improve processes, products, audiences or the prestige of the media.” McKenzie (2018) adds that innovation is “some product, service or tool which provides a practical way to attract new audiences.” According to Michael Evans (2018), artificial intelligence developer at Future Experience Technologies, laboratory products are created under the concept of innovation in public service, which “guarantees accessibility and universality in both its design and content.”

Woolard (2018) distinguishes three types of innovation carried out by the BBC: a) “incremental innovation,” which refers to continuous evolution in order to add new features to existing products; b) “nutritional innovation,” the one they practice most, based on the implementation of their technologies and products; and c) “discontinuous innovation,” which

consists of launching products or using technologies that involve deep changes in their offer to the audience or in their own production processes. The BBC is an example of discontinuous innovation, since it has been a pioneer in numerous cases of broadcasting production. In this sense, Woolard (2018) considers that the laboratory should increase incremental innovation. He also argues that continuous innovation is difficult to maintain, and that discontinuous innovation is very hard to develop, since this kind of innovation is riskier and more time-consuming.

Woolard (2018) lists several challenges that the BBC faces. On the one hand, maintaining its legacy and relevance, despite the technological opportunities that force the BBC to keep itself in a state of constant renewal. In addition to competing with new platforms and media, the BBC must also manage change in the current transition period, with the responsibility of maintaining the previous quality models and ensuring that it is accessible to the entire audience.

Another challenge is the speed of innovation, since in order to continue being relevant, it is necessary to constantly evolve, and this change is conditioned by the type of target audience. A third challenge is the transfer to other BBC departments. According to Woolard (2018), the BBC's innovation strategy places strong emphasis on the final recipients of its products, the members of the audience.

4.1.4. Transfer of innovation results

Although the transfer of its production to other sections of the corporation is one of its main objectives, McKenzie (2018) explains that the BBC is basically configured to be a traditional media organization and the professional staff is slowly adapting the proposals of the innovation teams. In most sections, the traditional organizational structure and previous work routines are maintained. Much of the transfer goes to the departments of Tech Enterprise, Online (sports, news, iPlayer and iRadio), BBC 3 and BBC News Labs. Overall, a low percentage of the production of the laboratory is transferred to other BBC staff.

The transfer of Research & Development products to the rest of the corporation is not very defined. Woolard (2018) does not dare to determine a percentage of the application of the results of the Research & Development department to other sections of the BBC, since it is an incremental innovation that modifies standards, production processes, knowledge, etc. "Innovation can be created quickly but its application is usually slow," Woolard (2018) argues. However, the level of transfer from BBC News Labs to BBC News is high and positively affects the corporation, reinforcing its corporate reputation and as a better service for the audience (Woolard, 2018).

The laboratory strengthens the level of BBC transfer among its departments, for example, in the voice team (Alexa, Google voice, etc.) developed by BBC News Labs. When a project works and is accepted by the audience, it is handed over to another team that will continue developing it (McKenzie, 2018).

Internally, together with the Connected Studio team, BBC News Labs professionals organize workshops for their colleagues in the corporation. They have created an internal website, News Labs Toolkit, where the prototypes being used by the BBC staff are displayed. Adrian Woolard (2018) emphasizes that they will continue to organize News Hacks with the aim of exchanging experiences with other BBC departments and collaborating with third party institutions.

This transfer also translates into collaboration with external, academic or professional entities. According to Andy Conroy (2018), Head of Research and Development, the laboratory works with more than 50 entities to boost the technology industry internationally.

Therefore, the results of BBC News Labs are transferred to other BBC departments and to external institutions in a variety of ways, providing knowledge and inputs that allow BBC News Labs to be a centre of excellence in broadcasting research (Figure 1).

Figure 1: A model of transference of innovation results at BBC News Labs.



Source: Own elaboration.

4.1.5. Analysis of the products

To date, BBC News Labs has developed 54 projects: 27 active, 9 inactive, and 18 closed. We have focused our research on the 27 active projects. Of these, 8 projects identify opportunities to interact with the technology and information industries; 12 are to develop tools to help journalists; 10 offer new approaches to tell stories; 3 reversion content into a foreign language; 6 develop the automatic generation of metadata and labels; 2 belong to the category of monitoring of transmissions and social networks in multiple languages; and one deals with the identification of content in different platforms (Table 1).

Table 1: Typology of active projects from BBC News Labs.

ACTIVE PROJECTS	Identify opportunities with technology and news	Develop tools to help journalists	Implement new approaches to storytelling	Reversion content into a foreign language	Automatic generation of metadata and labels	Monitor transmissions and social networks in multiple languages	Identify content in different platforms
newsHacks	X	X					
360° video/ VR			X				
ALTO				X			
Atomised News			X				
Audiogram Generator		X					
BBC for Voice User Interfaces			X				
BBC Rewind		X	X		X		
Bots			X				
Connected Studio-World Service	X		X			X	
External links manager					X		
Gifenator		X					
Data Journalism in India	X						
Language Technology	X	X		X			
News Switcher		X					
News in Space							X
OCTO					X		
Radio Reader		X					
SCRIPT				X			
SUMMA						X	
Sticht			X				
Structured Journalism	X	X	X				
Suggest	X	X	X				
Juicer	X	X			X		
News Slicer			X				
Trust Project Challenge	X						
Transcriptor		X			X		
Window on the newsroom		X			X		

Source: Own elaboration using data provided by BBC News Labs.

One of the main commitments of the laboratory is the development of tools that facilitate journalistic work. News Labs explores how BBC news should be heard on different smart speakers, creating formats for users to access BBC content on these devices. BBC for Voice User Interfaces generates audio formats so that news content is available on voice platforms such as Amazon Alexa and Google Home. The ALTO virtual voice-over tool allows video content to be reversioned into multiple languages by converting text to speech. BBC Rewind Collaboration makes it easier to search the BBC archive more quickly. With Gifenator, journalists capture images from live broadcasts of any event broadcast by the BBC to publish them as GIFs on social networks. They have experimented with bots on messaging platforms and social networks. In 2016, they created bots for Facebook, Twitter and Telegram. In March 2017, they launched a chatbot through a conversational interface, which has led to an increase in interaction with users.

Several projects promote collaboration on journalistic innovation. For example, the 11 organized newsHack events promote the best proposals to be developed with the support of the laboratory. In addition, News Labs and Connected Studio organize activities that promote the BBC World Service in countries with little technological development and take advantage of the talent of the local industry to design joint projects. The Growing Global Audiences through Data Journalism in India project helps journalists use open data to tell stories about India.

BBC News Labs started several projects on language technology in 2014 in order to extrapolate the contents of BBC News to different languages. They launched tools that ease the task of producing information for journalists and allow users to receive the news in their respective language. For example, News in Space relates news of different topics and in different formats that have some common point, using links and labels. Radio Reader allows journalists to extract and publish audio clips of radio broadcasts. Scalable Understanding of Multilingual Media (SUMMA) is a multilingual automatic monitoring platform that monitors international media to follow the news in several languages through voice recognition, automatic translation and thematic identification.

They have also created tools such as Elastic News, Atomised News and Transcriber, which help organize the information in the news to facilitate its distribution on any device. Juicer is a content search engine that works through an application programming interface, news aggregation and content extraction. Therefore, these tools streamline the work of professionals who no longer have to transcribe but only review the materials that are broadcast daily by the BBC.

The future of the BBC focuses on artificial intelligence, voice technology and the use of robots in order to improve the quality of the pieces and the efficiency of their distribution (Woolard, 2018). Internally, together with the Connected Studio team, they hold workshops for their colleagues.

4.2. RTVE Lab

4.2.1. Origin and objectives

RTVE Lab was launched in June 2011 as part of the Strategy and Business Development Department of Interactive Media, in collaboration with RTVE's Research & Development department (Arias, 2016). It is considered one of the most innovative initiatives in the Spanish news scene (Sádaba, García-Avilés & Martínez-Costa, 2016). The laboratory is currently directed by Miriam Hernanz and depends on the RTVE.es Content Division.

Hernanz (2017) asserts that RTVE Lab's goal is to innovate rather than to inform and to focus on immersive journalism. They focus on interactive formats such as webdocs, news games, 360° videos and virtual reality. RTVE Lab not only focuses on publishing innovative products but also on creating tools in order that the editors of RTVE departments work

autonomously in the production processes of their audiovisual pieces. Hernanz (2017) recognizes that this task is still of a small scale and they have only managed to collaborate with some departments, creating apps and products for the Eurovision Song Contest and Goya Awards retransmissions as well as tools for programmes such as “En Portada” and “Documentos TV.”

RTVE Lab responds to RTVE’s corporate goal of innovation, despite the fact that it develops the innovation of the web and is not coordinated with the other innovation areas or the Technology Department at the corporation (Zaragoza & García-Avilés, 2018). It also aims to create brands, tell useful stories for the audience, provide service journalism, implement narratives to demonstrate that technology can enrich content, and design tools such that teams can be independently innovative.

Seven years since its launch, RTVE Lab has established itself as a benchmark in the Spanish media market, despite the fact that it has minimal economic resources compared to other European public media laboratories. Hernanz recognizes that European laboratories make scalable products that are more profitable because these are reused, and they apply testing techniques before the launch of each product. According to Hernanz, they do not have a budget at RTVE Lab for these techniques and are not able to carry out audience research.

4.2.2. Structure and operations

RTVE Lab is composed of a multidisciplinary team of eight people: three journalists, a filmmaker, three developers and a designer, who share the same objective: “applying creativity to the development of interactive audiovisual content” (Hernanz, 2017).

The production process starts with the proposal of ideas from different sources: members of the laboratory, RTVE.es content department or colleagues from any RTVE section. Occasionally, on some subjects, they work with the unusual collaboration of other professionals from the broadcast newsroom. All the ideas are evaluated and therefore preproduction begins in the first meeting in which the subject matter is selected and, after discussions, they decide the most suitable formats, with the technical advice from developers and designers. They then decide the best format and outline the production process.

After that first meeting, professionals began to work in parallel on content and design. While the journalists focus on the documentation and content development stage, the designer begins to shape the model, compose the sketches and take photographs. From these elements, the developers build the formats. These are the last to join the production chain and as such work more intensely in the later stages of development. When the developers finish their part of the process, they move on to the verification period in which errors are detected and modifications are made in order to improve navigability and user experience. Finally, the product is tested, in advance of the launch, in order to make any last-minute modifications.

Hernanz (2017) explains that the development of projects involving two documentaries (television and webdoc) is planned together such that professionals work simultaneously on both projects. In the case of RTVE Lab’s transmedia projects, they expand the content into several formats and incorporate user participation.

Throughout the production processes, three aspects stand out: sharing the same physical space, which allows direct contact among the RTVE Lab team; holding spontaneous meetings, which increases collaboration and constant coordination throughout all the production stages. They use tools such as Slack, Trello, Atlantis and Avocade to share the different project outlines, and they work with the scrum system, an agile work methodology with daily objectives, which helps them implement deadlines for each stage of the project.

RTVE Lab developers and the designer agree they have plenty of freedom to create their designs. In this sense, their level of innovation is conditioned by the talent of its professionals. Indeed, their first products were videos and infographics such as a special video about the 10th

anniversary of 9/11. RTVE Lab did not start with interactive formats until they outsourced professional developers in 2012. The profile of the designer is very specific, since he is responsible for controlling the technological codes, developing user experience and organizing the content in order for it to be accessible. According to Hernanz (2017), a proactive attitude is more important than professional experience. RTVE Lab journalist Esther García (2017) also highlights other qualities such as versatility and being under a process of continuous learning in order to bring an innovative touch to their products.

In the content selection process, the role of public service is a priority in order to ensure products are aimed at all social levels and cultural backgrounds. TVE programming is prioritized. Miriam Hernanz takes the final decision about both content and format, and the head of the Interactive Department then supervises the final test. RTVE Lab members agree that content is a priority when creating each piece. In the words of García (2017), “if a story does not have ‘substance,’ it cannot be developed, no matter how innovative the form.” Each piece is unique and is produced with its own processes and conditions. According to RTVE Lab visual editor Marcos Martín (2017), “the Lab specializes in new formats because it tells stories in a different way.”

4.2.3. Concept and development of innovation

Hernanz explains that innovation consists of applying the technological codes to create new ways of telling **stories**, following their public service function, as well as creating a brand and positioning RTVE as a model for journalistic innovation in Spain. According to Hernanz (2017), innovating “is not just inventing, but adapting to solve a specific problem.”

Esther García (2017) argues that “innovation starts from the idea that we have to be different no matter what. It is a method of improving and endowing values for the brand itself.” Marcos Martín (2017) believes that innovation consists of “doing things that others do not do or doing what others do but in a radically different way.” And he adds that “a media company is innovative when it dedicates a large part of its resources to experimentation, to testing and producing new narratives.”

The perceptions of RTVE Lab’s professionals reveal the importance of individual initiative, the effectiveness of leadership and the commitment to multidisciplinary teams (made up of journalists and developers) that implement the products.

4.2.4. Transfer of innovation results

An example of transfer to the audience and collaboration with the audiovisual sector as a public service function is the co-production of webdocs and the hiring of external companies specialized in virtual reality and 360° video. In December 2016 RTVE Lab publicly presented the “Webdocs Factory,” which is dedicated to co-producing a webdoc with a producer that proposes the project to them. This strategy allows the audiovisual industry to be incentivised and increases the chances of webdocs becoming profitable for the producers that commit to them. Therefore, RTVE Lab helps professionals who are innovating and, therefore, also consolidates the interactive documentary production industry in Spain. To carry out this initiative, RTVE Lab provides a budget line for each project and also assumes executive production, that is, it offers constant advice on technical and narrative requirements.

Madiana Asseraf, director of EBU’s Media Strategy & Development Unit, emphasizes that with fewer resources than other European laboratories, RTVE Lab is achieving a greater impact than other more numerous departments. Asseraf (2018) highlights that at RTVE Lab they place the user at the centre of their activity: “they know how to listen to and understand the needs of the audience, they know how to propose innovative solutions and they know how to adapt their products according to audience feedback.”

According to some interviewees, the laboratory team encourages interaction between different RTVE departments and sections, as well as flexible workflows that foster the

dissemination of an innovative culture throughout the news organization (Figure 2). However, they usually do not receive much interest in terms of cooperation from other newsroom professionals.

Figure 2: A model of transference of innovation results at RTVE Lab.



Source: Own elaboration.

4.2.5. Analysis of the products

A total of 53 pieces available on the website were analysed up to 2017. Twenty webdocs were identified, of which 16 are based on documentaries broadcast on La 2 (TVE). Twenty-three interactive formats were identified, of which 6 are transmedia narratives of existing TV programmes and 8 are linked to events broadcast by TVE. In addition, 10 immersive video products were identified, 7 of them being 360° video formats and the other 3 virtual reality formats (Table 2).

Table 2. Typology of RTVE Lab projects.

TITLE	FORMAT	DATE
La línea de sombra	Transmedia webdoc of a documentary	30/11/2017
Memoria de futuro	Transmedia webdoc of a documentary	21/03/2017
Mugarab	Transmedia webdoc of a La 2 documentary	10/2014
Guerra a la mentira	Transmedia webdoc of a La 2 documentary	26/01/2017
Las sinsombrero	Transmedia webdoc of a documentary and exhibition	26/06/2015
San Fermín	Multiscreen interactive video	07/07/2015
Trazos Urbanos	Microdocumentary on Instagram	13/07/2015
Carlos, Rey Emperador	Interactive transmedia map of characters and podcast	7/09/2015
Isabel	Transmedia webdoc of a TVE series	20/11/2013
Karaoke “Mi gran noche”	Interactive transmedia video-karaoke	23/10/2015
Ingeniería Romana	Transmedia webdoc, interactive map and VR	24/10/2015
Tiempo de campaña	Interactive data visualization	1/12/2015
Generador de ilusión	Interactive game with transmedia video	14/12/2015
Urban Beekeeping	VR format	26/02/2016
Cuéntame cómo pasó	Transmedia interactive video of a TVE series	3/03/2016
Generation What?	Survey, interactive map and lineal video	11/04/2016
Refugiados en España	Interactive report	04/2016
Tu primer día en El Caso	Interactive transmedia short film from a TVE series	12/04/2016
Champions Replay	Interactive game and transmedia gamification	28/06/2016

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**The role of innovation labs in advancing the relevance of Public Service Media:
the cases of BBC News Labs and RTVE Lab**

Vive Río: Heroínas	360° video format	12/07/2016
El Trampolín	Transmedia gamification of a broadcast	5/08/2016
Guadalquivir	Transmedia webdoc with a 360° documentary	5/06/2016
Héroes: cuando la tierra arde	Interactive photo gallery	7 /09/2016
37 edificios para soñar	Interactive game	5/10/2016
Sexo, maracas y chihuahuas	Transmedia webdoc of a TVE documentary	14/11/2016
La Cocina	Video 360° and transmedia theatre play	18/11/2016
Que tiemble el camino	Transmedia webdoc and interactive game	13/12/2016
Montelab	Transmedia webdoc and interactive game	1/12/2014
En el Reino del Plomo	Transmedia webdoc with extras from a documentary	4/04/2013
Alma hija	Transmedia docuweb interview	29/09/2014
Fraking, fiebre a todo gas	Transmedia webdoc of a documentary	19/02/2015
50 años muerte de Kennedy	Transmedia webdoc of a TVE programme	22/11/2013
Historias en el retrovisor	Transmedia webdoc of a documentary	9/05/2013
Cromosoma 5	Transmedia webdoc of a documentary	30/04/2013
Otto y su cumpleaños	Promotional interactive game of Clan kids' channel	12/2016
Fred Astaire	Interactive transmedia documentary	22/06/2017
100 días de Trump	Interactive format	29/04/2017
Fuera de foco	Webdoc	2013
El tiempo en tus manos.	Transmedia interactive episode with VR of a TVE	24/02/2015
Cyrano de Bergerac	360° immersive scene of a theatre play	24/07/2017
Almagro respira teatro	360° scene, videos and interactive games	24/07/2017
Cervantes VR	VR format	20/04/2017
La mímica del alma: Alento 360°	360° video and immersive audio	29/04/2017
Un día en el Pavón	360° video	27/03/2017
Así será Tokio	Interactive transmedia TVE programme guide	23/05/2012
Sahel, vencer al hambre	Interactive format	3/05/2012
Así fue el Tsunami 2004	Interactive transmedia La 2 documentary	26/12/2014
Derbi en Final Champions	Interactive transmedia videos with Twitter	22/05/2014
Telediario, historia de imagen	Interactive transmedia with 360° images	4/2014
Las claves del Cónclave	Interactive format	2/2013
La transición real	Interactive format	19/06/2014
Propósitos para año nuevo	Interactive photo gallery	12/2012
Generacion 12-2	Webdoc	21/12/2013

Source: Own elaboration using data from RTVE Lab.

4.2.5.1. Webdocs

The webdoc is a format created from multilinear information that represents reality with its own navigation modalities, depending on the degree of participation involved (O’Flynn, 2012). This format lies between the interactive reportage and the documentary. Interactivity, multimodality, hypertextuality, feedback, multiplicity of narrative resources, infographics and gamification make up its essential features.

RTVE Lab has produced 20 webdocs of diverse themes. Some of them, such as *Cromosoma 5* or *Fraking*, *La fiebre del gas*, stand out for their scientific dissemination. Others include gamification strategies: *Que tiemble el camino* allows users to put themselves in the shoes of a Parkinson’s patient and, through an interactive game, can travel the Camino de Santiago (The Way of St. James) in Northern Spain. *Montelab* is a newsgame that addresses the real estate crisis in which users buy a home and make decisions on how to manage their budget.

Other webdocs, such as *La línea de sombra* and *En el reino del plomo*, were developed from reports broadcast on TVE. Occasionally, webdocs are useful for the user to experience a shocking reality. For example, *Guerra a la mentira* allows the atrocities committed in several international conflicts to be discovered and investigated. *Refugiados en España, en el limbo del asilo* addresses the life of refugees who arrived in Spain fleeing from the conflict in Syria and allows users to put themselves in their situation.

4.2.5.2. Interactive programmes

By interactive programmes we mean nonfiction narrative formats that combine action and users’ choice, immersion and enacted perception as a means to construct the representation of the subject matter (Aston & Gaudenzi, 2012). They are often transmedia projects that are produced out of an existing TVE series, as in the case of *Cuéntame cómo pasó*. On the occasion of the 300th episode, an interactive video presented by one of the principal actors illustrated the great events that marked the recent history of Spain. King Juan Carlos, the Spanish monarch at that time, shows an interactive map with additional information from the series that explains the relationships between the characters and the historical context.

Other interactive formats address sports topics. *Derbi en la final de la Champions*, which covered the 2013–2014 UEFA Champions League final, follows the likes of Real Madrid and Atlético de Madrid, using interactive videos produced during the game, including user “tweets.” *El Trampolín* narrates the Rio 2016 Olympic Games through a platform that includes games, quizzes about athletes, image galleries, etc. Another interactive format offers the San Fermín running of the bulls in Pamplona in a multi–screen format in order that the user can view the bull run from eight camera positions.

An especially interesting project is *Generation What?*, an interactive format in which 16 European public broadcasters participated. It portrays the “millennial” generation through a survey on their attitudes to Europe, the economic crisis, sentimental relationships, migration, access to housing, etc.

4.2.5.3. 360° videos and virtual reality

Interactive 360° video and virtual reality (VR) are immersive journalism formats that allow the participant to actually enter a virtually recreated scenario representing the news story (De la Peña *et al.*, 2010). They are especially suited to showing sporting events (*Vive Río: Heroínas de los Juegos Olímpicos de Río 2016*) or the hidden details of theatre performances (*Un día en el Pavón Teatro Kamikaze*, *Almagro respira teatro*, *Cyrano de Bergerac*), where users can experience an immersive experience in 360°.

RTVE Lab has experimented with VR in three different productions. For example, *Ingeniería Romana* uses VR to broadcast historical heritage. Through a VR app the user can

see the city of Tarragona and the old Tarraco. *El tiempo en tus manos*, adapted from the series *El Ministerio del Tiempo*, creates a transmedia universe with fiction content. Through a VR app, users interact with the characters in the series. Another example is *Cervantes VR*, which tells the life and work of the novelist Miguel de Cervantes. The episodes, produced with 3D images and immersive sound, allow the user to make a journey in the first person through the universe of the writer.

5. Conclusions

The analysis of the results shows that, although both laboratories belong to public entities and their missions include their commitment to innovation as a public service goal, they carry out different operations, have different objectives and achieve different results. On the one hand, BBC News Labs responds to the corporation's global innovation strategy through the use of new technologies for the research and design of content and tools. On the other, RTVE Lab operates as an innovation unit for the Interactive Service and as a small section with limited influence on the rest of the corporation but providing a wide variety of innovative storytelling formats.

Both laboratories enhance the universality of public service through the transfer of their innovation results. BBC News Labs creates tools to offer higher quality products to its users with the application of new technologies and, at the same time, facilitates the work of the professionals in the various departments of the corporation. RTVE Lab also improves the quality of online products and formats, in addition to creating content of social interest, such as culture, science and theatre, in an innovative way.

However, the level of transfer of innovation from both laboratories to other departments in their corporations is uneven. RTVE Lab has developed projects in cooperation with a limited number of TVE programmes, while BBC News Labs works specifically to transfer all its production to BBC News newsrooms, in addition to other departments such as BBC News Product & Systems and BBC Research & Development, BBC Radio and BBC World. Indeed, we have identified special support for the BBC World Service, since many tools are designed to facilitate the work of its journalists in different languages. The close relationship of the laboratory with other innovation departments of the corporation, such as BBC Connected Studio and Taster, is also part of its transference policy.

Most of BBC News Labs' productions are tools that streamline the task of journalists and devices that improve user experience. BBC News Labs has also developed a solid strategy to boost the technology industry through partnerships with universities and international companies.

RTVE Lab, on the other hand, bases itself on creating transmedia products of many existing TVE programmes. Moreover, although RTVE develops an innovation policy as a corporate commitment, RTVE Lab shows little coordination with the corporation's innovation policies, nor with RTVE's innovation and technology departments, but rather focuses on innovating in RTVE.es content. As part of its public service role, RTVE Lab launched the Webdocs Factory to increase co-production with external companies.

It could be argued that innovation in both laboratories is considered a strategy to win legitimacy as public services. One relevant difference is that BBC News Lab has a significant transference of results to other departments in the company in an effective way, while RTVE Lab is almost an isolated department focused on its own projects, with little collaboration from other newsrooms and therefore a limited transference of research results.

References

- Arias, F. (2016). "RTVE y RTVE Lab: incubadora de innovación". In C. Sádaba, J. A. García-Avilés & P. Martínez Costa (Eds.), *Innovación y desarrollo de los cibermedios en España* (pp. 120-125). Pamplona: Eunsa.

- Aston, J. & Gaudenzi, S. (2012). Interactive documentary: setting the field. *Studies in Documentary Film*, 6(2), 125-139. https://www.doi.org/10.1386/sdf.6.2.125_1
- Bardoel, J. & d'Haenens, L. (2008). "Reinventing public service broadcasting in Europe: prospects, promises and problems". *Media, Culture & Society*, 30(3), 337-355. <https://www.doi.org/10.1177/0163443708088791>
- Collins, R. (2007). The BBC and "public value". *M&K Medien & Kommunikationswissenschaft*, 55(2), 164-184.
- De la Peña, N., Weil, P., Llobera, J., Giannopoulos, E. & Slater, M. (2010). Immersive journalism: immersive virtual reality for the first-person experience of news. *Presence: Teleoperators and virtual environments*, 19(4), 291-301. https://www.doi.org/10.1162/PRES_a_00005
- Dogrueel, L. (2014). "What is so Special about Media Innovations? A Characterization of the Field". *The Journal of Media Innovations*, 1(1), 52-69.
- García-Avilés, J. A., Carvajal-Prieto, M., De Lara-González, A. & Arias-Robles, F. (2018a). Developing an index of media innovation in a national market: The case of Spain. *Journalism Studies*, 19(1), 25-42. <https://www.doi.org/10.1080/1461670X.2016.1161496>
- García-Avilés, J. A., Carvajal-Prieto, M., Arias, F. & De Lara-González, A. (2018b). How journalists innovate in the newsroom. Proposing a model of the diffusion of innovations in media outlets. *The Journal of Media Innovations*, 5(1), 1-20. <https://www.doi.org/10.5617/jomi.v5i1.3968>
- Głowacki, M. & Jackson, L. (Eds.) (2013). *Public Media Management for the Twenty-First Century: Creativity, Innovation, and Interaction*. London: Routledge.
- Iosifidis, P. (Ed.) (2010). *Reinventing Public Service Communication: European Broadcasters and Beyond*. Hamburg: Springer.
- Jakubowicz, K. (2010) PSB 3.0: Reinventing European PSB. In P. Iosifidis (Ed.), *Reinventing Public Service Communication: European Broadcasters and Beyond* (pp. 9-22). Hamburg: Springer. https://www.doi.org/10.1057/9780230277113_2
- Küng, L. (2008). Innovation and Creativity in the Media Industry: What? Where? How? In C. Dal Zotto & H. van Kranenburg (Eds.), *Management and Innovation in the Media Industry* (pp. 3-13). Cheltenham, UK: Edward Elgar.
- Küng, L. (2013). Innovation, Technology and Organisational Change. In A. Krumsvik & T. Storsul (Eds.), *Media Innovation. A Multidisciplinary Study of Change* (pp. 9-12). Göteborg: Nordicom. <http://www.doi.org/10.5617/jmi.v1i1.823>
- Moe, H. (2008). Public service media online: regulating public broadcasters' Internet service – a comparative analysis. *Television and New Media*, 9(3), 220-238. <https://www.doi.org/10.1177/1527476407307231>
- O'Flynn, S. (2012). Documentary's metamorphic form: Webdoc, interactive, transmedia, participatory and beyond. *Studies in Documentary Film*, 6(2), 141-157. https://www.doi.org/10.1386/sdf.6.2.141_1
- Sádaba, C., García-Avilés, J. A. & Martínez-Costa, M. P. (Eds.) (2016). *Innovación y desarrollo de los cibermedios en España*. Pamplona: Eunsa.
- Storsul, T. & Krumsvik, A. H. (2013). What is Media Innovation? In A. Krumsvik & T. Storsul (Eds.), *Media Innovations. A Multidisciplinary Study of Change* (pp. 13-26). Gothenburg: Nordicom. Retrieved from <http://urn.nb.no/URN:NBN:no-38800>
- Van den Bulck, H. & Moe, H. (2017). Public service media, universality and personalisation through algorithms: mapping strategies and exploring dilemmas. *Media, Culture & Society*, 40(6) 875-892. <https://www.doi.org/10.1177/0163443717734407>
- Zaragoza Fuster, T. & García-Avilés, J. A. (2018) "Desarrollo de la innovación periodística en la televisión pública: El caso del RTVE LAB", *Hipertext*, 10. <https://www.doi.org/10.31009/hipertext.net.2018.i17.02>

Appendix. List of interviewees

- Asseraf, Madiana. Head of EBU Media Strategy & Development. May 2018.
- Conroy, Andy. Head of BBC Research & Development, June 2018.
- Evans, Michael. Designer of Artificial Intelligence, Future Experience Technologies, BBC Research & Development. June 2018.
- García, Esther, RTVE Lab journalist. March 2017.
- Harrison, Laura. Director of Connected Studio. June 2018.
- Hernanz, Miriam. Head of RTVE Lab. March 2017.
- Martín, Marcos. RTVE Lab visual editor. March 2017.
- McKenzie, Robert. Head of BBC News Labs. June 2018.
- Woolard, Adrian. Head of BBC North Lab. June 2018.