

Art, Culture and New Technologies
in Latin America and the Caribbean
Creative Economy

Music and Performing Arts

Digital Trends and Strategies



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Introduction

How are music and the performing arts staged in the virtual sphere? Can online experiences substitute face-to-face interactions? What are the opportunities for this sector in the digital economy? How do technologies help the development of the industry and what needs to change for the performing arts to thrive in the digital world?

In the report, *Vision 2025. Reinvesting in the Americas: A Decade of Opportunity*, issued by the Inter-American Development Bank (IDB), it has been stated that in order to tackle economic reactivation defining the next decade, our region needs to work towards sustainable and inclusive growth. Some of the routes of action for this recovery are revitalizing the production sector, promoting digitization, rapid adoption of new technologies, innovation, and entrepreneurship in creative industries, supporting SMEs, and fostering synergies between the public and private sectors.¹

The performing arts is one of many other sectors of the economy taking part in the strife for sustainable and inclusive growth. They comprise those artistic manifestations that take form on a stage, aiming at being performed live in front of an audience. They are forms of expression contained in the world of performing, including disciplines such as theater, dance, music, circus, opera, performance, and multidisciplinary arts. In Latin America and the Caribbean (LAC) there is little systematic research studying and making visible the impact of performing arts on the economy and on society. This book gathers quantitative and qualitative research from collected data and experiences on technology adoption in the sector during the COVID-19 pandemic, presenting unpublished data from the recent experience of different institutions and organizations in the region. With presentations and shows being canceled, the health emergency has deprived the industry from its main source of income, forcing it to bring the curtain down. The digital scene became the only momentary showcase to communicate with the audience, and for that reason professionals from the sector turned to technology, finding alternative ways to create, promote and generate revenue from their work. It was the onset of an unprecedented exploration of digital tools that are changing the ways in which we can experience something as old as the performing arts. The Argentine theater critic and historian, Jorge Dubatti, refers to this digital transformation as “technovivio” (technoexistence),

¹ Inter-American Development Bank, *Vision 2025, Reinvest in the Americas: A decade of opportunity*, (Washington DC: BID, 2021).

—“Living culture deterritorialized by technological intermediation”—, which allows for non-physical interaction and communication,² unlike the theater “convivio” (coexistence) that “demands the intense, physicality of the artists, in a rendezvous with the technicians and the spectators”.³

Music and Performing Arts: Digital Trends and Strategies is part of the IDB’s editorial series, *Art, Culture and New Technologies in Latin America and the Caribbean*, that aims at identifying the ways in which technology can drive innovation in the creative economy. The sector generates a multidimensional impact rarely analyzed from an economic perspective, considering them productive activities worthy of attention and promotion. These industries provide entertainment while also contributing to the economy by creating jobs —many of them based on innovation and creativity—, creating attractive assets for investment, talent and tourism, and by fostering social cohesion, while promoting mutual understanding and empathy.

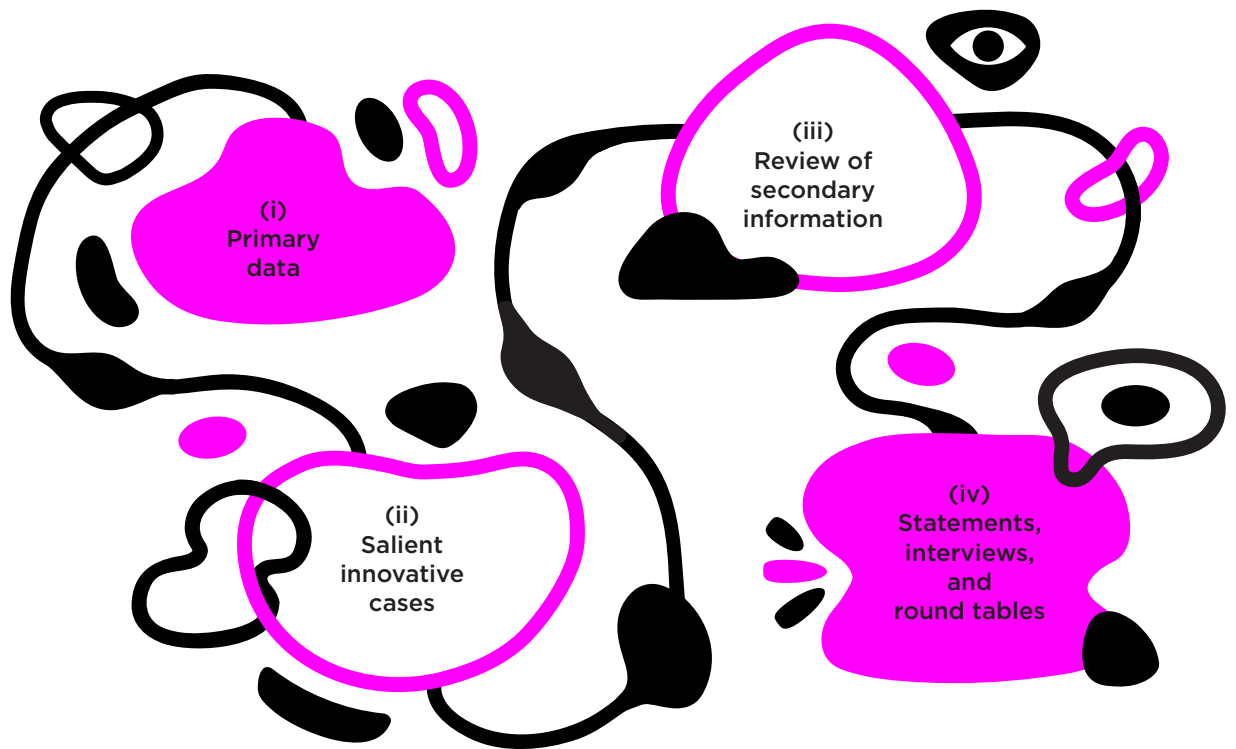
This publication is divided into four chapters. In the first, we review the effects of the pandemic on the performing arts ecosystem. In the second chapter, we describe the main changes brought about by the adoption of new technologies in music and the performing arts, the challenges faced by the industry and the innovations that ensued, emphasizing on emerging digital business models. The third part discusses illustrative cases of technological innovation, pointing out trends and possible futures for performative experiences from a digital perspective. Finally, we enlist trends and strategies that can trigger technological innovation in music and performing arts and underpin their role on the path to economic recovery and sustainable development in LAC.

2 *Idem.*

3 Jorge Dubatti. “Convivio y Tecnovivio: el Teatro entre Infancia y Babelismo”. *Revista Colombiana de las Artes Escénicas*. No. 9 (2015): 44-54, http://artescenicas.ucaldas.edu.co/downloads/artesescenicas9_5.pdf.

Methodology

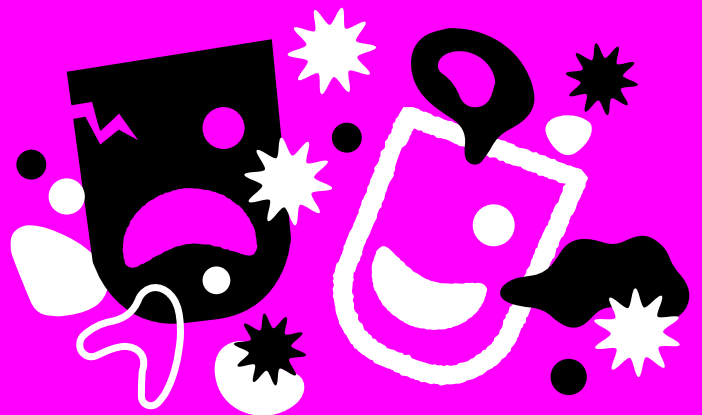
This publication was created on the basis of **(i) primary data**, from a *qualitative research* conducted through in-depth interviews to different stakeholders in the region and a *quantitative research* surveying three hundred directors of institutions and organizations related to the performing arts, whether in the fields of music, dance, theater, opera or multidisciplinary expressions; **(ii) salient innovative cases** in the field in LAC, North America and Europe and Asia; **(iii) the review of secondary information** such as global, regional, national, and sectorial surveys; and **(iv) statements, interviews, and round tables** with sector professionals, officials from the culture field, and creative economy experts. Throughout this volume, data from other studies is referenced in the critical apparatus. In the interest of not being repetitive, whenever no reference is assigned to support any information, it should be assumed that we are quoting our primary research.



1. COVID-19 Traces in the Music Industry and the Performing Arts

The performing arts are a ritual, where spectators take part not as consumers but as fellow travelers. We knew that the big problem was that without any attendance, the performing arts could not survive. The main problem during the pandemic has been the disconnection from the audience, and for that reason new languages and channels were created, while expecting the return of the long-awaited in-person experience.

—**Carmen Romero Quero**, CEO Teatro a Mil International Foundation



The Curtain Came down on a Stage in Crisis

Cancellation of in-person activities left the sector without activities and income, both from ticketing and from the collection of royalties for public performances, removing any possibility of distribution of their products. It was a hard blow for the region and not everyone could recover from it. Many independent businesses were shut down and high-skilled professionals temporarily transitioned to other productive areas, while others ventured into the digital sphere to continue exploring their craft.

It is estimated that in Latin America at least 6,908 theaters and 11,304 cultural centers were subject to intermittent closure throughout 2020 and most of 2021.⁴ The impact has been different in each country. For instance, in Mexico and Argentina, performing arts are responsible for 5.6% and 4.4% of cultural GDP, while Colombia, Costa Rica and Ecuador represent 1.1%, 0.7% and 0.15%, respectively. If we put these five countries together, the year-on-year variation between the second trimester of 2019 and 2020 was -44% in the performing arts and -23% in music (see chart 1).⁵ In 2020, the loss of income from live music concerts worldwide was 30,000 million dollars.⁶ The first year of the pandemic worldwide collection of copyright royalties dropped by 130,000 million dollars. Royalties in the music industry amounted to 8.498 million while in theater and other performing arts only 108 million were collected, which represents a contraction of 44%, a historical low for the sector.⁷



4 Triguboff Matías, *et al.*, “Evaluación del impacto del COVID-19 en las Industrias Culturales y Creativas. Una iniciativa conjunta de MERCOSUR, UNESCO, BID, SEGIB Y OEI” (Paris: UNESCO Publishing, 2021), <https://unesdoc.unesco.org/ark:/48223/pf0000380185>.

5 *Idem.*

6 Andy Gensler, “2020*, A Year Forever Qualified”, *Pollstar*, accessed May 25, 2021, <https://www.pollstar.com/article/a-year-forever-qualified-146993>.

7 Confederación Internacional de Sociedades de Autores y Compositores (CISAC), “Informe recaudaciones mundiales 2021 (datos 2020)”, *CISAC*, accessed January 20, 2022, https://www.cisac.org/sites/main/files/files/2021-10/GCR2021%20CISAC%20ES_2.pdf.

Chart 1. **Year-on-year variation from the second trimester 2019-2020 in music and performing arts in five Latin American countries⁸**

Country	Performing Arts	Music
Argentina	-81%	-58%
Colombia	-33%	-10%
Costa Rica	-17%	-17%
Ecuador	-27%	-21%
Mexico	-27%	N.A.
Average	-44%	-23%

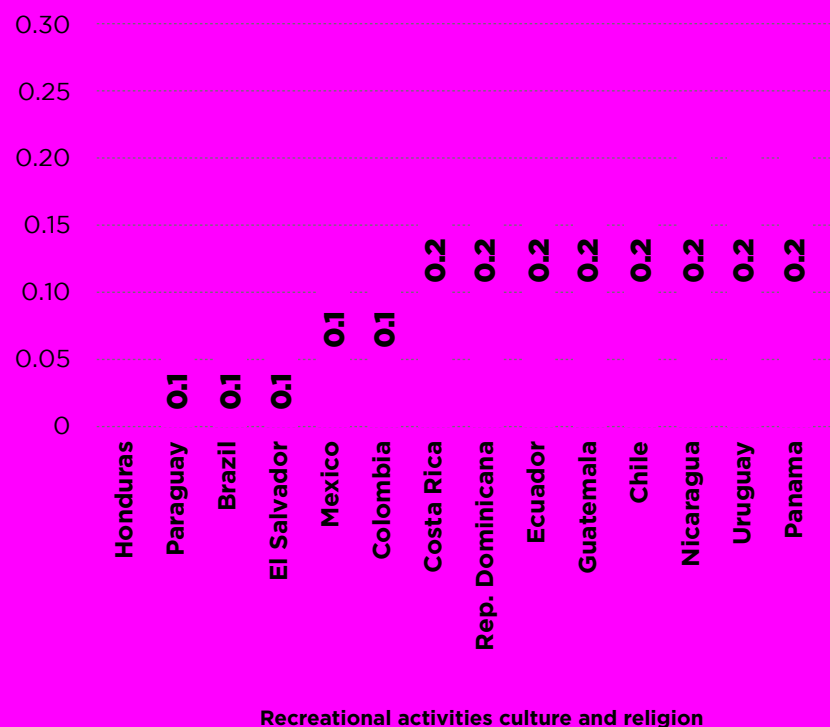
For the performing arts in LAC, public financing plays a central role, since most of the regional public administration models focus on guaranteeing access to cultural goods and services, considering citizen participation in arts and culture as a constitutional right. Thus, public cultural institutions contribute to the creation, production, and dissemination of artistic and cultural events. However, it has been estimated that expenditure on culture per country does not exceed 0.3% of GDP⁹ (see chart 2), while the economic contribution made by the creative and cultural sectors amounts to 2 to 5% of GDP by country.¹⁰ In the light of this imbalance, there is an opportunity for more public expenditures and larger investment aiming at increasing wealth and creating new jobs.

⁸ *Idem.*

⁹ Comisión Económica para América Latina y el Caribe (CEPAL), “América Latina (17 países): gasto en actividades recreativas, culturales y religión del gobierno central, 2018 (En porcentajes del PIB)”, accessed March 15, 2021, <https://observatoriosocial.cepal.org/inversion/es/grafico/america-latina-17-paises-gasto-actividades-recreativas-culturales-religion-gobierno-0>.

¹⁰ Alejandra Luzardo y Lázaro Rodríguez Oliva, “Economía Creativa en América Latina. Mediciones y Desafíos”, Banco Interamericano de Desarrollo, 2018, 41-64. <https://publications.iadb.org/publications/spanish/document/Econom%C3%ADa-creativa-en-Am%C3%A9rica-Latina-y-el-Caribe-Mediciones-y-desaf%C3%ADos.pdf>.

Chart 2. **Expenditure on recreational, cultural, and religious activities by federal governments in 14 LAC countries during 2018 (percentage of their GDP).**¹¹



Although 61% of the respondents admitted having received support from public institutions, they deemed it insufficient to face the extended lockdowns, making it necessary to look for other alternatives. 77% of them considered that the industry became more supportive (chart 3) and 55% reported having helped other firms during lockdown (chart 4). Also 30% received donations from citizens (chart 5), 27% from independent groups and 23% from trusts or foundations (chart 6).¹²

Royalties generated by copyright, an additional source of income for the performing arts sector, fell by 25.4% in LAC compared to the previous year. In 2020 of the total 388 million dollars collected from royalties, 90% came from the music industry. In other words, the music sector shrank by 24.3%, while theater and performing arts shrank by 82.5%, compared to the previous year.¹³

¹¹ CEPAL, *op. cit.*

¹² Aura/SIMO. “Estudio cuantitativo para la Serie Arte, Cultura y Nuevas Tecnologías en América Latina y el Caribe”. Ciudad de México: 2021.

¹³ (CISAC). “Informe recaudaciones mundiales 2021 (datos 2020)”. When added up, Brasil, México y Argentina accounted for 80% of the collection of royalties, and in 2020 income from royalties were 150, 101, and 95 million dollars respectively.

Chart 3. **Solidarity as a result of the pandemic**

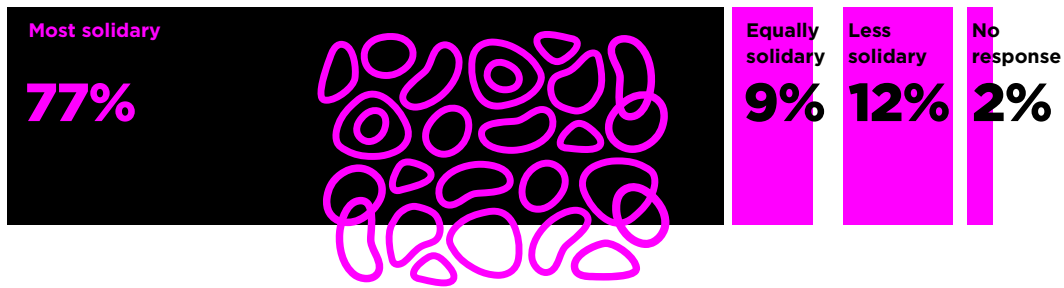


Chart 4. **Has your organization helped others during the pandemic?**

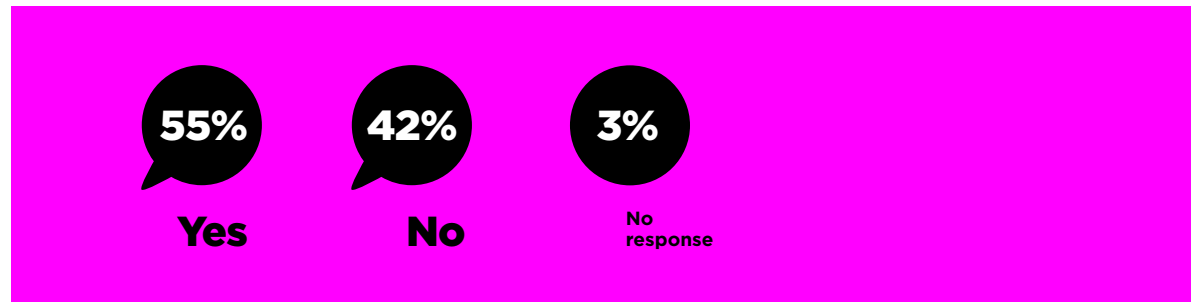


Chart 5. **Support for the sector in LAC**

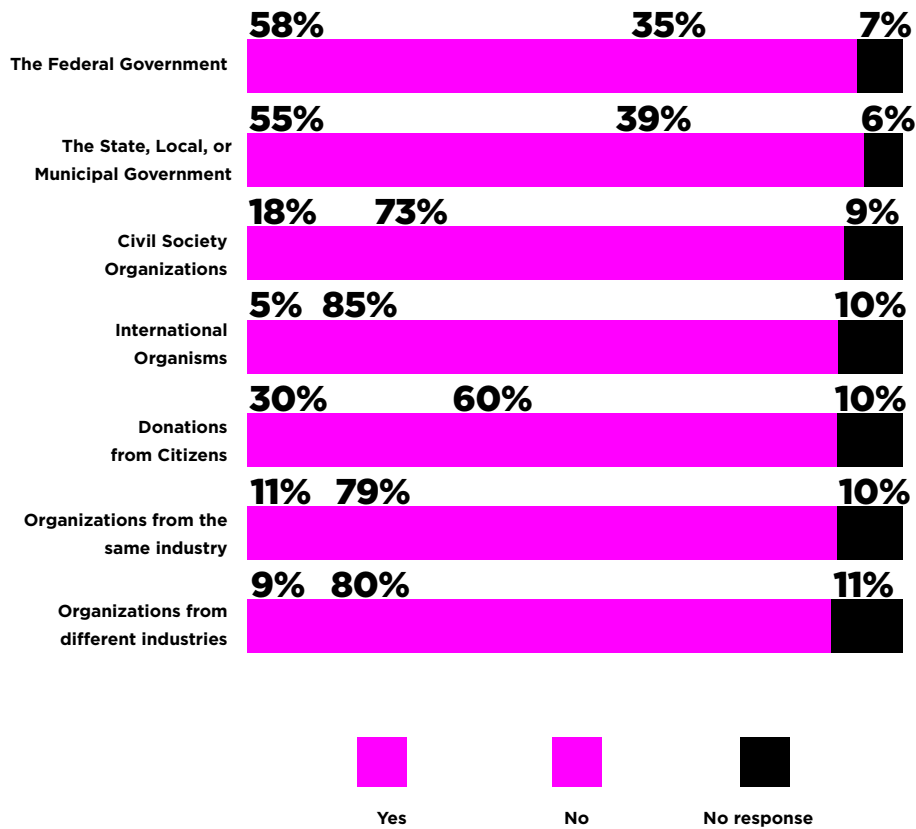
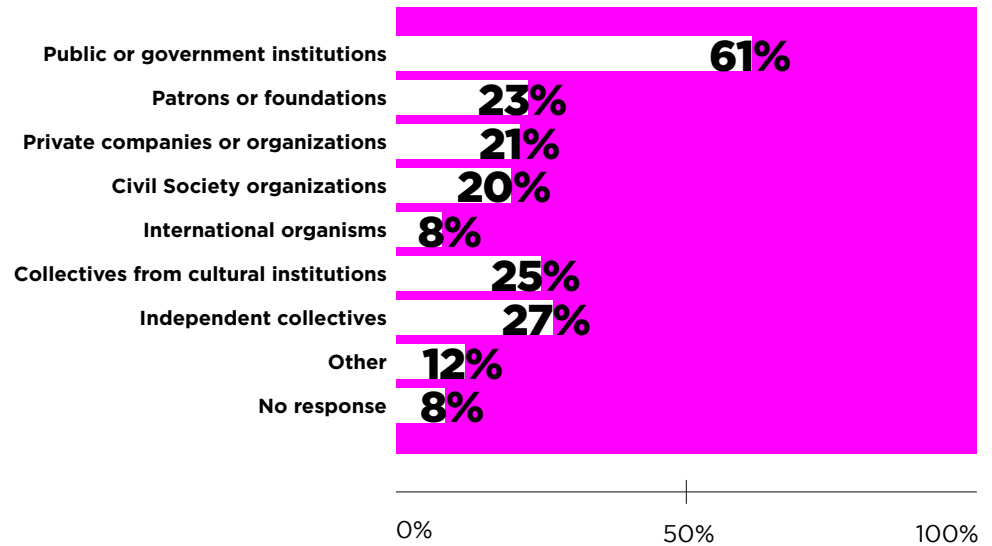


Chart 6. **Support networks in LAC**

The closure of venues upended other businesses and professionals indirectly related to the industry, such as rental companies (of furniture, audio, video, and lighting equipment), transportation, logistics and catering services, costume designers and set designers, among others. Although there is no specific regional data, in New York City, the closure of Broadway shows (responsible for 10,000 direct and 97,000 indirect jobs) led to an annual loss of 14.7 billion dollars.¹⁴

In LAC, public support for stage professionals has been unlike. 86.8% of the policies facing the crisis have focused on supporting creation, production, and dissemination, 7.8% on promoting consumption and 5.5% were recovery measures and transversal policies. Regarding direct funding, 45% were financial transfers through scholarships, contests, calls for proposals and prizes. 7% was allocated to the promotion of national content, which resulted in the creation of digital platforms where artistic and cultural works were disseminated.¹⁵ Some of these platforms are: *Compartir Cultura*,¹⁶ (Argentina); *Cultura en Casa*¹⁷ (Uruguay); *Aquí*

¹⁴ Michael Paulson, Elizabeth A. Harris y Graham Bowley, “One Lost Weekend”, *The New York Times*, issued September 23, 2020, <https://www.nytimes.com/interactive/2020/09/24/arts/new-york-fall-arts-economy.html>.

¹⁵ UNESCO et al., “Evaluación del impacto del COVID-19”.

¹⁶ Ministerio de cultura Argentina, “Compartir cultura”, official website, <https://compartir.cultura.gob.ar/>.

¹⁷ Ministerio de educación y cultura, “Cultura en casa”, official website, <https://culturaencasa.uy/>.

Cultura¹⁸ (Costa Rica); o Contigo en la Distancia,¹⁹ (Mexico). As a sector the performing arts accounted for 56% of specific measures during the pandemic.²⁰

From all support measures by governments in LAC, the emergency bonds for the performing arts industry in Argentina and Brazil stood out. The first transferred financial aid to creators thanks to national directories and registries of performing professionals, like the Instituto Nacional de la Música (INAMU).²¹ In Brazil, the artistic community organized to push for the adoption of the Aldir Blanc Law (named after the Rio de Janeiro composer who died of COVID-19),²² which allocated \$700,000 dollars to be distributed as a temporary income support of \$120 dollars per person.²³ The Caribbean Development Bank (CDB) launched a \$100,000 dollar fund to support the music subsectors, festivals and carnivals, and any artistic and cultural projects using digital tools and fostering a generation of income.²⁴

Other governments provided credit support for workers in the cultural sector, such as Argentina and Ecuador. In Argentina, 7 million dollars were granted through zero-interest loans for SMEs.²⁵ In Ecuador, the Central Bank opened a special line of credit for the arts, as well as bank loans through Impulso Cultura, offering conditions tailored for professionals in the creative fields.²⁶

18 Ministerio de cultura y juventud, “Aquí cultura”, official website, <https://aquicultura.go.cr/>.

19 Secretaría de Cultura, “Contigo en la Distancia”, official website, <https://contigoenladistancia.cultura.gob.mx/>.

20 Triguboff Matías, et al, “Evaluación del impacto del COVID-19”.

21 Instituto Nacional de la Música, <https://inamu.musica.ar/>.

22 Nestor García Canclini, “Debate 22: políticas culturales México Brasil”. recorded February 8, 2022, Mexico City, Mexico. Video, 7:46. <https://youtu.be/spOzgHE-jpmk?t=466> .

23 “Aprovada ‘Lei Aldir Blanc’, que destina R\$ 3,6 bilhões da União a trabalhadores da Cultura de todo o país”, *Revista Forum*, Issued May 26, 2020, <https://revis-taforum.com.br/cultura/aprovada-lei-aldir-blanc-que-destina-r-36-bilhoes-da-uniao-a-trabalhadores-da-cultura-de-todo-o-pais/#>.

24 Michelle Nurse, “CDB allocates US\$100,000 for COVID-19 Emergency Relief Grants for Cultural, Creative Industries”, *Caricom Today*, issued April 25, 2020, <https://today.caricom.org/2020/04/20/cdb-allocates-us100000-for-covid-19-emergency-relief-grants-for-cultural-creative-industries/>.

25 Ministerio de Cultura de la Argentina. “Medidas para el sector de la cultura ante el COVID-19”. Issued April 25, 2020. <https://www.cultura.gob.ar/medidas-en-el-sector-cultural-ante-el-covid-19-8932/>.

26 BanEcuador, <https://www.banecuador.fin.ec/productos-ciudadanos/credito-micro/productos-microempresas/credito-impulsocultura/>.

Aside from subsidies, looking for funds posed several problems. Sponsorships, a key source for the sector, were restructured and many companies stopped sponsoring the arts, to focus on other areas, such as health or food.²⁷ Private banking in the region still has a long way to go, as it currently lacks financial services targeting professionals from the creative fields, such as the performing arts. For now, credits address other types of companies and are not well-suited for creative projects.²⁸

In some countries, sponsorship laws promote private funding by granting tax exemptions for firms supporting the performing arts. This model is at a very early stage: legislations are relatively new, while patronage so far has little penetration and limited growth. Countries such as Brazil, Chile, Colombia, Mexico, and Uruguay have regulations and mechanisms addressing this issue, allowing both individuals and companies to financially support cultural initiatives, in exchange for tax exemptions. In Argentina though, patronage law is valid only in its capital, Buenos Aires (see chart 7).

Incentives for innovation and adoption of technology are usually a task of the ministries of Economy, Foreign Trade or Labor, leaving cultural government departments out of the scheme. Such is the case in Chile, where the Corporación de Fomento de la Producción (CORFO),²⁹ an agency of the Chilean Ministry of Economy, Development and Tourism, allocates part of its budget for the development of local creative enterprises. Regarding the music industry, CORFO has financed projects such as Bizarro Lab,³⁰ an acceleration program focused on music; the Music Tech Association Chile (MUSTACH),³¹ an organization bringing together technology-based Chilean companies that provide innovative products and services for the music industry; and the Observatorio Digital de Música Chilena (ODMC),³² the first research project of its kind in the region, aiming at creating reports on the economic impact of music similar to Music By Numbers, a program in the U.K.³³

27 KEA European Affairs, “The impact of the COVID19 pandemic on the Cultural and Creative Sector”, issued November, 2020, https://keanet.eu/wp-content/uploads/Impact-of-COVID-19-pandemic-on-CCS_COE-KEA_26062020.pdf.

28 Organization for Economic Co-operation and Development (OECD), “Culture shock: COVID-19 and the cultural and creative sectors”, issued September 7, 2020, <https://www.oecd.org/coronavirus/policy-responses/culture-shock-covid-19-and-the-cultural-and-creative-sectors-08da9e0e/>.

29 Corporación de Fomento de la Producción (CORFO), <https://www.corfo.cl/>

30 Bizarro Lab, official website, <https://www.bizarrolab.cl/>.

31 Mustach, official website, <http://www.mustach.cl/>.

32 Observatorio Digital de la Música Chilena, official website, <https://www.odmc.cl/#/>.

33 UK Music, “Music by Numbers 2020”, <https://www.ukmusic.org/research-reports/music-by-numbers-2020/>.

Chart 7: **Examples of patronage laws in Latin America**

Program	Territory	Year	Description
Ley de Mecenazgo (Santilli Law) ^I	Buenos Aires, Argentina	2006	Individuals are admissible for up to \$8,000 and companies for up to \$120,000 on tax deductions per project. The benefits granted by the law are 100% deduction of VAT for individuals, and 50 to 80% for companies. It is in force only in the City of Buenos Aires, and therefore not applicable at a federal level.
Rouanet Law	Brazil	1991	It governs tax exemptions on donations for artistic and cultural undertakings. It grants individuals with up to 6% tax deductions and companies with up to 4%.
Cultural Donations Law ^{II}	Chile	1990	It allows taxpayers to deduct up to 50% of their taxes payable with donations and the other remaining 50% can be acknowledged as expenses required for the production of income.
Corporación Colombia Crea Talento (COCREA) ^{III}	Colombia	2020	It grants a tax benefit of 165% of income tax deduction to private initiatives that contribute to the development of training, creation, production, distribution, and circulation projects in the creative fields.
Estímulos Fiscales a las Artes (EFIARTES) ^{IV}	Mexico	2017	It allows companies to contribute up to 100,000 dollars for the development of a stage production, in exchange for an equivalent deduction of taxes payable (VAT). Among its public calls are: EFITEATRO (production and Creation of Theater pieces), EFIDANZA (dance projects) and EFIMUSICA (music).
Fondo de Incentivo Cultural ^V	Uruguay	2009	The fund has been established with contributions from both individuals and companies interested in financing arts and culture projects. It allows the donor to deduct up to 75% of the total donation in taxes payable (VAT) while the rest can be labeled as general expenses.

^I Ciudad de Buenos Aires. “Los Contribuyentes pueden ser mecenas de la cultura”, accessed February 11, 2022. <https://www.buenosaires.gob.ar/cultura/mecenazgo/informacion-para-contribuyentes>

^{II} Ministerio de las Culturas, las Artes y el Patrimonio. “Ley de Donaciones Culturales (Ley Valdés)”, accessed February 11, 2022. <https://www.cultura.gob.cl/wp-content/uploads/2013/08/rc-presentacion-donaciones-culturales-2-oscar-aguero.pdf>.

^{III} COCREA, <https://cocrea.com.co/>.

^{IV} El Estímulo Fiscal a Proyectos de Inversión en la Producción Teatral Nacional; en la Edición y Publicación de Obras Literarias Nacionales; de Artes Visuales; Danza; Música en los Campos específicos de Dirección de Orquesta, Ejecución Instrumental y Vocal de la Música de Concierto y Jazz, (EFIARTES). <https://www.estimulosfiscales.hacienda.gob.mx/es/efiscales/efiartes>.

^V Decreto reglamentario al sistema de incentivo a las actividades artístico culturales (mecenazgo) de octubre de 2007. Accessed February 11, 2022. https://www.mnhn.gub.uy/innovaportal/file/913/1/decreto_reglamentario_incentivo_cultural.pdf.

Data gap and Informality in the Sector

The pandemic has shed light on job insecurity in the performing arts industry and a high rate of informality, amidst provisional, dynamic, and temporary jobs.³⁴ Without formal contracts and usually underpaid, stage professionals try other sources of employment to supplement their income.³⁵ After the economic setback, this informality exposed the fragility of the sector, in which lack of economic support, healthcare or unemployment insurance is a common reality across LAC.

The scarcity of data makes it difficult to clarify the effect of informality. Although in the region there has been significant progress in incorporating Culture Satellite Accounts, in 2021 only six countries have published statistics on the cultural sector (Argentina, Brazil, Colombia, Costa Rica, Ecuador and Mexico). Even the available data from these accounts is miscellaneous (see chart 8),³⁶ because information catalogs and definitions of cultural activities fluctuate among countries. In addition, current metrics do not integrate digital transactions, making it impossible to estimate their exchange and generated value.³⁷ Moreover, artistic and cultural jobs are often underestimated in official statistics for several reasons, like the difficulty of determining specific activities exclusively to the sector, or the fact that most artistic jobs are not the main source of income for creative professionals, and even the premise that most creative jobs are not considered part of the formal economy.³⁸

³⁴ OECD, “Culture shock”.

³⁵ Ana Carla Fonseca et al., “La pandemia pone a prueba a la economía creativa: Ideas y recomendaciones de una red de expertos”, Banco Interamericano de Desarrollo, accessed January 20, 2021, <https://publications.iadb.org/publications/spanish/document/La-pandemia-pone-a-prueba-a-la-economia-creativa-Ideas-y-recomendaciones-de-una-red-de-expertos.pdf>.

³⁶ Diana Cifuentes Gómez, “Los retos en la medición del empleo cultural en América Latina”, *Observatorio de Cultura y Economía*, accessed March 30, 2021, https://culturayeconomia.org/wp-content/uploads/empleo_cultural-1.pdf.

³⁷ Ernesto Piedras, “Economía creativa para un desarrollo sustentable”, *Hermosillo Dialoga*, filmed May 13, 2021, <https://hermosillodialoga.com/economia-creativa-para-un-desarrollo-sustentable/>.

³⁸ OECD, “Culture shock”.

Chart 8. **Data Availability on cultural activities by country (elaborated by the author)**

	Foreign trade ¹				Cultural satellite accounts				Cultural Infrastructure
	Imports		Exports		Production/Consumption /Added Value		Other revealing data (non exhaustive)		
	Goods	Services	Goods	Services	Added value by section	By general area	# jobs	Event assistance	
Argentina	•	•	•	•	•	•	•	N.A.	•
Bolivia	•	•	•	•	N.A.	N.A.	N.A.	N.A.	N.A.
Brazil	•	•	•	•	•	•	•	N.A.	N.A.
Chile	•	•	•	•	N.A.	N.A.	•	•	•
Colombia	•	•	•	•	•	•	•	N.A.	N.A.
Costa Rica	•	•	•	•	•	•	•	N.A.	•
Ecuador	•	•	•	•	•	•	•	N.A.	•
El Salvador	•	•	•	•	N.A.	N.A.	N.A.	N.A.	N.A.
Guatemala	•	•	•	•	N.A.	N.A.	N.A.	N.A.	•
Honduras	•	•	•	•	N.A.	N.A.	N.A.	N.A.	N.A.
Mexico	•	•	•	•	•	•	•	•	•
Nicaragua	•	•	•	•	N.A.	N.A.	N.A.	N.A.	N.A.
Panama	•	•	•	•	N.A.	N.A.	N.A.	N.A.	N.A.
Paraguay	•	•	•	•	N.A.	N.A.	N.A.	N.A.	N.A.
Peru	•	•	•	•	N.A.	N.A.	N.A.	N.A.	•
Rep. Dominicana	•	•	•	•	N.A.	N.A.	N.A.	N.A.	N.A.
Uruguay	•	•	•	•	N.A.	N.A.	N.A.	N.A.	N.A.
Venezuela	•	•	•	•	N.A.	N.A.	N.A.	N.A.	N.A.

¹ COMTRADE

A concrete example of the consequences of informality in the sector can be seen in the independent project Música México Covid-19,³⁹ launched by the University of Guadalajara, in collaboration with the Mexican Association of Phonographic Producers (AMPROFON), and the agency Música Relatable. After raising 500,000 dollars in the first round of funding for musicians and technicians in Mexico, several problems with sharing these donations arose. By the end of 2021, the money had not been fully distributed because the beneficiaries could not meet basic requirements, such as being registered in the Mexican Taxpayer Registry or having an active bank account under their own name.⁴⁰

³⁹ Música México Covid-19, official website, <https://musicamexicocovid19.com/>.

⁴⁰ Ana Rodríguez (partner at Música Relatable), interview by Pablo Solís Vega, February 2021.

Flourishing Collaboration amidst Confusion

Information and communication technologies (ICTs) contributed to the creation of networks on multiple platforms, where people shared experiences and thoughts, or created innovative ways to carry out activities and fulfill their goals. Like never before, professionals from the world of culture and the arts joined their peers in global interaction, fostering a shared discussion on the present and future of the performing arts, claiming the importance of arts for society. For María Claudia Parias, executive president of the Fundación Nacional Batuta⁴¹ in Colombia, these platforms helped to “create emotional chains of support, and sectoral validation of collaborative work, since there is a need to recognize the creative industries as an essential sector in human life”.⁴²

Collective organization became a lobbying tool for fundamental changes, new regulations, and assistance funds. Flavia Furtado, director of the Amazon Opera Festival⁴³ in Manaus, Brazil, recalls the first time Brazilian opera houses were meeting on WhatsApp groups and Zoom calls to share good practices and think of joint solutions. From that point onwards, they have organized a common front to dialogue with authorities and promote initiatives that would ease the emergency situation in the sector. In total, they have managed to bring together 1,500 professionals from more than 200 cultural institutions in the country, putting them in a position to elaborate a unified discourse in front of public authorities.⁴⁴ In Panama, stage professionals organized and lobbied to modify a law on culture that had left out the performing arts, while succeeding in including the majority of their agreed demands.⁴⁵

⁴¹ Fundación Nacional Batuta was founded in 1991 as a public federal project in partnership with the private sector, and is the leading organization of the Sistema Nacional de Orquestas Sinfónicas Juveniles e Infantiles de Colombia. <https://www.fundacionbatuta.org/>.

⁴² María Claudia Parias (CEO at Fundación Nacional Batuta), interview by Pablo Solís Vega, March, 2021.

⁴³ Festival Amazonas de Ópera is an annual festival held at the Teatro de Manaus, in Brazil, around March and May. It is one of the most important opera events in the country and one of the most traditional ones in the continent <https://fao.teatroamazonas.com.br/>.

⁴⁴ Flavia Furtado (CEO of the Festival Amazonas de Ópera), interview by Pablo Solís Vega, March, 2021.

⁴⁵ Analida Galindo y Marlyn Attie de Mizrachi (Director of the Fundación Espacio Creativo), interview by Pablo Solís Vega, March, 2021.

The Teatro Colón in Buenos Aires⁴⁶ joined the “Beijing Forum for Performing Arts”,⁴⁷ a network of more than forty Opera houses around the world with the mission of reflecting on the future of the discipline.⁴⁸ In Chile, several music professional associations bringing together singers and technicians, managers and producers founded the Red de Asociaciones Musicales de Chile (RAM) which, although is not a formal organization, has made it possible to reach agreements between different actors in the music industry, pushing a reactivation agenda and lobbying with governments for emergency funds and health protocols to be ready for the return of in-person events.⁴⁹

46 Teatro Colón de Buenos Aires is one of the most important opera halls in the world. It is a stage open to foreign productions, but it also has an in-house orchestra, ballet and chorus, as well as a production team and workshop. <https://teatrocolon.org.ar/es>.

47 Beijing Forum for Performing Arts. <http://bfpa.chncpa.org/eng/gylm/>.

48 María Victoria Alcaraz (General Director at Teatro Colón de Buenos Aires), interview by Pablo Solís Vega, May, 2021.

49 Félix Barros (CEO at Evento Medido), interview by Pablo Solís Vega, May, 2021.

In addition to making available their programming for free during lockdown, some cultural institutions shared their spaces and technical and creative staff to support the work of health professionals.

In Argentina, the Teatro Colón in Buenos Aires turned their stage production workspace into a facial mask workshop available for the whole population. Its facilities were also adapted to carry out contagion tests and part of its staff volunteered at a hotel where citizens in isolation were lodging.⁵⁰

In Chile, the Bizarro Live Entertainment company and Movistar Arena urged their food production teams to assemble and distribute food boxes for marginalized populations. In addition, profiting from their experience in handling masses, they have been used as a vaccination center for the population in Santiago.⁵¹

In Quito, Ecuador, the Eugenio Espejo National Library, housed an emergency ventilator prototype factory at one of its warehouses.⁵²

In Mexico, theatrical production teams helped to build division walls to isolate patients at improvised hospitals, aiming at expanding their capacity and treating a great part of the infected population.

In Brazil, the Serviço Social Do Comércio⁵³ de São Paulo increased the collection and donation of food. It also distributed hygiene products and hired community associations and cooperatives to produce cloth masks, which they distributed at public hospitals. Face shields were also manufactured at the technology and arts sections of their facilities.⁵⁴

⁵⁰ Alcaraz, entrevista.

⁵¹ Ricardo Lira (CEO at CRT+IC. Centro para la Revolución Tecnológica en Industrias Creativas), interview by Pablo Solís Vega, May, 2021.

⁵² Ministerio de Cultura y Patrimonio de Ecuador, “Nueve respiradores reparados fueron entregados al Hospital de la Policía Nacional, gracias al trabajo de biomédicos voluntarios”, Gobierno de Ecuador, issued May 23, 2020, <https://www.culturaypatrimonio.gob.ec/nueve-respiradores-reparados-fueron-entregados-al-hospital-de-la-policia-nacional-gracias-al-trabajo-de-biomedicos-voluntarios/>.

⁵³ Founded in 1946, The Serviço Social de Comercio (SESC) is a Brazilian Non-profit organization with financial support from the corporate sector, and active across Brazil. Its main goal is to improve the wellbeing of local communities, addressing education, leisure, culture, and health care aspects. It is the leading institution in funding and supporting the arts in Brazil. <https://www.sesc.com.br/>.

⁵⁴ Aurea Vieira (Manager for International Relations at the Serviço Social Do Comércio de São Paulo), interview by Pablo Solís Vega, February, 2021.

2. Reimagining The Performing Arts: Between the Face-to- Face and the Digital Experience

The pandemic sped things up and pushed forward everything related to streaming so that instead of postponing it, streaming was happening faster than we had anticipated.

—**Andy Ovsejevich**, CEO at Ciudad Cultural Konex



In the history of the performing arts, technological exploration has been a constant goal in search for new forms of expression, but also as a means to enliven the aesthetic experience of audiences. Even before the pandemic, technological innovation was constantly used to enhance the artistic in-person experience, blurring the boundaries between the imaginary and the real world. Among some of these innovations are: Neural synthesizers,⁵⁵ wearables sensors that transform body movements into sound and lighting,⁵⁶ Visual projections that react to body movements using Kinect technology,⁵⁷ stereoscopic dance,⁵⁸ 3D⁵⁹ mapping, drones⁶⁰ and robots,⁶¹ 360 videos,⁶² virtual⁶³ and augmented reality,⁶⁴ and even holograms, which bring deceased characters back to life.⁶⁵ The pandemic accelerated the process of technology adoption, with the intention of addressing digital audiences.⁶⁶ The urge to transform itself led the industry to rethink their contents and infrastructure, while discovering new activities and experiences.

55 Pepe Zapata, "Transformación de las Artes Escénicas en la Era Digital", *Anuario AC/E de Cultura Digital* (2016): 54-72, accessed March 25, 2021, https://www.accioncultural.es/media/Default%20Files/activ/2016/Publi/anuario2016/4_transformacionArtesescenicas.pdf.

56 Imogen Heap, "The Mi Mu Musical Glove - Kickstarter", March 23, 2014, <https://youtu.be/vJWzxMVDq8I>.

57 Frieder Weiss, "Mortal Engine by Chunky Move", <https://youtu.be/sbjOMualLVs>.

58 Klaus Obermaier, "Le Sacre du Printemps - Klaus Obermaier & Ars Electronica Futurelab", March 20, 2012, <https://www.youtube.com/watch?v=DhPtrpSIHXU>.

59 RWC - Real-World Connection Pte Ltd, "3D Architectural Mapping Projection Yt Symphony Orchestra 2011", June 19, 2011, <https://www.youtube.com/watch?v=7eF9W3gcDWw&feature=youtu.be>.

60 Daito Manabe, "ELEVENPLAY x RZM "24 drones", September 15, 2015, <https://www.youtube.com/watch?v=cYWVvKudIIJ8>.

61 Huang Yi, "HUANG YI & KUKA - A duet of Human and Robot", October 23, 2013, <https://vimeo.com/77566365>.

62 Wall Street Journal, "Backstage with an Elite Ballerina (360 Video)", November 26, 2015, <https://www.youtube.com/watch?v=FQZAlg5KfvQ>.

63 Welsh National Opera, "Rhagflas MAGIC BUTTERFLY Trailer", July 11, 2017, <https://www.youtube.com/watch?v=cBW8KVRhZEs&t=43s>.

64 stype, "BTS 'Love Yourself'" World Tour - Augmented Reality stage", May 28, 2020, <https://www.youtube.com/watch?v=V9Qb1Ocll80>.

65 Michael Jackson, "Michael Jackson - Slave To The Rhythm", May 14, 2014, <https://www.youtube.com/watch?v=jDRTghGZ7XU>.

66 Aura/SIMO, *op. cit.*

The Digital Transformation of the Performing Arts Sector

Before the pandemic, 7 out of 10 performing arts organizations deemed their technological development as ideal (chart 9) and 54% rated their technological infrastructures as optimal or sufficient (chart 10). The most common tools were social networks (90%), WhatsApp (63%), and websites (54%), while teleconferences were mentioned by 32% of the respondents (chart 11). In almost half of the sector (49%) technological development and innovation plans were being carried out (chart 12), while websites (30%) and online streaming (21%) were the main innovations projected.⁶⁷ 7 out of 10 organizations admitted the need to develop additional technological tools (chart 13) and 80% of them recognized their importance during the pandemic (chart 14). Among the activities that grew in relevance are digital catalogs (8 to 30%), streaming (28 to 60%), teleconferences (32 to 52%), online ticket sales (8-18%), mobile apps (10-15%), QR codes (18-23%), virtual reality (8-12%), and podcasts (10-12%) (chart 15). 55% of the respondents admitted that the development of new multimedia content was a consequence of the health crisis (chart 16).⁶⁸ While in 2019 only 1 out of 4 artistic, cultural or entertainment projects were digitally available, during the pandemic that same percentage rose above 50%, we can conclude that traditional sectors of the creative economy have been undergoing major technological innovation adjustments since its onset.⁶⁹

Chart 9. **Technological development prior to the pandemic**

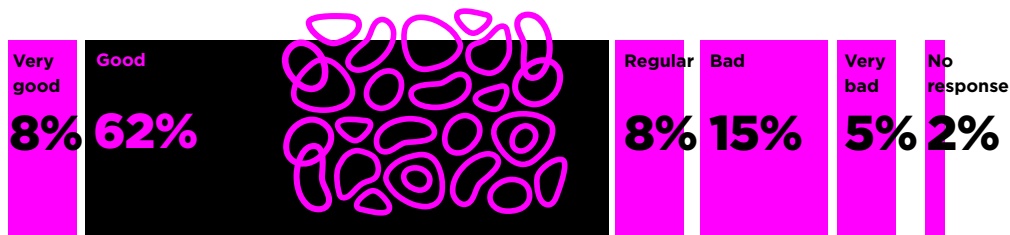
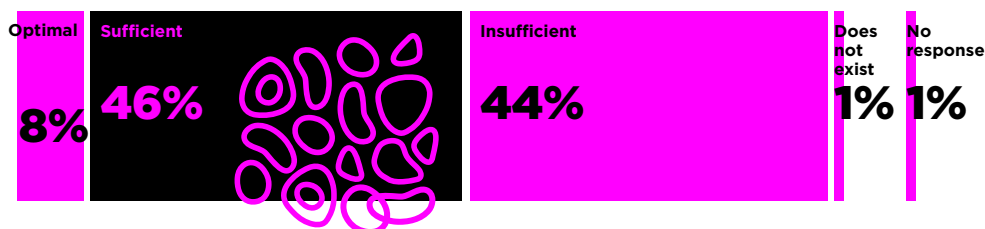


Chart 10. **Perception of the level of technological adequacy before the pandemic**



⁶⁷ *Ibidem.*

⁶⁸ *Ibidem.*

⁶⁹ Triguboff *et al.*, "COVID-19 Impact Assessment." *op. cit.*

Chart 11. Digital tools in use before the pandemic

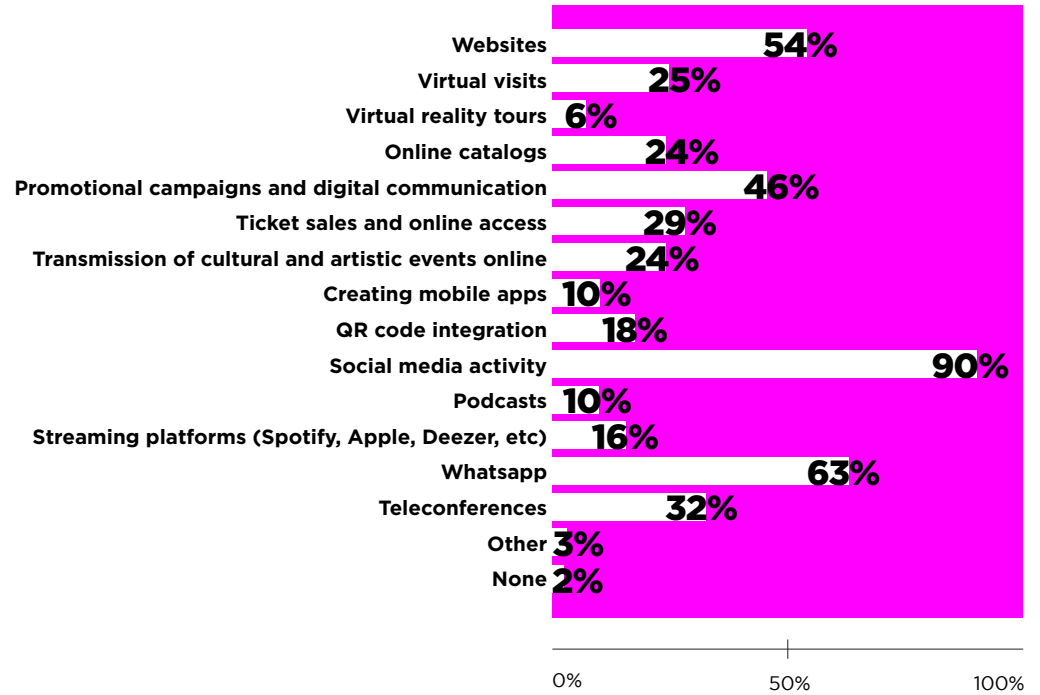


Chart 12. Plans for the incorporation of new technologies before the pandemic

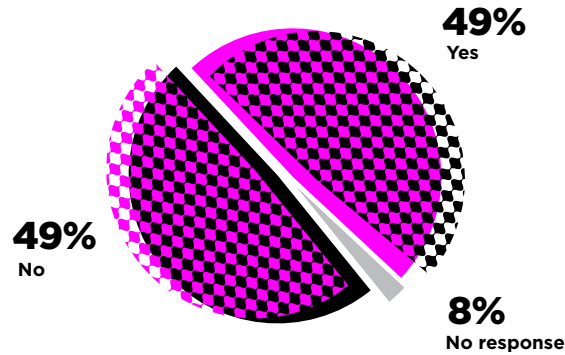


Chart 13. Plans for the incorporation of new technologies after the onset of the pandemic

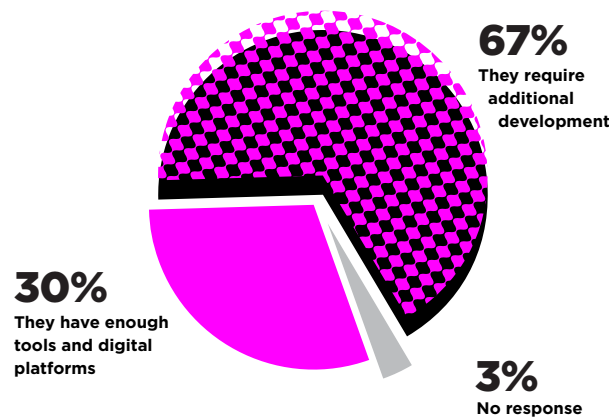


Chart 14. Perception of the degree of importance of digital tools for the sector

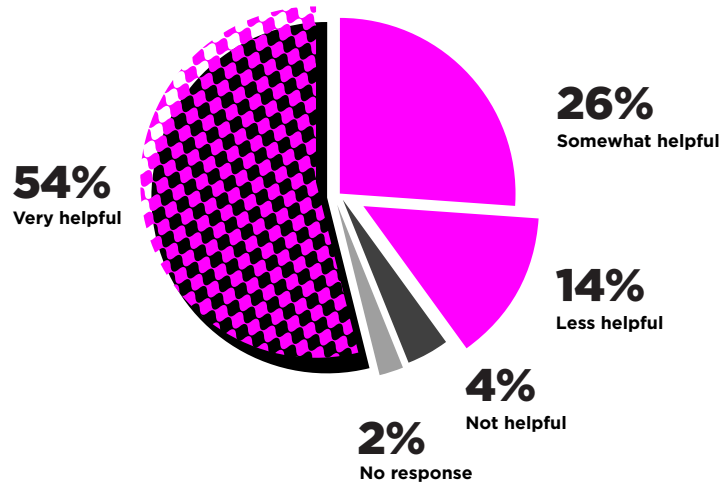


Chart 15. Use of digital tools

Tools	Before of the pandemic	After the pandemic
Digital catalogs	8%	30%
Streaming	28%	60%
Teleconferences	32%	52%
Online Ticketing	8%	18%
Mobile apps	10%	15%
QR codes	18%	23%
Virtual Reality	8%	12%
Podcasts	10%	12%

Chart 16. Development of multimedia content as a result of the pandemic



Digital Content Platforms and Increased Audiences

For some institutions related to music and the performing arts, online streaming was not completely new since they already owned websites, which they used as digital repositories and social tools aiding them to engage with new audiences. At Teatro Colón in Buenos Aires online recording and streaming became common in 2015. When the pandemic hit, they had substantial experience in distributing digital content, and counted on a catalog extensive enough to put together programming, which is still available for free and with the artists' authorization granted in advance.⁷⁰

Due to the pandemic, the Serviço Social Do Comércio de São Paulo (SESC SP) launched their SESC digital platform ahead of schedule, even though another online content platform has been available since 2014. In addition to their catalog, they have live streamed to promote sports, musical, theatrical, dance or circus activities every day. By May 2020, their #EmCasaComSesc project included one daily debate, four music shows, three theater performances, and two dance interventions every week. All content was available for free and is still available on their YouTube channel.⁷¹

In Chile, the Teatro a Mil International Foundation⁷² previously had an online digital repository⁷³ with available videos of past festivals. During the pandemic, guaranteeing optimal experience of their website while making it user-friendly for an increasing number of users became their major priority. To reach this goal, their staff was trained in the users' journey through their platform. As its director states, "Today [a website] is a tool that connects, supports, promotes, and disseminates the work of theater companies. We have managed to consolidate a digital channel and a virtual stage which went from three thousand to eighty thousand followers in just one week; we even had peaks of five hundred thousand connected users, something unusual for a foundation like ours which is devoted to theater".⁷⁴

⁷⁰ Alcaraz, interview.

⁷¹ Scallop, interview.

⁷² The Teatro a Mil International Foundation is responsible for organizing the Santiago a Mil International Festival, one of the most important performing arts gatherings in the region, which takes place each year in January and features theater, dance, music, opera, circus or multidisciplinary arts. <https://www.teatroamil.cl/quienes-somos/conocenos/>.

⁷³ Teatro a Mil, official website, www.teatroamil.tv.

⁷⁴ Carmen Romero Quero (general director of the Teatro a Mil International Foundation), interview by Pablo Solís Vega, March 2021.

Cultural organizations have turned to the most popular social networks to reach larger audiences. Facebook, YouTube, and Instagram are the most mentioned among respondents when asked about tools to enhance audience engagement, especially with younger generations. The most popular ways to address audiences are social networks (94% of respondents), WhatsApp (77%), and email (56%).⁷⁵

Jorge Codicimo, from the Teatro Colón in Buenos Aires, recognizes the importance of social media to strategically create audiences that would attend theaters in the future. He highlights the “long tail” phenomenon, that consists in leaving content available on the internet to allow a larger number of users to watch it over time. As an example he points out their production and mise-en-scene of the *Swan Lake*, available on Youtube where it reached 250,000 views by June 2021, a figure that could only be compared to the attending audience of 250 sold out performances.⁷⁶

New audiences come from different countries, significantly widening the global outreach of theaters and platforms. In Brazil, the São Paulo SESC and its 2,208 online artistic actions presented in 2020 reached 8 million views.⁷⁷ For the Manizales International Theater Festival⁷⁸ in Colombia, this meant its audience increased fivefold and reached 32 different countries, some of them quite distant like Ukraine, China or Japan.⁷⁹ At the Ciudad Cultural Konex, in Buenos Aires, they can also assess that their programs have surpassed the local sphere. CEO, Andy Ovsejevich, explains that, before the pandemic, their activities only addressed the population of Buenos Aires and its surroundings, but thanks to the digital transition the whole country is now their target: “Now we are able to reach people in the provinces, who could not visit us otherwise; we are addressing them through social networks, and that means new business opportunities”.⁸⁰

⁷⁵ Aura/SIMO, *op. cit.*

⁷⁶ Jorge Codicimo (general coordinator of Institutional Communication of the Teatro Colón in Buenos Aires), interview by Pablo Solís Vega, May 2021.

⁷⁷ Vieira, interview.

⁷⁸ The Manizales International Theater Festival was founded in 1968 and is one of the oldest performing arts festivals in LAC. It takes place each year in autumn, between September and October, in the city of Manizales, Colombia. <https://festivaldemanizales.com/>.

⁷⁹ Octavio Arbeláez (director of the Manizales International Theater Festival), interview by Pablo Solís Vega, February 2021.

⁸⁰ Andy Ovsejevich (CEO at Ciudad Cultural Konex), interview with Pablo Solís Vega, March 2021.

At Fundación Espacio Creativo,⁸¹ in Panama, they believe new technologies have democratized culture by reaching audiences that, for different reasons, could not go to theaters or simply did not know about them before.⁸² Óscar Carnicero, from La Teatrería in Mexico, agrees with this idea. People across different Mexican provinces have thanked him for the chance to see a play for the first time through La Teatrería's online transmissions.⁸³ Alejandra Serrano, a Mexican theater researcher, emphasizes that "criticism on digital cultural activities has to do in part with excluding people without internet access, which is true. However, in-person theater can also be exclusive: theaters are not always easy to get to and have limited seats to offer, not to mention the cost of tickets. For that reason, shedding light on the shortcomings of both in-person and digital shows seems positive to me".⁸⁴

Training audiences is a priority for most cultural organizations. In Manizales, Colombia, the pandemic help to expand the Escuela de Espectadores program, launched in alliance with the Argentine Jorge Dubatti. By March 2020 there were 1,200 users registered.⁸⁵ According to Octavio Arbeláez, "the experience has been interesting because now we have no less than 300 or 400 viewers, while before the pandemic our events were attended by 50 or 60 people; and during the 3 days of our festival 48,000 users were connected, which is not exactly a low attendance".⁸⁶

During lockdown audiences have shown different behavior patterns: 6 out of 10 respondents recognize that their audiences have changed.⁸⁷ Initially, digital programming focused on younger audiences consuming digital content. But little by little, older audiences began to increase, forcing them to adapt their content. At the Fundación Teatro Nacional

⁸¹ Fundación Espacio Creativo (FEC) is a center offering artistic residencies that promotes the creation, production, education, and celebration of contemporary dance and performing arts located in Panama City. <https://www.fec.org.pa/>.

⁸² Galindo and Attie de Mizrachi, interview.

⁸³ Óscar Carnicero (director of La Teatrería), interview by Pablo Solís Vega, February 2021.

⁸⁴ Alejandra Serrano, "Pandemic reflections from independent theater", *Theatrical Research. Magazine of Performing Arts and Performativity*, Vol. 11, No. 18 (2020), <https://investigacionteatral.uv.mx/index.php/investigacionteatral/article/view/2649/4605>.

⁸⁵ Arbeláez, interview.

⁸⁶ *Idem*.

⁸⁷ Aura/SIMO, *op. cit.*

Sucre⁸⁸ in Ecuador, this shift meant an increase in digital ticket sales. As Fabiola Pazmiño states, “perhaps young people buy tickets driven by specific shows, by specific artists, but do not necessarily buy tickets again, while mature audiences are very loyal and are more aware of the importance of paying for tickets”.⁸⁹

While audiences were changing, it became clear that the number of online users was decreasing. Digital saturation prompted people to return to face-to-face experiences. Salomé Olarte, music manager at the Instituto Distrital de las Artes in Bogotá, has witnessed this exhaustion: “After spending so many hours working on a computer, people no longer wanted to watch a concert, they preferred to read a book, go out to breathe and see nature. So, the outreach of our digital programming was not what we expected.”⁹⁰ This fatigue has also encouraged the creation of new formats. Plays and concerts that used to last an hour or more, have now been reduced into 5 to 30 minutes formats.

Technology and its Challenges

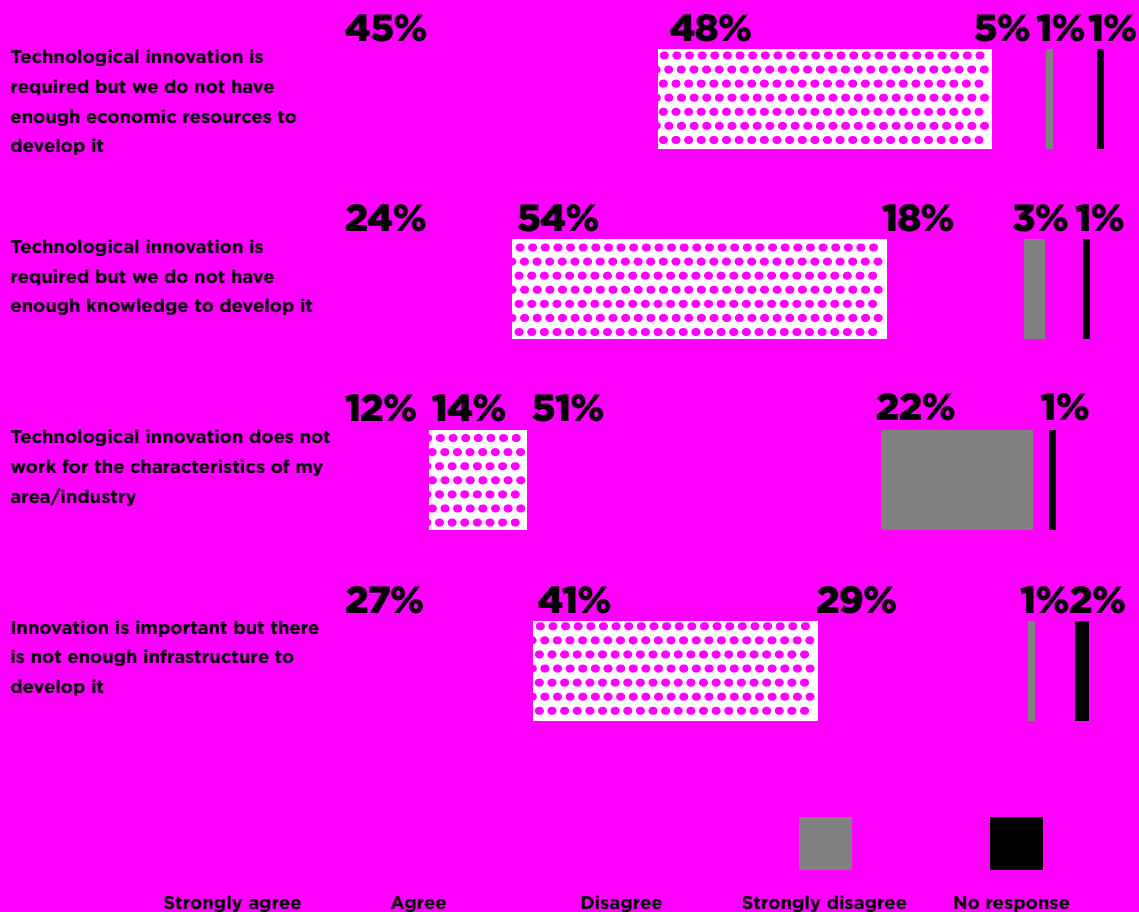
Technological adoption has not been uniform, and professionals in the sector have had to cope with several challenges related to the digital divide: 9 out of 10 respondents pointed to lack of financial resources, 8 out of 10 lack of technological skills, and 6 out of 10 lack of technological infrastructure in their cities (chart 17).

⁸⁸ The Fundación Teatro Nacional Sucre is an NGO formed by the Municipio del Distrito Metropolitano de Quito, The Empresa del Desarrollo del Centro Histórico de Quito and the Fondo de Salvamento del Patrimonio Cultural in Ecuador. The foundation manages several theater halls (Teatro Nacional Sucre, Teatro Variedades Ernesto Albán, Teatro México, and Centro Cultural Mama Cuchara); it also supports several in-house groups and casts, such as the Banda Sinfónica Metropolitana, the Orquesta de Instrumentos Andinos, as well as other ensembles and choirs, and is responsible for promoting the development, dissemination and production of the arts in Quito and Ecuador. <https://www.teatrosucre.com/>.

⁸⁹ Fabiola Pazmiño (Production Coordinator at the Fundación Teatro Nacional Sucre), interview by Pablo Solís Vega, March 2021.

⁹⁰ Salomé Olarte (Music Manager at the Instituto Distrital de las Artes, Bogotá), interview by Pablo Solís Vega, March 2021.

Chart 17. **Technological innovation shortcomings**



During lockdown, the first experiences of online streaming emphasized the need to involve professionals like engineers, cameramen, illuminators, editors, and post-producers, in producing quality content. Others have learned to adapt or set stage productions in digital formats, aiming at creating innovative digital experiences. While some of this self-learning was done at home, organizations devoted to the performing arts offered training and education programs on editing, lighting or self-production. That was the case of the Teatro a Mil International Foundation in Chile. After realizing that some of the new proposals they received lacked technical standards, they organized a series of workshops for creators in order to improve the production of digital content.⁹¹

The increasing number of connected users shed light on poor infrastructure and the limited possibilities of connectivity, even in some LAC capital cities. A salient case is *Despierta Elena*, a play written for Zoom that took place in real time at three different houses, in which the viewer could simultaneously see what was happening at each setting and could

⁹¹ Romero Quero, interview.

choose among three different endings. But users experienced connectivity issues, preventing them from watching the live stream properly.⁹²

In terms of infrastructure, some theaters improved their speed of connectivity in an unprecedented way. In Mexico City, La Teatrera changed their internet provider, and invested in technical infrastructure to adapt their hall for live HD streaming sessions.⁹³ At the Ciudad Cultural Konex, in Buenos Aires, they adapted their facilities and refurbished the digital division of the complex at an old oil factory, dividing it into nine rooms to stage shows in different formats. According to CEO Andy Ovsejevich, they invested in cameras and equipment, upgraded their connectivity network, and hired cameramen and cinematographers. Now one of the nine rooms will be destined exclusively for digital content, functioning as a TV studio.⁹⁴

Technological Innovations to Engage with Offline Audiences

Digital alternatives are not yet available among a large percentage of the population, since more than half of the planet's inhabitants do not have internet access.⁹⁵ It is estimated that broadband penetration in LAC is around 30% of the population, highlighting existing inequalities in the region.⁹⁶ In the Caribbean, specialists have remarked poor infrastructure and lack of basic digital skills. Universal connectivity access is a pending issue in our region that has become more urgent during the pandemic.⁹⁷

To address this, the cultural sector has merged old and new technologies, looking for innovative solutions. An outstanding example was led by the Fundación Nacional Batuta in Colombia, an organization devoted to musical training among vulnerable children and youngsters. A country where 40% of its population does not have internet access, resorted to

⁹² *Idem*.

⁹³ Butcher, interview.

⁹⁴ Ovsejevich, interview.

⁹⁵ World Bank, "People Using the Internet (% of Population)," accessed May 10, 2021, https://data.worldbank.org/indicator/IT.NET.USER.ZS?name_desc=false.

⁹⁶ Antonio García Zaballos and Enrique Iglesias Rodríguez, "Economía digital en América Latina y el Caribe. Situación actual y recomendaciones", Inter-American Development Bank (2017), accessed January 20, 2021, <https://publications.iadb.org/es/economia-digital-en-america-latina-y-el-caribe-situacion-actual-y-recomendaciones>.

⁹⁷ Rodney Small (coordinator of creative industries at the Ministry of Culture of Saint Vincent and the Grenadines), interview with Pablo Solís Vega, April 2021.

distance training. They delivered more than 30,000 kits with USB keys, reading devices, speakers, and other sound equipment. In partnership with local and community radio stations, Radio Nacional de Colombia, the RTVC network, and the army, they broadcasted twenty-six half-hour radio programs twice a week. For those who did have internet access, they opened a YouTube channel where teachers posted tutorials, keeping close contact with their students at home. For many of the tutors it was their first experience with online education and they were trained to adjust their methodology accordingly. This is how they succeeded in keeping up their work across the country. The strategy was well received and its endeavors triggered a lot of sympathy because of the psychosocial support they kept giving, and the fact that they even reinforced it. María Claudia Parías, the CEO of the organization, explains how up to ten children would gather for class in those homes that have internet: “our containment strategy, based on the idea of emotional and physical self-care, worked out quite well”.⁹⁸

Some other organizations in the region also turned to the radio in order to tell stories. The Santiago a Mil International Festival, in Chile, developed a radio drama project, initially targeting the elderly. But in the end, there was a connection between “the analog grandparents and today’s digital grandchildren, because grandparents told them that when they were young radio theater was part of their lives, and now their grandchildren, the most digitized segment of the population, could share that world with their grandfathers and grandmothers, helping them reconnect with it.”⁹⁹

Concerned by the exclusion caused by the digital divide, the organizers of the International Theater Festival in Manizales, Colombia made “carros-valla” available. They are small trucks with giant screens traveling to stream live events in inner-city areas without internet access. According to the director of the festival Octavio Arbeláez, “this strategy resulted in major inclusion for people without internet connection, granting them access to this type of experiences”.¹⁰⁰

In Panama, the Espacio Creativo Foundation figured out a way to help their dance students without home internet access. Through strategic alliances, technology companies and internet providers donated laptops, smartphones, and prepaid chip cards granting unlimited data for a year.¹⁰¹ They also adapted their curriculum to cover programming, web design,

⁹⁸ Parías, interview.

⁹⁹ Romero Quero, interview.

¹⁰⁰ Arbeláez, interview.

¹⁰¹ Galindo and Attie de Mizrachi, interview.

photography, and lighting. However, they pointed out that “our boys did not have the basic skills and it was a great lesson to realize that our programs must be adjusted to the reality of our environment. We cannot pretend that we are ready to venture into virtual reality before developing basic skills first”.¹⁰²

Technologies as Management and Marketing Solutions

Technological innovation at different stages in the production chain of the music and performing arts industries is improving organizational efficiency of firms and new ventures. From the joint research carried out by UNESCO, IDB, SEGIB and OEI, it can be concluded that in the cultural and entertainment sector, innovation in the development of new services (45%), in the methods of production and distribution (22%), and in new operational software (9%), are major trends.¹⁰³ Several platforms and applications are now available on the market to support management, administration, and monetization of creative activities. For instance, GigWell,¹⁰⁴ a company that emerged in Silicon Valley, has created a software granting art agents access to an extensive database of forums, halls and venues, and giving them tools to organize contracts, share calendars, send technical riders and create financial records with costs and expenses. Similarly, VIP-Booking¹⁰⁵ offers stage producers and art agents the possibility to retrieve musical proposals and venues for shows from a catalog, where they can also review social networks metrics, access multimedia content, and contact artists and professionals without any intermediaries.

Another collaborative software is Critical Switch,¹⁰⁶ a Mexican platform that seeks to connect entrepreneurs from the creative field, promoting networking and serving as a channel to formulate proposals, exchange views, and obtain feedback. There are other emerging streaming websites like the ones mentioned, such as Overture Plus, in England,¹⁰⁷ as well as other ticketing platforms like Boletia¹⁰⁸ in Mexico and Access hoy in Argentina.¹⁰⁹

¹⁰² *Idem*.

¹⁰³ Triguboff *et al.*, “Assessing the Impact of COVID-19.” *op. cit.*

¹⁰⁴ Gigwell, official page, <https://www.gigwell.com/>.

¹⁰⁵ Vip-booking, official page, <https://www.vip-booking.com/>.

¹⁰⁶ Critical Switch, official page, <https://criticalswitch.com/>.

¹⁰⁷ Overture, official page, <https://overture.plus/>.

¹⁰⁸ Boletia, official page, <https://boletia.com/>.

¹⁰⁹ Accesshoy, official page. <https://www.accesshoy.com/>.

In Chile, Evento Medido¹¹⁰ was founded as a pioneer company measuring impact of shows in LAC. The firm's software generates systematized information on concerts and festivals, measuring demographics, direct and indirect economic impact, as well as the carbon footprint produced by mass events.¹¹¹ Business intelligence services provide key indicators for the effective management of in-person and online activities, yielding data for decision-making, and useful information for organizers, but also for other brands and investors.

This sector in LAC has enhanced its business possibilities thanks to new emerging conferences and the organization of specialized industry gatherings. These networking events have been useful in strengthening the performing arts industry ecosystems and in professionalizing the operation of creative industries in the region. Some of them are: Circularart,¹¹² in Medellín, or the Feria Internacional de la Música para Profesionales (FIMPRO)¹¹³ in Guadalajara, aiming at the development of music; and the Santiago a Mil International Festival, in Chile, or the Ventana Internacional de las Artes (VIA),¹¹⁴ in Bogotá, devoted to the performing arts. During the pandemic, these events migrated to the digital sphere, profiting from the possibilities of reaching new digital platforms. Investing in the development of this type of virtual meetings and platforms will help strengthen professional and business ties in the sector, and for that reason continuing to foster the digitization of the music and performing arts will be essential.

Monetization Strategies

When it comes to financing, 9 out of 10 respondents believe that new technologies can help generate new income (chart 18), but only 22% admitted having used technological tools with that intention, while only 1 out of 5 have ventured yet into e-commerce (chart 19).¹¹⁵ The LAC experience has shown that digital options are still not enough to compensate for the losses caused by the first two years of the pandemic. Digital payments

¹¹⁰ Evento Medido, official page, <https://www.eventomedido.org/>

¹¹¹ A detailed example of the information generated by the platform can be seen at the following links: <http://bit.ly/dashboard-talca> and <http://bit.ly/dashboard-ozuna>.

¹¹² Circularart. <https://circularart.org/>.

¹¹³ International Music Fair for Professionals (FIMPRO). <https://fimguadalajara.mx/>

¹¹⁴ The International Window of the Arts (VIA) is the meeting of scenic professionals that takes place around the Ibero-American Theater Festival of Bogotá, Colombia. [https://festivaldeteatro.com.co/..](https://festivaldeteatro.com.co/)

¹¹⁵ Aura/SIMO, *op. cit.*

are not widespread and a digital payment culture needs to be encouraged. In addition, an important number of the organizations producing and promoting the performing arts are public institutions, which offer free content, reinforcing a message of culture as a right that should be accessible without paying.¹¹⁶

Chart 18. **Perception of the use of digital tools to generate revenues**

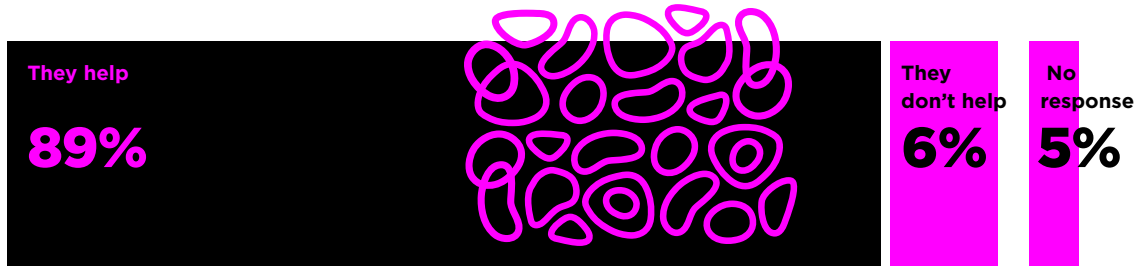
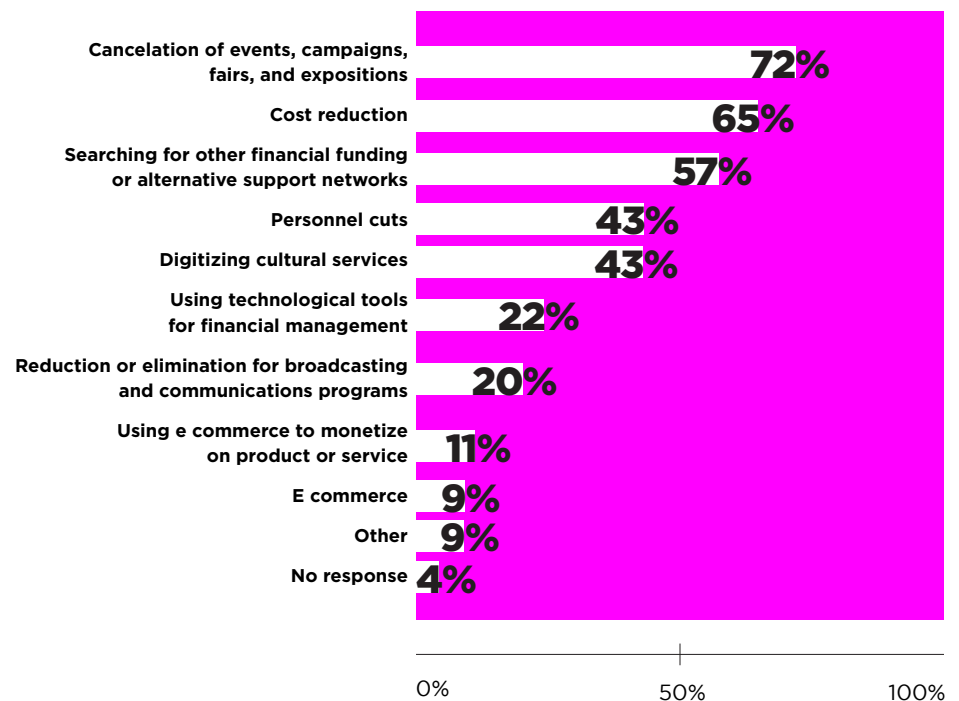


Chart 19. **Financial strategies followed during the pandemic**



Live streaming music, theater, dance, or opera shows, represent an opportunity to generate income in the future, from both ticket sales and from advertising boosted mostly by the pandemic. Several live streaming companies, particularly specialized in digital music shows, consolidated in 2021.¹¹⁷ Live Nation, the global entertainment giant, invested in the de-

¹¹⁶ Codicimo, interview.

¹¹⁷ Music Ally, "The Trends Report: looking ahead to 2022," published January 14, 2022, <https://musically.com/2021/11/15/live-music-back-livestreaming-here-to-stay/>.

velopment of Veeps, a live streaming website. Another example is Driift, a new platform that has managed to sell 600,000 tickets for 28 shows in 17 countries and a revenue of 14 million dollars in less than a year of being in business.¹¹⁸ In our region Tickets Hoy emerged, a platform currently available in Argentina, Chile, Spain and the United States, that streamed nearly 600,000 shows during the first twelve months of the pandemic, engaged with an audience of 1.8 million people and generated 21 million dollars.¹¹⁹

The performing arts have ventured into video-on-demand (VOD) and Over-The-Top (OTT) services, in order to reach new markets and find other ways of monetization. A pioneering company in LAC is Teatrix from Argentina, which since 2015 offers a video catalog of theater pieces, available at any time of the day, in exchange for a monthly or annual subscription.¹²⁰ Escenix was born in Chile, another theater-on-demand platform with stage proposals recorded in 4K cameras. It was launched at the end of 2020 with 45 works and 2 unreleased titles each month.¹²¹ These types of platforms are in full development and more people are making use of them every day,¹²² including institutions such as the Teatro

¹¹⁸ Driift, official page, <https://driift.live/about/>.

¹¹⁹ Diego Balan. "XAVE: el mercado de NFT para los artistas latinoamericanos". Creativity Culture Capital. accessed January 15, 2022. <https://www.creativityculturecapital.org/es/2021/09/13/xave-el-mercado-de-nft-para-los-artistas-latinoamericanos/>.

¹²⁰ Teatrix. <https://www.teatrix.com/>.

¹²¹ Escenix. <https://escenix.cl/>.

¹²² For comparison purposes, Netflix reached 200 million global subscribers in 2020; among them 53 million were from LAC, where they control 77.8% of the market share. In addition, market projections for the region estimate that video on demand platforms will reach 116 million subscriptions in 2026, with five platforms based in the United States (Netflix, Amazon Prime Video, Disney +, Apple TV + and HBO) sharing 90% of the market. Faced with this scenario, initiatives that foster competition, enhance conditions for other competitors to enter the market, and encourage the transmission and consumption of diverse cultural content will be desirable, following the steps taken by the European Union, or countries like Canada and France, where legislations have forced platforms to maintain national content quotas, or to pay taxes earmarked for the production of local creative content.

Carlos Fernández de Lara, "Netflix suma en promedio 100 mil suscriptores al día durante pandemia; 37 millones en 2020", Forbes, issued January 19, 2021, <https://www.forbes.com.mx/tecnologia-netflix-ya-suma-200-millones-de-usuarios-37-millones-se-sumaron-en-ano-de-pandemia/#:~:text=6%3A19%20pm-,Netflix%20suma%20en%20promedio%20100%20mil%20suscriptores%20al%20d%C3%A1a%20durante,usuarios%20en%20un%20solo%20trimestre>.

Larroca, Nicolás, "El 13,6% de los ingresos de Netflix provienen de América Latina", Telesemana, issued in 2019, <https://www.telesemana.com/blog/2020/01/23/latinoamerica-representa-el-136-de-los-ingresos-de-netflix/>.

Real de Madrid,¹²³ Cirque du Soleil,¹²⁴ the New York Metropolitan Opera¹²⁵ or the Broadway industry.¹²⁶

Online music streaming platforms are also widely accepted. In 2020 they had 443 million paid subscriptions, reaching a value of 13.4 billion dollars, a 18.5% increase from the previous year,¹²⁷ a sustained annual growth of 18% is projected for these companies.¹²⁸ YouTube and Spotify have grown particularly fast in LAC. Prior to 2020 they were already boosting in five capitals cities, Mexico City, Bogotá, Santiago, Lima, and São Paulo,¹²⁹ among the top ten triggering cities¹³⁰ with the most registered users. After the pandemic, the International Federation of the Phonographic Industry (IFPI) confirmed this trend: revenue from recorded music increased by 30.2% in LAC, mostly from streaming platforms, amounting to 84.1% of total income from royalties in the region.¹³¹

Plataformas.News. “América Latina Sumará 63 Millones De Clientes Svod Para 2026”.

Plataformas.News. issued March 3, 2021. <https://plataformas.news/ott/nota/america-latina-sumara-63-millones-de-clientes-svod-para-2026>

Rufo Valencia, “Netflix y Amazon deberán financiar producción de contenidos canadienses”, Radio Canadá Internacional, issued November 4, 2020, <https://www.rcinet.ca/es/2020/11/04/netflix-y-amazon-deberan-financiar-produccion-de-contenidos-canadienses/>

Agencia EFE, “Francia obliga a plataformas como Netflix a invertir en producciones locales”, Periódico Gestión, issued June 28, 2021, <https://gestion.pe/economia/empresas/francia-obliga-a-plataformas-como-netflix-a-invertir-en-producciones-locales-noticia/>

T. Koch, “El Parlamento europeo obliga a Netflix y a las televisiones a ofrecer un mínimo del 30% de producción europea”, El País, issued October 3, 2018, https://elpais.com/cultura/2018/10/02/actualidad/1538480515_585030.html

¹²³ My Opera Player. <https://www.myoperaplayer.com/>

¹²⁴ Cirqueconnect. <https://cirqueconnect.cirquedusoleil.com/es>

¹²⁵ MetOpera On Demand. <https://www.metopera.org/season/on-demand/>

¹²⁶ BroadwayHD. <https://www.broadwayhd.com/>

¹²⁷ International Federation of the Phonographic Industry (IFPI), “Global Music Report 2021”, accessed February 10, 2021, https://www.ifpi.org/wp-content/uploads/2020/03/GMR2021_STATE_OF_THE_INDUSTRY.pdf

¹²⁸ Lisa Yang et al, “Music in the air 2020 Report”, The Goldman Sachs Group, Inc (2020), <https://www.goldmansachs.com/insights/pages/infographics/music-in-the-air-2020/report.pdf>.

¹²⁹ Jason Joven, “Music ‘Trigger Cities’ in Latin America & South/Southeast Asia (Part 1),” Chartmetric, published May 28, 2019, <https://blog.chartmetric.com/music-trigger-cities-in-latin-america-south-southeast-asia-part-1/>

¹³⁰ See Glossary.

¹³¹ International Federation of the Phonographic Industry (IFPI). *op. cit.*

Creators have found new alternatives in the use of platforms such as TikTok, Twitch or Patreon, which seek creative content creators to closely engage with their audiences, triggering new and more sophisticated social interactions, and making possible new ways of monetization. Some of them, like TikTok, allow creators to generate income from the number of followers playing their videos, but others, promote micro-donations, thus placing the final consumer in a new position within the value chain.

Twitch and Patreon make interacting with users easier while promoting crowdfunding. The first specializes in live broadcasting and allows creators to receive wire transfers, using an in-house banking system. On Patreon, creators post exclusive content for fans connected through a paid membership, helping them engage with their audiences, and conveying to them the feeling of belonging to a select base of fans. Ana Rodríguez, from the agency Música Relatable, points out that on these platforms, some musicians receive 3 dollars from thousands of followers per month, generating an income not comparable to just streaming their music online: “Spotify works well for the big superstars and their catalogs, but not for artists who have less followers, or simply prefer to have a direct and closer relationship with their fans, and these new tools can balance things out”.¹³²

Copyright and Collection of Royalties in the Digital Sphere

Platforms have multiplied licensing and collection of royalties by increasing the supply and consumption of series, movies, and videos.¹³³ In 2019, it was estimated that digital content contributed to 20.5% of the total royalties generated by reproduction rights worldwide, growing at a rate of 187% during the past 5 years. More than 2,000 million euros in revenue came from online music consumption, (23% of the total music royalties), growing 27.2% from 2018 to 2019. On the other hand, copyright of digital theater performances generated 100 thousand euros.¹³⁴ In 2020, the total collection of digital royalties was 116 million euros, 36.4% more than the previous year.¹³⁵

The collection and regulation of royalties in digital environments have been subject of an intense debate, particularly regarding streaming

¹³² Rodríguez, interview.

¹³³ Paul Brindley, “Digital Landscape: The Post-Pandemic Industry,” Circulart, filmed November 12, 2020, <https://youtu.be/P8abUhLPZpo?t=7984>.

¹³⁴ CISAC, “COVID-19: Crisis, Resilience, Recovery”.

¹³⁵ CISAC, “2021 Report”.

platforms,¹³⁶ which has resulted in legal disputes fighting for a fair distribution of royalties. In the case of music, the market-centered or “market share” distribution system (called Market Centric Payment Systems – MCPS) is predominant, favoring big transnational record labels and their artists. According to Spotify from a catalog of 5 million artists registered in their platform, about 43,000 music tracks are responsible for 90% of the music consumed by listeners. This means that less than 1% of the creators receive 90% of the revenue.¹³⁷ To put it in other words, for artists to receive the equivalent of the minimum wage in Spain,¹³⁸ they would need 225,000 streams on Spotify.¹³⁹

In 2020, SoundCloud announced a user-centric model, that shares revenues with artists in a more equitable way (User Centric Payment Systems – UCPS¹⁴⁰). In the United States, songwriters’ societies won a legal battle that forced these companies to increase songwriters’ royalties from 10.5 to 15.1%, a legislation enforced since 2022.¹⁴¹ In the UK, the discussion over the distribution of digital royalties was held at the British Parliament, where it was concluded that the digital economic distribution system had to be balanced.¹⁴² The committee assigned to

¹³⁶ Center National de la Musique, “Le CNM évalue l’impact d’un changement éventuel de mode de rémunération par les plateformes de streaming”, issued January 27, 2021, <https://cnm.fr/le-cnm-evalue-limpact-dun-changement-eventuel-de-mode-de-remuneration-par-les-plateformes-de-streaming>.

¹³⁷ Shain Shapiro, “We Don’t Just Need A Review Of Music Streaming: We Need A Review Of The Entire Music Ecosystem,” *Forbes Magazine*, published January 20, 2021, <https://www.forbes.com/sites/shainshapiro/2021/01/20/we-dont-just-need-a-review-of-music-streaming-we-need-a-review-of-the-entire-music-ecosystem/?sh=19995c9b2c1e>.

¹³⁸ By September 2019, when the referred article was published, the minimum wage in Spain was 1,050 per month.

¹³⁹ Lidia Montes, “Cuántas reproducciones necesita un músico para ganar 1 euro en Spotify, Apple Music, Amazon y más”, *Business Insider*, published on September 15, 2019, <https://www.businessinsider.es/cuantas-reproducciones-spotify-necesitan-ganar-1-euro-491653>.

¹⁴⁰ Dani Rivas, “Spotify, Soundcloud y cómo funciona el pago en plataformas de Streaming”, *Tenho Mais Discos Que Amigos!*, published on March 24, 2021, https://www.tenhomaisdiscosqueamigos.com/2021/03/24/spotify-soundcloud-pagamento-streaming/?fbclid=IwAR3UOammNx2tzbduo-_tnvm3hJOInQxrdFGSEc18qSS6BkDKoiFXnmntjh4.

¹⁴¹ Rhian Jones, “Songwriters fight to be heard in streaming revenues debate,” *The Guardian*, published February 12, 2021, <https://www.theguardian.com/music/2021/feb/12/songwriters-fight-to-be-heard-in-streaming-revenues-debate>.

¹⁴² Music Ally, “Play and Plays: the story of the UK’s Parliamentary Inquiry into music streaming economics,” published July 15, 2021, <https://musically.com/wp-content/uploads/2021/07/MusicAlly-PlaysAndPay.pdf>.

the case, recommended adopting an equitable remuneration system (50/50 of the royalties), the same already in use for radio and television. They also suggested that the Competition and Markets Authority (CMA) carry out an investigation to analyze the market practices of the main record labels in the country and their eventual impact on the music industry. Finally, they mentioned the need to promote laws allowing artists to regain the rights over their works 20 years after having transferred them to record labels and producers, as well as other legal initiatives promoting transparency while providing advice for creators on the terms and conditions of the agreements between record labels, music publishers, and streaming platforms.¹⁴³

The proliferation of platforms, contents and means of distribution has led to severe problems for stakeholders, which is why the regulation of copyright in the digital sphere has become necessary. This is the reason why IDB and the Ibero-American General Secretariat (SEGIB) have developed tools and invested in promoting the exchange of best practices, technical cooperation, and meetings on this matter. Among its programs, the recommendation to legislate on the protection of intellectual property stands out, promoting fair rates and equitable collection of royalties and encouraging the professionalization of the creative sector to contribute to the sustainable development of creative industries in digital environments¹⁴⁴. Similarly, the International Confederation of Societies of Authors and Composers (CISAC) updated its system for the identification of musical works (International Standard Musical Work Code or ISWC), for the first time in fifteen years, trying to improve the reliability and efficiency of royalty collection.¹⁴⁵

Blockchain could be another solution because it keeps a unique and traceable record of each agreement, transaction, or contract. Until recently, collection of royalties was an almost manual process, mostly done on a country-by-country basis and through some intermediaries lacking transparency in how they determined, quantified, and collected royalties. On the other hand, Blockchain allows for a transparent and secure registration system that can be trusted by all stakeholders (both

¹⁴³ Music Ally, “Labels under fire as UK streaming inquiry report calls for ‘complete reset’ of market”, issued July 15, 2021, <https://musically.com/2021/07/15/labels-under-fire-uk-streaming-inquiry-report/>.

¹⁴⁴ United Nations Educational, Scientific and Cultural Organization (UNESCO), “Culture and Covid-19: Impact and Response Tracker. No. 3”, consulted on February 20, 2021, https://en.unesco.org/sites/default/files/issue_3_en_culture_covid-19_tracker-5.pdf.

¹⁴⁵ CISAC, “COVID-19: Crisis, Resilience, Recovery”.

creators, distributors, and consumers) and that will eliminate intermediaries and increase revenues.¹⁴⁶

Stored on a blockchain, Non-fungible Tokens (NFTs) are another alternative for monetizing and distributing digital works. The way digital assets are chained ensures both their uniqueness and, especially their traceability, creating a kind of proof of ownership, whether of an audio file, an image, a video, a 3D animation, etcetera. In some cases, NFTs are used as bank shares of digital projects. The ownership of this sort of investment capital is not only useful in the development of a given project, but it also entitles the holder to other benefits —not to mention being co-owner of the project— such as access to exclusive content and information.

There has been some speculation that NFTs will be a suitable alternative to monetizing and taking control over intellectual property in the digital age¹⁴⁷. In addition, this technology encourages new methods of monetization while adding digital value. Ownership agreements, the so-called smart contracts, entitle creators not only to full legal copyright without need for intermediaries, but it also guarantees a revenue share for any future transactions related to each work or piece, thanks to its traceability and blockchain technology. If this trend continues, NFTs could radically change the way creators monetize regardless of their artistic discipline, giving them control over the trading process, while at the same time generating long lasting revenues from their work.

The exorbitant sales figures of the first collectible NFTs have sparked financial speculation. Music bands, like Kings of Leon are now distributing and monetizing their music using blockchain technology,¹⁴⁸ while others, like Grimes have obtained millions of dollars in revenues.¹⁴⁹ In December 2021, Natalia Osipova, prima ballerina at the London Royal Ballet, was the first to sell NFTs dance performances, with a triptych of two videos of the piece *Giselle* and one more of the duet *Left Behind*, for \$80,000 in total.¹⁵⁰

¹⁴⁶ PWC, “Blockchain: recording the music industry. How Blockchain technology could save the music industry billions”, PricewaterhouseCoopers LLP, published 2018, <https://www.pwc.co.uk/entertainment-media/publications/blockchain-recording-music-industry.pdf>.

¹⁴⁷ Barros, interview.

¹⁴⁸ Sara Cáseres Huerta, “Kings of Leon será la primera banda en lanzar un álbum en formato NFT: ‘When You See Yourself’”, Rolling Stone Mexico, published March 4, 2021, <https://rollingstone.com.mx/kings-of-leon-lanza-album-nft/>.

¹⁴⁹ Jacob Kastrenakes, “Grimes sold \$6 million worth of digital art as NFT.”, The Verge, published March 1, 2021, <https://www.theverge.com/2021/3/1/22308075/grimes-nft-6-million-sales-nifty-gateway-warnymph>.

¹⁵⁰ Hanna Noelle-Smith. “World’s First Ballet NFTs Starring Natalia Osipova Dance to Success at Bonhams Encore Sale”. Bonhams. Viewed February 22, 2022. https://www.bonhams.com/press_release/33503/.

Cryptocurrencies are here to stay with NFTs as a means of building digital communities, triggering digital transactions, and creating value. Experts believe that rather than just being tools to generate income easily, cryptocurrencies, NFTs, and metaverses will disrupt how we socially interact, trade, and create economic and social value.¹⁵¹

Virtual Shows Are Still Performing Arts?

Some Zoom conversations transformed into aesthetic explorations on their own right, as in the case of the Brazilian Theater Company Anti Status Quo¹⁵² and its piece *JuntosESeparados*. In Mexico, the group Landscape Artes Escénicas¹⁵³ adapted the show *LOOP Mirrors of Time TCRV*, originally designed for the stage, but finally streamed live on Skype, winning the World Summit Award 2020 in the Culture and Tourism category.¹⁵⁴ Thanks to an Argentinian-Swiss collaboration among choreographers Edgardo Mercado, Gilles Jobin, and Damián Turkieh, the piece *Virtual Crossings* was staged as a simultaneous performance by three dancers in Buenos Aires and Geneva, using Augmented Reality and Motion Capture Technology.¹⁵⁵ At the Manizales International Theater Festival, the Magiluth group from Brazil presented *All that a VHS can hold*, a transmedia experience inviting their audience to connect to different social networks such as WhatsApp, Instagram, YouTube, and even their emails.¹⁵⁶ In that same festival, *Linderos del Horizonte Dramafónicos*, from the Quinta Picota group was also staged, with live stories being told over the phone. *Mia sobre ella misma*, by the company Deca Teatro, was staged entirely on WhatsApp.¹⁵⁷ La Quinta del Lobo presented *Infinitos*, at

¹⁵¹ Music Ally, “The Trends Report”.

¹⁵² Anti Status Quo, official Facebook page, <https://www.facebook.com/asqciadedanca/>.

¹⁵³ Landscape_Artes Escénicas, <https://landscape.com.mx/escena-contemporanea-danza-teatro-y-multimedia/>.

¹⁵⁴ “Propuesta mexicana de teatro digital gana concurso mundial de innovación tecnológica”, La Jornada, issued December 21, 2020. <https://www.jornada.com.mx/notas/2020/12/21/cultura/propuesta-mexicana-de-teatro-digital-gana-concurso-mundial-de-innovacion-tecnologica>.

¹⁵⁵ Cie Gilles Jobin, “Virtual Crossings Buenos Aires/Genève”, November 22, 2020, <https://vimeo.com/482243033>.

¹⁵⁶ Grupo Magiluth, “Tudo que coube numa VHS”, <https://www.grupomagiluth.com.br/tudo-que-coube-numa-vhs>.

¹⁵⁷ Manizales Festival, catalog, <https://www.festivaldemanizales.com/catalogo/>.

Teatro Colón in Bogotá. For the show, five films were recorded using different video tools along with a video mapping projection that simulated the restoration and the collapse of the main hall into particles.¹⁵⁸ As part of the show, the audience could share on their website¹⁵⁹ the lessons, and the nostalgic or disengagement feelings they had gone through during the Covid crisis.

The pandemic has been fertile ground for the creation of new content in the creative fields, using both old and new technologies. Fabiola Pazmiño, Production Coordinator at Fundación Teatro Nacional Sucre, in Ecuador, believes that “multimedia production has seen an exponential growth, creating non-stop premieres and new releases. The most interesting thing is that we have gone back to basics, with home studies playing a major role. It is something worth considering when planning subsidies and funding.”¹⁶⁰

All this experimentation has even posed the question if performing in the virtual world can still be considered performing arts. Mexican Cecilia Sotres, from the collective Las Reinas Chulas thinks that, “There’s infinite possibilities in the language of performing arts, learning this new language has taught us that it’s not theater, or video, TV, or cinema, but it’s the opposite, it contains all of them”.¹⁶¹ This idea was echoed at art fairs in the region, where attendants reflected upon creative exploration through technological means. The Colombian Octavio Arbeláez shared that the 2020 edition of the Manizales International Theater Festival wanted to highlight the relationship between technology and *mise-en-scène*, not only in terms of the appropriation of digital tools by creators, but also in discussing new ways to communicate with audiences, which he believes “must be considered and studied from another perspective. For now, in this moment of transition, the audience’s participation is absolute, and that must be at the center of this discussion.”¹⁶²

Others were skeptical about the replacement of face-to-face experiences with technology. Most of them believe that neither of them can be replaced; and they both will coexist, with technological innovations as a

¹⁵⁸ Carmen Gil (professor at the Arts Department from the Universidad de los Andes and curator of Voltage: Salón de Arte y Tecnología), interview by Pablo Solís Vega, May 2021.

¹⁵⁹ Infinitos, <https://infinitos.co/>.

¹⁶⁰ Pazmiño, interview.

¹⁶¹ Cecilia Sotres, “Cabareteando ando en pandemia”, *Investigación Teatral. Revista de Artes Escénicas y Performatividad*. Vol. 11, Núm. 18 (2020), <https://investigacionteatral.uv.mx/index.php/investigacionteatral/article/view/2649/4605>.

¹⁶² Arbelaez, interview.

convenient alternative. Jorge Dubatti points out that “if we were to accept that a gathering culture could be replaced by a techno-living culture [...] we would be encouraging an immense cultural shipwreck, the loss of one of the most wonderful cultural treasures of humanity (what we call a theater show¹⁶³)”. Ricardo Lira, executive director of the Centro para la Revolución Tecnológica en Industrias Creativas¹⁶⁴ (CRT+IC), in Chile, stressed that the pandemic helped us understand digital experiences as completely opposed to live physical experiences, so we must think of them like two different sorts of contents. In light of new technological advances, video cameras will not be the only necessary ingredients for live streaming events; they should instead be considered as experiences in their own right, opening new creative and business opportunities.¹⁶⁵

The Future Was Already Here: Immersive Reality and the Metaverse

Amidst fierce competition for the users’ attention on electronic devices and faced with the evidence of stage productions losing their appeal when watched on a screen, innovation has become crucial to recreate stage experiences and engage more effectively with audiences. Fabiola Pazmiño thinks that if we intend digital content to be so compelling that people would pay for it, “there should be more investments, to enhance digital experiences and help us recreate the face-to-face connection with the audience, sharing with them the feeling that they are actually taking part of something unique”.¹⁶⁶

It was with this intention in mind that theater organizations around the world incorporated immersive technologies, creating new experiences while expanding the possibilities of their productions and the interaction with audiences. Shows supported by immersive virtual environments (IVE) and digital cities accessed through avatars have taken center stage. Video games are ahead in taking advantage of these types

¹⁶³ Jorge Dubatti, “Entre el convivio y el tecnovivio: artes de pluralismo, convivencia y diversidad epistemológica”, *Investigación Teatral. Revista de Artes Escénicas y Performatividad*. Vol. 11, No. 18. Universidad Veracruzana, México, accessed March 15, 2021, <https://investigacionteatral.uv.mx/index.php/investigacionteatral/article/view/2649/4605>.

¹⁶⁴ CRT+IC is a public-private organization that promotes the development of technological skills among creative industries professionals in order to enhance creative companies, startups, products, and services. <https://www.crtic.cl/>.

¹⁶⁵ Lira, interview.

¹⁶⁶ Pazmiño, interview.

of technologies, serving as frameworks for the first staged events in the metaverse. In 2019, DJ Marshmello took the stage inside *Fortnite* during a virtual concert organized by the video game franchise, which brought together 10.7 million users.¹⁶⁷ A year later, the video game broke its own record with 12.3 million connected players that attended rapper Travis Scott's concert,¹⁶⁸ and in 2021 they repeated the experience with singer Ariana Grande's show.¹⁶⁹ Although we are talking about prerecorded and prescheduled shows, with artists appearing as digital characters, what is interesting about these events is the size of their audience and the different opportunities they offer to develop narratives that suit them. At each new version, the organizers have made improvements with games that allow you to unlock levels or acquire digital objects to better enjoy the concert (like a microphone on fire), or overcome obstacles to reach the stage, like rushing off of a giant toboggan or jumping on and off of different planets with moon-like gravity force. As each track changed, the digital environments changed and players could fly into space or dive into giant oceans, unfolding alternative narratives. Additionally, shows are no longer single presentations. Instead, they are scheduled at different timeframes,¹⁷⁰ further expanding their outreach.¹⁷¹

In *Roblox*, stage shows have also translated into digital millionaire sales. An illustrative case was that of Swedish pop singer Zara Larsson, who reported more than a million dollars in revenues in digital assets. After her presentation, virtual objects such as hats, clothes and accessories were sold to dress the avatars of connected users, and an even an avatar with the physical traits of the singer was for sale.¹⁷² Users of

¹⁶⁷ Nick Statt, "Fortnite's Marshmello concert was a bizarre and exciting glimpse of the future," *The Verge*, posted February 2, 2019, <https://www.theverge.com/2019/2/2/18208223/fortnite-epic-games-marshmello-concert-exciting-bizarre-future-music>.

¹⁶⁸ Andrew Webster, "Travis Scott first Fortnite concert was surreal and spectacular", *The Verge*, posted April 23, 2020, <https://www.theverge.com/2020/4/23/21233637/travis-scott-fortnite-concert-astronomical-live-report>.

¹⁶⁹ As of the date of this publication, the number of attendees for the Ariana Grande concert series has not yet been made public. Andrew Webster, "Ariana Grande's Fortnite tour was a moment years in the making", *The Verge*, posted August 9, 2021. <https://www.theverge.com/2021/8/9/22616664/ariana-grande-fortnite-rift-tour-worldbuilding-storytelling>.

¹⁷⁰ Webster, "Travis Scott".

¹⁷¹ *Idem*.

¹⁷² Mark Savage, "How Pop Star Zara Larsson made a seven-figure sum on Roblox", *BBC*, published on November 5, 2021, <https://www.bbc.com/news/entertainment-arts-59163449>.

Minecraft have monetized concerts, taking advantage of its gameplay, which invites them to build worlds while learning how to code them. An excellent example is Open Pit, which is made up of people under the age of twenty-five who organized and programmed several virtual concerts for *Minecraft*, bringing together 18,000 connected users in April 2020, and raising more than \$55,000, that were donated to charity¹⁷³ in the US.

Immersive environments represent a great opportunity to develop new narratives and engage with audiences in unconventional ways.¹⁷⁴ Considering the examples above, it seems that in the metaverse live events disappear, transforming into new creative happenings. The physical presence of the artist and spectator is replaced by an avatar, coming together in an entirely virtual time and space. The magic of art takes place while the audience gathers together in a space where all physical barriers have been removed and boundaries between the performing arts have become blurry. If the invention of cinema marked the birth of the “Seventh Art”, are we now on the threshold of naming a new discipline? Meanwhile, Mixed Immersive Reality, supported by Virtual Reality (VR), Augmented Reality (AR), Blended Reality (MR), and Extended Reality¹⁷⁵ (RE), is being used to enhance the experience of in-person events. An innovative example is the show “ABBA Voyage: The Concert”, which involved creating four forty-years-younger digital versions of the original Swedish group members, who were filmed by 160 cameras for motion capture, working with a team of more than 500 artists to complete a live show that combines video, lighting, and sound.¹⁷⁶

On the other hand, some shows do not involve any human characters on stage, as is the case of *Uncanny Valley*, performed by the Rimini Protokoll collective at the Santiago a Mil International Theater Festival. The work reflects on the relationship between robots and humans, presenting a humanoid on the scene, who at some point states: “if you have come to see an actor, you are in the wrong place; but if you have come to see the real thing, you are also in the wrong place.”¹⁷⁷

¹⁷³ Ellise Shafer, “More than a game, *Minecraft* Music Festival is a Blockbuster”, *Variety*, issued May 13, 2020, <https://variety.com/2020/music/news/all-about-minecraft-music-festivals-1234598970/>.

¹⁷⁴ Tom Rockhill, “To engage remote audiences, AR is more vital than ever,” *Digital Arts*, issued April 6, 2020, <https://www.digitalartsonline.co.uk/features/hacking-maker/engage-remote-audiences-ar-is-more-vital-than-ever/>.

¹⁷⁵ For the definition of these terms see Section 5.

¹⁷⁶ HMV Official. “ABBA announce new album *Voyage* and spectacular new live show”. YouTube video accessed February 28, 2022. <https://www.youtube.com/watch?v=IRT2ZTRR1ps>.

¹⁷⁷ Fundación Teatro a Mil. Trailer *Uncanny Valley* | Santiago a Mil 2021”. YouTube video, accessed March, 14, 2021. <https://www.youtube.com/watch?v=LPwGq9G-dvdE&t=8s>.

Although it is not yet clear what the future of the metaverses and cryptocurrencies in music and the performing arts will look like, artists and creators will play a central role in the development and appropriation of new technologies. They will be in charge of bringing coding to life, transforming complex technological languages into attractive and immersive environments, with engaging and exciting narratives. Also, by combining these tools, artists would unleash their imagination as stage creators, developing new and unexplored narratives. If that kind of future is to become a reality in LAC, different issues from poor connectivity to lack of digital skills, must be addressed so that both creators and consumers can become active agents in these new hyperconnected worlds.

3. Cases of Innovation



Theater as we knew it, or as we used to think about it, is no longer going to exist; it has to stop being narrow-niched and will have to adapt to new technologies.

—**Oscar Carnicero**, director of La Teatrera

In this section we analyze six cases of innovation that, through technology, have found innovative solutions for the performing arts industry. Their experience provides direct responses to the concerns raised throughout these pages, relating to the situation of the sector in LAC: How can technology favor the professional development of performing artists? How to promote stage creations in digital environments? How to improve the digital experience? Each case address these questions and tackles the challenges of what the future holds in store, the possible paths to transition into a globally hyperconnected digital sphere through data intelligence, or how to renew the engagement with audiences based on technological innovation with interactions highlighting the positive impact of the performing arts in the societies of our region.

Teatrix. Argentina

How to Promote the Consumption of Music and Theater in the Virtual World?

One of the biggest challenges in the digital field is to increase the consumption of culturally diverse content. In the context of tech giants like Netflix, Facebook, Google, Amazon, Apple, Disney or Spotify, it is necessary to advance regulations and find strategies to promote content produced in different parts of the world, using other narratives reflecting cultural diversity. Teatrix has tackled this task by launching a video on demand platform (VOD) specialized in theater plays in Spanish. It is the first platform streaming theater in high definition that can be accessed from any device and at any time, offering several subscription plans. The project was born in 2015 in Argentina and during the pandemic they have expanded to new markets in Bolivia, Colombia, Spain, Mexico, Paraguay, and the Latino audience in the United States. During their first four years, they reported a sustained annual growth of 5%, but during the first 6 months of 2020 that number increased to 80%, and by the end of that year they had tripled their audience, while time spent by viewers multiplied by 10. Faced with restrictions in performing for physical audiences, theater companies, production houses, and the like had to adapt their pieces to be streamed on Teatrix, keeping professional standards and hoping to monetize their shows. The streaming company has invested in creating an intuitive, world-class, and user-friendly platform with culturally diverse contents produced, meeting global quality standards. This has granted access to theater experiences for people who had never visited a theater hall before, encouraging new audiences to become interested in consuming both virtual and in-person performances.

PortalDisc App. Chile

How to Promote the Local Art Scene while Fostering Digital Economy for the Benefit of Music and Performing Arts Creators?

Independent or culturally diverse projects are faced with the challenge of making their content visible, promoting it, and making it stand out. To cope with this situation PortalDisc, launched in 2020, was the first streaming app on the market specializing 100% on Chilean music. Founded twelve years ago, the firm was a pioneer in offering digital distribution alternatives for Chilean artists, developing an MP3 online store. Currently, their catalog includes more than 130,000 songs, from more than 300 labels and 7,000 national artists. In 2021, the application was installed on more than 10,000 cell phones in 32 different countries. Aside from some additional functions similar to those of any commercial app, what makes PortalDisc unique is its geographical mapping of the country, adding sections for each Chilean territory, and its genre tagging (Andean, Mapuche, Rapanui, Chilota among others). This segmentation puts Chilean music in perspective, with a distinctive narrative that takes into account each region, style and sound, aiming at promoting the different cultural manifestations that endure across the country. The platform offers a far more generous deal for creators compared to those of the most popular streaming platforms. PortalDisc App pays 3.9 dollars for every 1,000 reproductions, while Spotify offers only one-third of that amount for the same number of reproductions. Artists are also given the chance to upload their own music, avoiding intermediaries, such as digital aggregators. There is a free version of the app that allows users to stream up to 50 songs per month at no cost. Premium memberships are offered at a cost of \$3.9 dollars per month or \$39 dollars per year. The company seeks to give fair treatment to artists and position itself as a platform to promote local music, while supporting the development of the Chilean music industry.

Pro Indie Music. Mexico

How to Support Professional Development of Independent Musicians Using an App?

Pro Indie Music is a Mexican project promoting technology for the development of independent artists, especially for those from the music industry. Using machine learning and artificial intelligence it provides users with relevant information to boost their careers. The app's algorithm

measures and grades the artists' development, recording and analyzing the available data collected from their own social networks (number of followers, interactions, time spent on them, and so on) and from other working documents (portfolios, technical riders, and contracts, among others). By storing the data provided by users, the system can make direct suggestions, combining the results from other users of the platform. ProIndie Music was, at first, a hub where musicians could access valuable information on the industry and its participants, sharing feasible strategies for their professional development. Then, the platform went from being a link between creators and festival programmers, managers, PR agencies and digital aggregators, to becoming a tool to assess an artist's career, providing concrete advice on how to achieve greater impact. Starting with 35 users-artists, the latest version of the application was launched on the market in April 2021, and by the end of that year they had 540 active subscriptions across Mexico, and Central and South America. Their membership system can be paid either monthly or in annual installments. Additionally, the platform can offer tailored advice on specific needs like how to release an album, which social networks to profit from, how to take advantage of digital tools, how to better engage with their audiences, and it even provides information about industry trends, particularly about NFTs. In addition, access to their customers' information allows the firm to target outstanding artists that know how to engage with audiences, offering them specific contracts with strategic partners and enhancing their development and market positioning.

Muse's Simulation Theory: Virtual Experience. England

How to Transform a Live Concert into an Interactive Digital Experience?

Faced with the challenge of making live-streaming concerts more attractive, the English band Muse teamed up with Los Angeles, California-based company Stage Inc to create "Muse's Simulation Theory: Virtual Experience," the online transmission of a show at the Metropolitan Stadium in Madrid, Spain, in 2019, for a physical audience of 50,000 people. The concert was filmed using 6k 360 cameras. The stadium was refurbished from a digital perspective, adding augmented reality items, in order to properly project immersive reality videos. During the virtual event, fans were able to interact by voice or text messages with other attendees, to play with some interactive items or to purchase digital or physical merchandise, including the digital clothing that the musicians were wearing on the day of the concert. Users or avatars made their way into the stadium just like in real life, however, once inside the venue they

were able to teleport to other sections of the stadium, choosing from 16 different points of view and at least three of them were on stage: facing the singer, the bassist or from either side of the drummer. Each angle of the 360° camera offered a panoramic view of the show from an unprecedented point of view. Downloading the app and watching the show can still be done for free. The firm has used the Muse virtual experience to launch Stageverse and publicize the platform. By September 2021, Stage Inc. managed to raise \$7.5 million of initial investment for the development of virtual worlds, seeking to dominate the emerging market of live shows in the metaverse.

Interspecifics. Mexico

How to Create Innovative Links Between the Performing Arts and Science?

Some institutions have identified creative disciplines—and stage performances in particular—as an opportunity for interacting with technological advances. An illustrative example in the region is the collective Interspecifics, an independent artistic research studio founded in Mexico City. The collective has been using sound to make air pollution visible in urban environments like Mexico City, São Paulo or Bogotá. In 2021 it was awarded with the Artificial Intelligence (AI) AI Lab, SETI x AI, residency, for their Codex Virtualis project, which aims to build a systematic collection of AI-generated hybrid organisms, emerging from speculative symbiotic connections between microorganisms and algorithms. The collective's goal is to explain complex phenomena through sensorial experiences, helping to understand them. They define themselves as a nomadic and experimental group working at the intersection between art and science. Their research focuses mainly on sound as a means of understanding the bioelectrical activity of different bacterial, plant, mold, and human conglomerates. For that purpose, they use their “ontological machines”, devices that combine hardware with creativity. The group also gives priority to sharing knowledge at public workshops, such as B10S or Music Makers Hack Lab, where they share the experience of their designs and works, based on open-source technologies. According to them, exchanging knowledge aids the creation of larger user communities, broadening their current learnings. Interspecifics' work has been carried out in different countries like Mexico, Germany, the Netherlands, Brazil, Chile, Ecuador, the United States, and Canada. Presently, there are more than three hundred artists and researchers in their database.

Centro para la Revolución Tecnológica en Industrias Creativas (CRT+IC). Chile

How to Promote Technological Development for Creative Industries in LAC?

With technology advancing at an exponential rate, our region runs the risk of being left behind, unless it takes part in current technological development and adaptation. Founded in 2021 in Chile, the Centro para la Revolución Tecnológica en Industrias Creativas (CRT+IC), a project led by the Fundación para la Revolución Tecnocreativa, a division of Bizarro Live Entertainment and one of the most important Chilean mass media entertainment companies. The project has the financial support of the Corporación de Fomento de la Producción (CORFO), an agency of the Chilean Ministry of Economy, Development and Tourism, whose goal is to promote the development of cutting-edge technologies by forming experts in creativity and technology that can come forward with solutions for the entertainment industry, enhance human capital, and trigger the internationalization of Chilean creative industries. This project involves a training program through workshops, seminars, and courses, bringing technological skills closer to stakeholders, while opening a space for the exchange of ideas between science, technology, and culture, supporting the piloting and development of projects through residencies. Through their Astillero Creativo program, supporting startups in the design of commercial validation strategies, training of executive staff and technology licensing. Finally, they will promote the strengthening of projects incubated at the center, aiding their success in searching for funds and other means of financing. During the first stage they will focus on technologies like 5G, Digital Realities (Virtual Reality - Augmented Reality), Artificial Intelligence, Blockchain, and the Internet of Things. They are targeting startups and SMEs from the following segments: music and entertainment, audiovisual and publishing, video games and digital reality, architecture, design, and urban studies. The center has also officially announced a strategic partnership with the firm Epic Games, becoming the first and only certified training center for Unreal Engine in Chile. Their goal is to promote new technologies, fostering knowledge and creating solutions for the actual needs of the creative industries.

4. Final Observations



The pandemic might be the equivalent of the prehistory of digital art and there is still much to discover.

—**Aurea Vieira**, Manager of International Relations at the São Paulo Social Service of Commerce

Technological innovation is changing the means of creation, production, promotion, exhibition, consumption, training, managing and even storing music and other works related to the performing arts. The digital experience cannot be a substitute for in-person events, but it can be a great ally in the sector's development, helping in the creation of new business models, engaging with audiences and achieving more efficient processes. The main challenge is to help music and performing arts professionals take part in technological development and monetization strategies, boosted by new technologies. Below we reflect upon possible routes of action for these industries, as well as their role in economic reactivation.

1. The Performing Arts and Digital Economy

1.1 Technology helps to expand creativity. New digital technologies are multiplying the ways of telling stories, thus expanding the powers of creation. In the digital world, there are no frontiers between the audience and the stage, encouraging artistic experimentation towards interactive experiences.

1.2 The digital transition means new sources of income. Offerings of digital content will play a major role in supplementary financial strategies in the sector, with consumers taking a leading role in the production chain. Audiences will no longer be passive and will play a role in processes from which they were excluded before, particularly in financing creative projects. To unlock this potential, professionals from the music business and the performing arts will need training, and investment in developing ad hoc platforms, while addressing legal and control mechanisms, so that creators can be granted fair financial compensation for their work.

1.3 Universal access to art. The digitization of music and the performing arts is expanding access to artistic and cultural manifestations like never before. To continue in this direction, creators will not only need the technical skills required to adapt their work and explore new technological tools, but also to partner with other CCI professionals and digital experts to design experiences equal to in-person quality events.

1.4 Promoting training and socializing technological advances. Creativity and imagination of musicians and stage creators can draw on new digital tools, exploring unknown territory and helping socialize them, so that more people know about them and use them. Developing initiatives that foster technological development and specialized training will spread its use in the sector.

2. Public Policies Favoring Digital Economy

2.1 Enhancing internet connectivity. Investments in digital infrastructure must be a priority in order to prevent the region from falling behind economically and socially in the global context.

2.2 Regulation of copyright and promotion of fair distribution of royalties. Advancing initiatives on copyright regulation and improving collection of digital royalties will help protect intellectual property, generating more revenue for musicians and performing artists in the region.

2.3 Fostering competition and monetization in digital media. Creating laws and regulations that promote local production can trigger the growth of the performing arts in the region, making them globally competitive industries.

2.4 Expanding dissemination of local content. Streaming platforms specialized in local multimedia content are commercial outlets for original productions that provide audiences with culturally diverse contents. However, it is necessary to cope with market imbalances, either taxing the main global streaming platforms and earmarking those resources to produce local content, or by creating regulations that compel these platforms to include in their catalog a minimum percentage of exclusively local content productions.

3. Cultural Policy for Music and The Performing Arts in the 21st Century

3.1 Ensuring public financing for the sector. Public funding will continue to play a central role in the development of music and the performing arts in the region. And governments should guarantee earmarking exclusive budgets for that purpose.

3.2 Modernizing financial transfer systems. Public funding should be seen as a production incentive, and should be made available for different value chain actors. Next to creators, other key agents such as producers, managers and digital developers are in need of seed capital; this capital can come from expanded public resources and encourage public-private investment funds, to strengthen the creation, production, marketing, dissemination, and circulation of products in the sector. This will make it possible to unleash the economic potential of the sector, both in digital and face-to-face scenarios.

3.3 Promoting and increasing private funding in the sector. To ease reliance on public resources, it is necessary to increase private funding. There are several tax exemption and tax reduction models available for firms willing to support undertakings in the sector. But there is still room for innovation. Research and Development is required to advance regulations promoting sponsoring and patronage solutions tailored for the region. More promotion and incentives will make firms aware of the economic and social benefits of investing in artistic and cultural projects.

3.4 Making the economic contribution of the scenic industries visible.

The recognition of the economic, political, and social value of the performing arts as generators of jobs, wealth, and added value to the territories, involves preparing and disseminating reports with data that show the contribution of these industries to the economy and society, which will also help trigger public-private investments for the development of the sector.

3.5 Recognizing performing arts professionals as formal employment.

Integrating performing arts professionals into social security schemes, guaranteeing their access to public health services, or creating specific regimes in employment or tax payment accounts will help reduce the precariousness of the sector and recognize the status of the artist as an integral part of the productive sector of society.

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Interviews

Alcaraz, María Victoria (General Director at Teatro Colón de Buenos Aires). Interview by Pablo Solís Vega. May 2021.

Arbeláez, Octavio (Director of the Teatro de Manizales International Festival). Interview by Pablo Solís Vega. March 2021.

Barros, Félix (CEO at Evento Medido). Interview by Pablo Solís Vega. May 2021.

Barrow, Marielle (General Coordinator at the Fondo para las Industrias Creativas, Banco de Desarrollo del Caribe). Interview by Pablo Solís Vega. May 2021.

Carnicero, Óscar (director at La Teatrería). Interview by Pablo Solís Vega. February 2021.

Clériga, Luis (Otoño en Hiroshima founder). En entrevista con Pablo Solís Vega, February 2021.

Codicimo, Jorge (General Interinstitutional Communication Coordinator at Teatro Colón, Buenos Aires). Interview by Pablo Solís Vega. May 2021.

Cortés, Malitzin (experimental musician and audiovisual artist / live coding expert). Interview by Pablo Solís Vega. August 2021.

Dañoibeitia, Cristóbal (President of the Observatorio Digital de la Música Chilena). Interview by Pablo Solís Vega. May 2021.

Dookiesingh, Vashtie (Financial senior consultant at Inter-American Development Bank). Interview by Pablo Solís Vega. May 2021.

Furtado, Flavia (Director of the Festival Amazonas de Ópera). Interview by Pablo Solís Vega. March 2021.

Galindo, Analida and Marlyn Attie de Mizrahi (Co-directors of Fundación Espacio Creativo). Interview by Pablo Solís Vega. March 2021.

Garrido, Rodrigo (CEO at Hoppia). Interview by Pablo Solís Vega. May 2021.

Guardia Crespo, Marcelo (Social Communicator at the Universidad Católica de Bolivia). Interview by Pablo Solís Vega, May 2021.

Knust, Oliver (director at ChileMúsica). Interview by Pablo Solís Vega. March 2021.

Lara, Marcelo (CEO at Pro Indie Music). Interview by Pablo Solís Vega. June 2021.

Lira, Ricardo (Executive director at CRT+IC. Centro para la Revolución Tecnológica en Industrias Creativas). Interview by Pablo Solís Vega. May 2021.

Machicao, Marko (consultant). Interview by Pablo Solís Vega. March 2021.

Olarte, Salomé (Musical Manager at Instituto Distrital de las Artes, Bogotá). Interview by Pablo Solís Vega. March 2021.

Ovsejevich, Andy (CEO at Ciudad Cultural Konex). Interview by Pablo Solís Vega. March 2021.

Parias, María Claudia CEO at Fundación Nacional Batuta). Interview by Pablo Solís Vega. March 2021.

Pazmiño, Fabiola (Production Coordinator at Fundación Teatro Nacional Sucre). Interview by Pablo Solís Vega. March 2021.

Ribas, Dani (data expert and consultant). Interview by Pablo Solís Vega. March 2021.

Rodríguez, Ana (Associate at Música Relatable Agency). Interview by Pablo Solís Vega. February 2021.

Romero Quero, Carmen (General Director of the Fundación Internacional Teatro a Mil). Interview by Pablo Solís Vega. March 2021.

Small, Rodney (Coordinator of Creative Industries at Ministerio de Cultura, San Vicente and the Grenadines). Interview by Pablo Solís Vega. March 2021.

Vieira, Aurea (Manager of International Relations at Serviço Social Do Comércio de São Paulo). Interview by Pablo Solís Vega. February 2021.

Quantitative Study for this Research

Aura / SIMO, "Quantitative study for the Series 'Art, Culture and New Technologies in Latin America and the Caribbean'", Mexico City: 2021.

6. Glossary

360 Video

Video format that enables a holistic panoramic view, in 360 degrees

A

Artificial Intelligence

Combination of algorithms that simulate human intelligence processes performed by machines.

Augmented reality (AR)

Technological interface that allows users to see and interact with digital items, in a physical reality context.

B

Blockchain

Chain of information that records digital transactions and operations.

C

Content platforms

Online website putting together all kinds of multimedia content available for the final user.

Copyright

Rules and legal principles that protect the rights that creators have over their works.

Culture Satellite Account

Statistical tool that measures the contribution made to the GDP of a country by the cultural sector, adding up all the activities that comprise it.

D

Digital Experience

The interaction between final users and digital media.

Drive-in concerts

Artistic shows attended by audiences that watch the shows sitting on their car seats.

E

Emergency bonds

Financial support offered by governments as part of a financial emergency program.

Extended Reality (ER)

Combination of technologies that allow interaction between real and virtual environments.

F

Full HD

It refers to an image resolution of 1920 by 1080 pixels.

I

Immersive Technologies

Series of tools trying to simulate real environments.

L

LED screen

Electronic device that projects multimedia content using LED diodes.

Licensing

Permission granted for the exploitation of a work protected by copyright.

Long tail

Marketing strategy consisting in leaving a product a long period of time in the market so it can gain visibility. On the internet, it refers to the effect of making content available over a period of time so that more people can watch it.

M

Mapping

Audiovisual technique consisting in projecting videos on surfaces, displaying animated elements or dynamic images, using artistic effects.

66 **Market Centric Payment System (MCPS)**

Revenue distribution model popular in streaming platforms and based on the concept of market share. It is determined by the number of streams generated for each artists' track in proportion to the market share, receiving more royalties from those with the most streams. (see User Centric Payment System - UCPS).

Metadata

Descriptive information that helps to interpret, identify, process, and store data. They are the data of the data, the describing informational content of an object or resource.

Mixed reality

Immersive technology that combines elements of virtual reality and augmented reality.

Multimedia

Combination of text, images, animation, and sound to create hybrid content.

N

Non fungible token (NFT)

Items traded in digital environments. They are unique and unrepeatable cryptographic pieces built with blockchain technology.

O

Over-The-Top (OTT)

Free transmission services consisting of audio, video, and other contents streamed through the Internet without traditional distribution operators being involved.

P

Patronage

Scheme of protection or resources granted to any cultural or scientific endeavor. In the arts, it defines the action of financial support given to artists and projects for their creative development.

Performing Arts

Artistic activities performed onstage for an audience. They include music, theater, dance, circus, opera, and the multidisciplinary arts.

Performing Spaces

Venues, halls, or theaters where shows are performed or staged. They comprise outdoors or indoors spaces.

Public Performing Rights

legal rights that grant the authorization to reproduce copyright content in public.

R

Rider

Document enlisting all the technical requirements for an artistic performance.

Royalties

Payment due to the copyright holder of a work or asset for the ongoing use of it.

S

Streaming

Multimedia technology that allows users to watch recorded or live content on digital platforms.

T

Tax incentives

Tax exemptions or credits used by governments to encourage a particular productive sector, or economic activity.

Tecnovivio

Term that encompasses the interaction of audiences with digital performances or shows.

Transmedia

Narrative strategy consisting in fragmenting a content and retelling it, using different media.

Triggering Cities

Term that englobes those global cities where a great amount of music content is being streamed or downloaded, multiplying data, and building algorithms, while aiding to the dissemination of those contents among wider audiences.

U

User Centric Payment Systems - UCPS

Revenue distribution model used by streaming platforms based on every user's consumption, unlike the Market Centric Payment Systems (MCPS).

V**Video on demand (VOD)**

OTT video service, in which users are allowed to choose between different videos hosted on a platform, at any given time.

Virtual Immersive Space

360 tridimensional spaces where users can interact without using VR helmets or glasses.

Virtual reality (VR)

Technological interface that creates an immersive virtual environment out of simulated scenes or places.

7. Projects Reviewed for This Publication

Company / project	Country	Type of project	Pages
Amazon music	United States	Streaming platform	36, 37, 49
Anti Status Quo	Brazil	Theater company	42
Apple Music	United States	Streaming platform	24, 36, 49
Aquí Cultura	Costa Rica	Digital Content Platform	12
Asociación Mexicana de Productores Fonográficos (AMPROFON)	Mexico	National Organization	17
Banco de Desarrollo del Caribe (CDB)	Caribbean	International organization	10
Inter-American Development Bank (IDB)	International	International Organization	5, 33, 40
Biblioteca Nacional Eugenio Espejo	Ecuador	Library	20
Bizarro Lab	Chile	Accelerator	14, 20, 53
Boletia	Mexico	Online ticket sales company	33
Circularart	Colombia	Music Association	34, 38
Ciudad Cultural Konex	Argentina	Art space	27, 31
Comisión Económica para América Latina y el Caribe (CEPAL)	International	International Organization	9, 10
Compartir Cultura	Argentina	Digital content platform	12
Confederación Internacional de Sociedades de Autores y Compositores (CISAC)	International	NGO	8, 10, 38, 40
Contigo en la Distancia	Mexico	Digital content platform	13
Corporación Colombia Crea Talento (COCREA)	Colombia	Public tax incentive program	15

Company / project	Country	Type of project	Pages
Corporación de Fomento de la Producción (CORFO)	Chile	Government entity	14, 53
Critical Switch	Mexico	Social network	33
Cultura en Casa	Uruguay	Digital content platform	12
Deezer	France	Streaming platform	24
<i>Despierta Elena</i>	Chile	Digital theater play	30
<i>Swan Lake</i>	Argentina	Online Theater Play	27
Epic Games	United States	Video game company	53
Escuela de Espectadores	Colombia	Educational program	28
Estímulos Fiscales a las Artes (EFIARTES)	Mexico	Public tax incentive program	15
Evento Medido/ Fanear	Chile	Digital company	19, 34
Federation of the Phonographic Industry (IFPI)	International	NGO	33
Festival Amazonas de Ópera	Brazil	Festival	18, 36, 37, 49
Festival Internacional de Teatro de Manizales	Colombia	Festival	27, 28, 32, 42, 43
Festival Internacional Santiago a Mil	Chile	Foundation	6, 32, 46
FIMPRO	Mexico	Music Encounter	34
Fortnite	United States	Immersive video game	45
Fundación Espacio Creativo	Panama	Foundation	18, 28, 32
Fundación Nacional Batuta	Colombia	Foundation	18, 31
Fundación Teatro Nacional Sucre	Ecuador	Government entity	29, 43
GigWell	United States	Digital company	37
Impulso Cultura	Ecuador	Digital content platform	13
<i>Infinitos</i>	Colombia	Digital stage work	42
Instituto Nacional de la Música (INAMU)	Argentina	Government entity	13
Interspecifics	Mexico	Artistic company	52

Company / project	Country	Type of project	Pages
<i>JuntosESeparados</i> (Anti Status Quo)	Brazil	Digital stage work	42
La Teatrería	México	Scenic space	28, 31
Landscape Artes Escénicas	Mexico	Theater company	42
Las Reinas Chulas	Mexico	Theater company	43
Aldir Blanc Law	Brazil	Emergency financial aid regulation	13
<i>Linderos del Horizonte Dramafónicos</i>	Colombia	Digital stage work	42
<i>LOOP Mirrors of Time TCRV</i>	Mexico	Stage work digital	42
<i>Mía sobre ella misma</i> (Deca Teatro)	Colombia	Digital stage work	42
Music By Numbers	United Kingdom	Research center	14
Music Tech Association Chile (MUSTACH)	Chile	NGO	14
Música México Covid-19	Mexico	Private fund	17
Música Relatable	Mexico	Company / consultancy firm	17, 38
London Royal Ballet	England	Art space	41
Netflix	United States	OTT platform	36, 37, 49
Non Fungible Token (NFT)	United States	Blockchain	41, 42
Observatorio Digital de la Música Chilena (ODMC)	Chile	NGO	14
Organización de Estados Iberoamericanos (OEI)	International	International Organization	33
Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura (UNESCO)	International	International Organization	33
Overture Plus	United States	Digital company	33
Patreon	United States	Digital platform	38
PortalDisc App	Chile	Streaming platform	50

Company / project	Country	Type of project	Pages
Pro Indie Music	Mexico	Company digital	50
Red de Asociaciones Musicales de Chile (RAM)	Chile	NGO	19
Secretaría General Iberoamericana (SEGIB)	International	International Organization	33, 40
Servicio Social Do Comércio de São Paulo (SESC SP)	Brazil	Public-private institution	26
SESC Digital	Brazil	Content platform	26
SoundCloud	United States	Streaming platform	39
Spotify	International	Streaming platform	24, 37, 38, 39, 49, 50
Teatrix	Argentina (international)	VoD platform	36, 49
Teatro Colón in Buenos Aires	Argentina	Art hall	19, 20, 25, 27
Teatro Colón in Bogotá	Colombia	Art hall	43
Teatro de Manaos	Brazil	Art hall	18
TikTok	China	Digital platform	38
<i>All that a VHS can hold</i>	Brazil	Digital stage work	43
Twitch	United States	Digital platform	38
<i>Uncanny Valley</i>	Germany	Digital stage work	46
University of Guadalajara	Mexico	Public university	18
Ventana Internacional de las Artes	Colombia	Performing arts gathering	34
VIP-Booking	United States	Digital company	33
<i>Virtual Crossings</i>	Switzerland and Argentina	Digital theater play	42
World Summit Award 2020 (WSA)	International	Prize	42
YouTube	United States	Streaming platform	26, 27, 32, 37, 42

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