



IGF 2020

Best Practice Forum on Local Content

Local and indigenous content in the digital space:
Protection, preservation and sustainability of creative
work and traditional knowledge

Final BPF output report

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Executive summary

1. Introduction

A Best Practice Forum (BPF) on Local Content was first established in the Internet Governance Forum (IGF) framework in 2014, with a focus on how to create an enabling environment for the development of online local content. The BPF was then reconvened in 2017 and over the past three years it has looked at various issues related to the development and promotion of locally-relevant content in the digital space.

In 2020, the BPF looked at issues related to the protection, preservation, and promotion of local and indigenous languages and cultural heritage in the digital age. It also explored issues of sustainability and funding related to the production of various forms of local content.

In its work, the BPF carried out a public survey, held online meetings with interested stakeholders, collected contributions from relevant organisations, and carried out research to identify additional relevant good practices on the issues explored.

2. Protection, preservation and promotion of local and indigenous languages

The BPF has provided overviews of several initiatives and policies dedicated to protecting, preserving and promoting local and indigenous languages in the digital space.

At the international level, the United Nations Educational, Scientific and Cultural Organization (UNESCO) has carried out significant work in support of multilingualism and local and indigenous languages. For instance, the 2003 Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace proposes a series of measures aimed to contribute to fostering universal access to digital resources and services, and facilitating the preservation of cultural and language diversity. In 2019, UNESCO acted as the leading UN agency for the implementation of the International Year of Indigenous Languages (IYIL), which raised global awareness of the importance of indigenous languages for sustainable development. The Strategic Outcome Document of the IYIL 2019 highlights the need to ensure the availability of digital technologies, content and services for indigenous language users.

Considering the gradual disappearance of indigenous languages and the vulnerable situation of the world's indigenous peoples, the UN General Assembly declared an International Decade of Indigenous Languages between 2022 and 2032. In February 2020, a high-level event held in Mexico led to the elaboration of the Los Pinos Declaration, outlining recommendations for the elaboration of a Global Action Plan for the International Decade, including in the area of digital empowerment, language technology and indigenous media.

The BPF has also looked at other specific initiatives that support the digital presence of local and indigenous languages. Rising Voices is working in Latin America with networks of digital activists who use technology, digital media, and the Internet to promote and revitalise their native languages by producing digital content. Wikimedia projects are also a useful tool for the preservation and promotion of local languages and culture. Other initiatives include the Drops language learning app (which includes languages such as Maori, Samoan, and Hawaiian); the Language Digitization Initiative dedicated to providing various resources to indigenous communities to help improve their access to information; and the Canadian Indigenous Languages Technology Project which develops speech- and text-based technologies to assist the stabilisation and revitalisation of indigenous languages.

Local radio and TV stations are valuable avenues for promoting and preserving local languages, while also supporting the production of local content (including cultural production). Various countries have radio and TV channels – now moving into the web – that preserve and give new life to local languages. Examples include S4C in Welsh in Wales, Māori Television in New Zealand, Algeria-based TV4 and the Tamazight channel in Morocco.

The COVID-19 pandemic has highlighted once more the important role of the Internet in our societies. As lockdown measures were put in place, the Internet has become central for accessing information about the spread of the disease, but also for education and work. In this context, it became increasingly important to make sure that people have access to relevant information in their languages. UNESCO, Wikimedia and the Hutukara Yanomami Association in Brazil have been among the various organisations launching initiatives to facilitate access to accurate, clear and reliable information in indigenous languages.

3. Protection, preservation and promotion of cultural heritage

The second large focus area for the BPF was the protection, preservation and promotion of cultural heritage. To start with, the BPF explored the role of libraries and other cultural and heritage institutions in preserving cultural heritage and making it available via digital tools. One example is Cerdotola, a digital library safeguarding the cultural heritage and memory from countries around Africa. The German and Qatar Digital Libraries also offer unrestricted online access to valuable cultural heritage objects. Many libraries and institutions are turning digital to open the cultural heritage data that their collections contain (e.g. Digital Library of the Brasileira Guita). Such efforts respect intellectual property rights and largely power access to materials in the public domain (or obtain the permission of rights holders otherwise). But applicable intellectual property frameworks can pose challenges (e.g. especially for digitisation projects spanning several jurisdictions), and at times require more resources.

The protection of intellectual property in the context of traditional knowledge (TK) and traditional cultural expressions (TCE) was another issue the BPF looked at. At the international level, the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore under the World Intellectual Property Organization (WIPO) undertakes negotiations to finalise an agreement on (an) international legal instrument(s) for the protection of TK, TCEs and genetic resources. Such an instrument would define what is meant by TK and

TCEs, who the rights holders would be, how competing claims by communities would be resolved, and what rights and exceptions ought to apply. In parallel, WIPO is providing various tools to help indigenous and local communities in managing intellectual property. Examples include the WIPO Cultural Documentation and Intellectual Property Management Training Program, the Indigenous and Local Community Entrepreneurship Program and the WIPO for Creators consortium.

It has for long been the practice that researchers who collected representations of native and indigenous life, language and cultural materials became owners of intellectual property rights for such collections. But such practices have often failed to take into account the rights of the native and indigenous communities themselves over their own cultural heritage. The BPF has identified some initiatives dedicated to addressing such challenges. Local Contexts has developed a set of TK Labels to empower native, first nations, aboriginal and indigenous communities to define the circulation routes and access obligations for digital cultural heritage materials. British Columbia-based Indigitization developed a toolkit of resources to support and guide digitisation projects in indigenous communities.

Initiatives that promote the ethical sharing of, and open access to, cultural heritage are also worth mentioning. Some of the licenses and public domain tools developed by Creative Commons can be used to share and preserve cultural heritage online. The Open GLAM initiative promotes digital cultural heritage, focusing on works that are already out of copyright and are being digitised by cultural heritage institutions.

The digitalisation of intangible cultural heritage (ICH) deserves more attention. ICH is subject to various threats that jeopardise its existence and its availability for future generations. These range from environmental degradation and cultural globalisation, to demographic issues, and economic pressure. Digitisation initiatives can help preserve, protect and promote ICH.

4. Protection, preservation and promotion of other forms of local content in the digital age

Local communities and local creators need to be empowered to use digital technologies to develop, promote and protect creative content, products and services. Such communities can benefit from having access to easy-to-use and open online tools allowing them to improve their work and make it available online. Examples of initiatives that focus on such issues include StoryWeaver – an India-based web platform dedicated to all those interested in reading and creating multilingual children’s books, and Bloom – a web platform allowing the creation and translation of books into multiple languages (especially minority languages).

Providing training and funding for local artists to freely express themselves is also important. An initiative of Hivos, the Resource of Open Minds (R.O.O.M.) programme is dedicated to supporting artists, culture and media producers, and creative hubs to freely express themselves, including through the use of digital tools.

5. Local content production: issues of sustainability and funding

There are many communities around the world which have specialised in the production of local artisanal objects. These communities rely on their skills in crafts such as textile designing, handicrafts, the production of glass and leather goods to make a living and ensure their sustainability. Other local communities have been traditionally involved in producing organic goods and rely on these productions as their main source of income. Digital technologies can help these communities become more sustainable.

In India, the Digital Empowerment Foundation has put in place the Digital Cluster Development Programme to support the development of local clusters that leverage digital technologies to improve and scale up local crafts activities as a way to create sustainable livelihood options and support inclusive growth at the local level.

China-based Alibaba Group, in collaboration with the government, launched Rural Taobao, a strategic initiative dedicated to building e-commerce infrastructures that allow rural communities to easily sell their handicrafts and manufactured goods. The overall goal behind the initiative is to drive inclusive economic growth in rural China through e-commerce.

Local newspapers have an important role to play in the preservation and promotion of local languages, but they often struggle with sustainability challenges, especially in the face of digitalisation. One successful example is La Voz de Galicia, which over the past years has been intensively working on transition from a paper-first to a digital-first newspaper.

6. Recommendations

The initiatives and examples of good practices that the BPF has collected served as a good source for a series of the recommendations on what still needs to be done to protect, preserve and promote local and indigenous languages and cultural heritage, and support the sustainability of local content production. Below is an extract from the overall set of recommendations which can be found in the report's dedicated section.

Protection, preservation and promotion of local and indigenous languages

- ❖ Sustainable policies are needed to ensure a universal, free and open online access to multilingual knowledge and information. Digital technologies can be leveraged to this aim.
- ❖ Funds need to be allocated to capacity development initiatives to foster digital skills among local and indigenous communities, so that they become empowered to use digital technologies in a meaningful way to access and develop content.
- ❖ Support to cultural diversity needs to be extended worldwide as a common practice, to face and counter the risk of global homogenisation.
- ❖ Stakeholders should encourage the creation of networks of digital activists and champions who can promote indigenous languages. More sustainable models are needed for digital activists who support communities to use the Internet and digital media to promote and revitalise indigenous languages.

- ❖ Local and indigenous media should be supported (through technical, organisational and financial means) in the efforts to produce and disseminate original content.

Protection, preservation and promotion of cultural heritage

- ❖ Governments need to develop enabling policies and allocate funds to support initiatives focused on the digitisation of cultural heritage, tangible and intangible.
- ❖ Intellectual property rights frameworks need to be clarified and, where necessary, enhanced, to support the digitisation of cultural heritage. International frameworks on exceptions and limitations to intellectual property rights could help address challenges in the digitisation of cultural/heritage material.
- ❖ Indigenous communities should be empowered to manage the intellectual property associated with their cultural heritage in ways that best respond to their needs and interests. Digital tools could be leveraged in this regard.
- ❖ Governments and the private sector should support local communities in their efforts to digitise their intangible cultural heritage, through funds, capacity development, etc.

Local content production: issues of sustainability and funding

- ❖ Governments, international organisations, private sector actors and other stakeholders should actively support (with funds, technical resources, capacity development initiatives) local creators such as artisans to make use of digital tech to improve their conditions and bring more sustainability to local communities.
- ❖ More sustainable models for the remuneration of creative work need to be devised as a way to foster the development of local content.
- ❖ Funding initiatives need to be put in place to support small publishers – like local newspapers, community media and services for minorities – in their efforts to ensure sustainability.

I. General introduction

1. The Internet Governance Forum

The *Internet Governance Forum (IGF)* is a global forum, convened by the United Nations Secretary-General¹, where governments, civil society, the Internet technical community, academia, the private sector, and independent experts discuss Internet governance and policy issues.²

IGF 2020, the fifteenth annual meeting of the IGF and the first virtual IGF meeting due to the COVID-19 pandemic, was hosted by the United Nations Department of Economic and Social Affairs (UN DESA) in November 2020 under the overarching theme “Internet for human resilience and solidarity”.

2. IGF Best Practice Forums

The IGF *Best Practice Forums (BPFs)*³ provide a platform for experts and stakeholders to exchange experiences in addressing Internet policy issues, discuss and identify emerging and existing good practices.⁴ BPFs are expected to be open, bottom-up and collective processes, and their outputs to be community-driven.

BPFs prepare their work in a series of intersessional discussions that culminate in a BPF session at the annual IGF meeting and a report published as part of the IGF outputs.

The objective is to collect from community experience, not to develop new policies or practices. BPF outputs intend to contribute to an understanding of global good practice, and to serve as a resource to inform policy discussions, standards development, business decisions, as well as public understanding, awareness, and discourse.

¹ The [resolution adopted by the UN General Assembly on 16 December 2015 \(70/125\)](#), “Outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the outcomes of the World Summit on the Information Society”, extended the mandate of the IGF as set out in paragraphs 72 to 78 of the Tunis Agenda.

² IGF website: <http://www.intgovforum.org>. The IGF is one of the key outcomes of the World Summit for the Information Society (WSIS).

³ BPFs were re-introduced in 2014 as part of the intersessional programme to complement the work of the IGF community and develop more tangible outputs to “enhance the impact of the IGF on global Internet”. This intersessional programme was designed in accordance with the recommendations of a 2012 report by the Commission on Science and Technology for Development’s (CSTD’s) Working Group on IGF Improvements.

https://www.intgovforum.org/multilingual/index.php?q=filedepot_download/4586/588

⁴ BPF outputs and activities are archived on the IGF webpage: <https://www.intgovforum.org/multilingual/content/bpfs-outputs>

3. IGF 2020 Best Practice Forums

BPFs are organised under the supervision of the *IGF Multistakeholder Advisory Group (MAG)*, which selects the topics for the BPFs, and receive substantive IGF Secretariat support.

The MAG confirmed the following four topics for the 2020 BPF cycle:

- ❖ Data and new technologies in an Internet context
- ❖ Exploring best practices in relation to international cybersecurity agreements
- ❖ Gender impact on shaping Internet policy
- ❖ Protection, preservation and remuneration of creative work and collective wisdom from a local content perspective.

II. BPF Local Content introduction

1. About BPF Local Content

Linguistic diversity and the need to nurture and develop local content has been a concern from the earliest days of the Internet. It was identified as one of the action lines in the [Geneva Plan of Action](#) and still today is one of the main obstacles to access the global Internet, when a local offer of contents and services in the local languages is scant or inexistent. Furthermore, the absence of local content in local languages within the Internet offer could weaken cultural diversity and create a gap between generations within the same community.

A BPF on Local Content was first established in 2014 with a focus on how to create an enabling environment for the development of local content. In 2017 the IGF MAG once again convened this BPF and it collected examples of initiatives that succeeded in stimulating the creation of local cultural assets, and extracted experiences and lessons learned with the goal to inspire policy makers and other stakeholders.

In 2018 the BPF Local Content examined the relationship between local Internet access provision and the development of locally relevant content and services. The focus was on both enabling a sustainable local content value chain, and the economic viability of creating and providing locally relevant content.

In 2019 the BPF Local Content decided to extend the scope of its issues, with special emphasis on preservation and promotion of languages and heritage under conditions in which cultural and linguistic diversity, artefacts and histories are sometimes at risk as a result of political and social shifts and upheavals.⁵

2. Themes and focus in 2020

The BPF Local Content's initial plan for 2020 was to build on previous work and further explore issues related to the **protection, preservation and remuneration of creative work and collective wisdom, from a local content perspective**. The intention was to focus on how to protect, preserve and remunerate creative work and collective wisdom in order to create a sustainable model for the production, distribution and local fruition of local content in the digital age.⁶

⁵ Previous outputs of the BPF Local Content can be found at <https://www.intgovforum.org/multilingual/content/bpfs-outputs>

⁶ "BPF Local Content Work Plan for 2020", https://www.intgovforum.org/multilingual/index.php?q=filedepot_download/5005/2067

As part of its work, the BPF conducted an online public survey to collect case studies and examples of good practices on the outlined issues. However, the input submitted by the community revealed more interest in two main topics:

- ❖ **The protection, preservation and promotion of local and indigenous languages**
- ❖ **The protection, preservation and promotion of cultural heritage**

In line with these findings, the BPF has decided to shift from its initial plan to a new approach allowing it to focus more on the two issues mentioned above. As such, the largest part of this report looks at (1) how the Internet and related digital technologies could be leveraged to support the protection, preservation, and promotion of local and indigenous languages and cultural heritage; and (2) various policies and initiatives aimed at promoting local and indigenous languages, as well as cultural heritage, in the digital space. The remaining sections focus on the protection, preservation and promotion of other forms of content in the digital age, and on issues of sustainability and funding related to the production of various forms of local content. The report documents examples of good practices and case studies around the explored issues, and concludes with a series of recommendations drawn from the presented examples.

3. Methodology

This document reflects the work of the BPF Local Content in 2020. It builds on:

- ❖ Responses to a public survey which resulted in 27 contributions
- ❖ Submissions from several organisations that are working on issues within the BPF focus (listed in Annex B)
- ❖ Discussions held throughout several online meetings with interested stakeholders
- ❖ Additional research conducted with the aim of shedding light on additional relevant good practices on the issues explored
- ❖ Discussions held at the BPF Local Content session organised during IGF 2020⁷ (when the draft version of this report was presented)

⁷ Details about the session are available at <https://www.intgovforum.org/multilingual/content/igf-2020-bpf-local-content>. The session recording can be accessed at <https://www.youtube.com/watch?v=-9ccQ6bQpok>.

III. Protection, preservation and promotion of local and indigenous languages

Guiding questions

- ❖ How can digital technologies be leveraged to promote and revitalise local and indigenous languages (e.g. through the creation of digital content)?
- ❖ How to give local and indigenous languages more presence on the Internet?
- ❖ How are digital technologies used to facilitate access to COVID-related information in local and indigenous languages?

1. Supporting multilingualism and local and indigenous languages at the international level: UNESCO work

The United Nations Educational, Scientific and Cultural Organization (UNESCO) [has been an active](#) promoter of multilingualism and linguistic diversity in the digital space. Over the years, the organisation has worked on various policies and initiatives dedicated to fostering a more vibrant presence of local and indigenous languages online, as a way to promote and revitalise them.

1.1. Normative framework in support of multilingualism and linguistic diversity in the digital space

In 2003, UNESCO's General Conference adopted a [Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace](#), which proposes a series of measures aimed to contribute to fostering universal access to digital resources and services and facilitating the preservation of cultural and language diversity. Among other recommendations, international organisations and the information and communications technology (ICT) industry are encouraged to collaborate in the development of multilingual content, tools and systems.

Multilingual Internet content in focus

“The public and private sectors and the civil society at local, national, regional and international levels should work to provide the necessary resources and take the necessary measures to alleviate language barriers and promote human interaction on the Internet by encouraging the creation and processing of, and access to, educational, cultural and scientific content in digital form, so as to ensure that all cultures can express

themselves and have access to cyberspace in all languages, including indigenous ones.”

UNESCO Recommendation concerning the Promotion and Use of
Multilingualism and Universal Access to Cyberspace

Member states are required to report on the implementation of the recommendations every four years. The most recent, [fourth consolidated report](#) (2019) on the implementation of the 2003 Recommendation was submitted to the 206th session of UNESCO Executive Board, before its transmission to the General Conference of UNESCO at its 40th session. According to the report, and based on information submitted by member states, progress has been achieved in some areas and certain challenges were observed as follows:

- ❖ Most Member State reports have emphasised the **continuous need and commitment to develop further the universal, free and open online access to multilingual knowledge and information, taking advantage of technical developments**, including in the field of artificial intelligence (AI). Initiatives have been taken to foster innovation and facilitate access, digitalisation, transmission and distribution of digital information, particularly from scientific and public domains at national levels through respective legislative measures. Institutions have been established to monitor, implement and assess the effectiveness of activities undertaken.
- ❖ **Capacity building to foster ICT and media and information literacy (MIL) skills and the use of open access** are receiving frequent attention. Improvements are being made on different levels in the fields of education, research and science as well as in e-administration, e-governance and digital economy. The multilingual aspects in the access to online portals are taken into account in some solutions only. Open access to multilingual information, particular scientific data, is encouraged.
- ❖ The advancement in the use of advanced technologies, including AI, and wide-ranging networks for broadband access, primarily in small towns, rural and remote areas with small populations is still in major focus. Some countries report on the difficulty of implementing existing legislation due to the lack of funding and access to submarine cables.
- ❖ The reports include information on recent revisions of the national right to information laws and national regulations, which contribute to building good governance and ensuring participatory processes for citizens using different languages in society.
- ❖ The need for **an ongoing re-assessment and adaptation of existing copyright legislation remains a relevant issue** in view of the continuous progressions in the technological field. The latest reports suggest that this commitment is only partially being followed up.

- ❖ The reports clearly emphasised that little attention is being paid to the alleviation of language barriers. The focus largely lies on the promotion of national and major dominant languages among citizens including linguistic minorities, migrants and refugees, rather than **active facilitation of access to knowledge and information in minority, lesser-used and indigenous languages**.

1.2. Promoting indigenous languages: international cooperation, new strategic directions and recommendations for actions

1.2.1. International Year of Indigenous Languages (2019)

The preservation and promotion of indigenous languages have been a focus area for UNESCO over the past several years. In 2019, the organisation acted as the leading UN agency for the implementation of the [International Year of Indigenous Languages \(IYIL\)](#), in line with the [UN General Assembly \(UNGA\) Resolution 71/178](#). IYIL represented a unique opportunity to raise global awareness of the importance of indigenous languages for sustainable development, peace building and reconciliation processes in our societies, as well as to mobilize stakeholders and resources worldwide.

a) **IYIL 2019 Strategic Outcome Document: emphasis on language digitalisation**

For the preparation of the [Strategic Outcome Document of the IYIL 2019](#), a global consultative procedure was set up in consultation with the Steering Committee for the organisation of the International Year. This included several international and regional consultations, held in cooperation with member states, indigenous peoples, academic organisations, UN system entities and other public and private bodies. The results included key recommendations for the elaboration of the strategic outcome document and future actions.

In the conclusions contained in the Strategic Outcome Document, stock was taken of the progress made and further guidance was given with regard to the various strands of work on indigenous languages. The document also contained a call for the establishment of minimum standards, to be built on the existing framework of normative instruments and tools, to preserve, support and provide access to indigenous languages and their users. The impact of the IYIL2019 as a mechanism for international cooperation and awareness-raising will also need to be carefully assessed for its potential as a launchpad for a new and longer-term sustainable response designed with specific goals, actions and timelines.

Conclusion V of the Strategic Outcome Document refers to **language digitalisation**:

“Digital technologies, in particular language technology, content development and dissemination, play a growing role in influencing societal development and contributing to

the intergenerational transmission of indigenous languages from older to younger generations, rather than fostering their disappearance in today's world. In this context, policy and decision makers, language technology developers, media and information providers, and other relevant public and private stakeholders should be alert and sensitive to barriers that impede the availability of new technology, content and services to indigenous language users. Provisions should take account of consent considerations and should, where possible, encourage the application of solutions whose delivery is based on open standards including in particular emerging technologies, Artificial Intelligence, Blockchain and others”.

b) Targeted actions and initiatives in the framework of IYIL 2019

⇒ International Conference “Language Technology for All” (December 2019, UNESCO headquarters)

In the framework of IYIL 2019, UNESCO organised an international conference entitled “[Language Technologies for All](#)” (LT4ALL) in December 2019 at its Headquarters in Paris, in close cooperation with the Government of the Khanty-Mansiysk Autonomous Okrug-Ugra (Russian Federation), the European Language Resources Association (ELRA) and its Special Interest Group on Under-resourced languages (SIGUL), and in partnership with the UNESCO Intergovernmental Information for All Programme (IFAP) and the Interregional Library Cooperation Centre (Russian Federation), and other public and private organisations.

The conference called on all relevant stakeholders to take **concrete measures for the promotion of a truly multilingual Internet and technologies.**

The major objective of the event was to promote the human rights and fundamental freedoms of all language users to access and create information and knowledge in languages they best understand, and to encourage all relevant stakeholders to take concrete measures for the promotion of linguistic diversity, truly multilingual Internet and Language Technologies, with special focus on indigenous languages within the context of international normative instruments and international cooperation mechanisms such as the IYIL 2019. The event also identified recommendations on how to harness technology for the preservation, support and promotion of languages, including lesser-used and indigenous, as well as on how to increase and facilitate communication between language users.

⇒ Side Event during the 39th Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore: Panel Discussion “Protecting, Preserving and Promoting Indigenous Languages: IYIL 2019” (March 2019)

Established in 2000, the [World Intellectual Property Organization’s \(WIPO’s\) Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore](#) (IGC) is a forum where WIPO Member States discuss the intellectual property issues that arise in the context of access to genetic resources and benefit-sharing as well as the protection of traditional knowledge and traditional cultural expressions. During the 19th IGC in 2019, the [joint](#)

panel discussion of UNESCO and WIPO provided an overview of progress made towards organising the IYIL 2019 and the work of WIPO's Traditional Knowledge Division, joined by indigenous and local community members through the WIPO Indigenous Fellowship Program. WIPO produced and presented a four-minutes animation, telling the story of the Yakuanoi people – a fictitious indigenous community – as they navigate through key issues regarding intellectual property and traditional knowledge. Under the WIPO Open Access Policy, anyone can translate the animation into their own indigenous language(s) for widespread dissemination among indigenous peoples.

⇒ **WSIS Forum 2019 – High Level Dialogue “ICT 4 ALL: Indigenous Languages Matter for Peace, Innovation and Development” (10 April 2019, ITU HQ)**

A key message to be drawn from the high-level panel, organised by UNESCO during the WSIS Forum 2019 is that promoting linguistic diversity and multilingualism through ICTs contributes to the preservation, access and promotion of the invaluable traditional knowledge imbued in languages, and facilitation of innovation and development in our societies. In order to produce effective language technologies, it is key that indigenous peoples and language users are involved in the development process.

The participants of the discussion identified a series of ethical, political, cultural, economic and technical challenges that prevent the development and mainstreaming of language technologies in minority, lesser-used languages. A central issue to be tackled is that users of minority languages often do not have the **right means or set of skills to develop strategies for the promotion of their own languages online**. Strong documentation efforts are therefore needed. Concurrently, private-sector organisations are increasingly supporting multilingualism by shifting their focus from languages ranked according to countries with the highest GDP, to developing language technologies in multiple languages, including minority ones and from low GDP countries. It was concluded that equipping indigenous language users with the necessary tools to benefit from latest digital developments requires the joint-efforts of multiple stakeholders.

⇒ **Festival Latino americano de Lenguas Indígenas en Internet 2019 (FLLii) (August, September, October 2019, Guatemala)**

The FLLii 2019 (Latin American Festival of Indigenous Languages on the Internet), organised by the Consorcio Festival Latino americano de Lenguas Indígenas en Internet (NGO) in cooperation with UNESCO Guatemala and other partners including Rising Voices, was an opportunity to bring together indigenous language digital activists, partners, organisations, academics, programmers and policy makers from Latin America. Through discussions, presentations and hands-on workshops, participants reflected on ongoing challenges in terms of the digital divide, language and technical issues, and what this means for communities working to maintain their language and pass it on to the next generation. Beyond raising awareness, the festival aimed at sending a strong message that more needs to be done at all levels and that, through collaboration on common goals, there will be a ripple effect for years to come. Within the festival, **meetings of digital activists of indigenous languages in Latin America** were held under the title "Departmental Event of Digital Activism of Indigenous Languages on the Internet", in the

municipalities of Cobán (23 August) and Quetzaltenango (27 September) and in Antigua, Guatemala (22–24 October). This was aimed at speakers of indigenous languages from communities in north western Guatemala; digital activists, technologists, self-learners; people interested in new technologies/innovation; teachers and students from schools and universities; Wikipedians as well as local institutions related to indigenous languages.

⇒ **Hackathon for Promoting Indigenous Languages through Free and Open Source Software (15-17 March 2019, Singapore)**

UNESCO Bangkok Office and FOSSASIA organised the [Hackathon for Promoting Indigenous Languages through Free and Open Source Software](#) at the Lifelong Learning Institute in Singapore, which was held during the FOSSASIA Summit 2019. The hackathon provided an innovative platform for young people and developers to find solutions to a pressing global issue. The event was supported by UNESCO's Youth Mobile initiative aiming at building the coding skills of young people and leveraging computer science education for sustainable development. The participants developed 12 possible **ideas/apps that can be developed using FOSS to promote indigenous languages**, including [Gadong](#), [Thazine](#) and [Guageland](#).

1.2.2. International Decade of Indigenous Languages (2022 – 2032)

In view of the gradual disappearance of indigenous languages and the vulnerable situation and marginalised position of the world's indigenous peoples, the UNGA declared an **International Decade of Indigenous Languages (IDIL) between 2022-2032** ([Resolution 74/135](#)). IDIL is intended to provide the framework for targeted, long-term actions in the area of indigenous languages, including in the area of language technology and digitalisation, as well as information accessibility.

Los Pinos Declaration

UNESCO and the Government of Mexico, in cooperation with a range of national, regional and international partners, organised a high-level event titled "[Making a Decade of Action for Indigenous Languages](#)", that took place on 27–28 February 2020 in Mexico City (Mexico), on the margins of the International Congress on Languages at Risk.

It was noted during the event that a detailed analysis of the IYIL's outcomes provide a solid basis for the identification and prioritisation of future strategies and working modalities, securing the commitment of key stakeholders and assuring the necessary funding for implementing IYIL follow-up activities.

The high-level event also generated the [Los Pinos Declaration](#) (Outcome Document) that presents milestones and recommendations for the elaboration of the future Global Action Plan for the International Decade, including in the area of "**Digital empowerment, language technology and indigenous media**":

- ❖ By consulting with indigenous people and obtaining their free, prior and informed consent, the **integration of technology and media as tools in the effort to preserve, revitalise and promote indigenous languages** could be very effective, and beneficial to indigenous people themselves.

Accessible and affordable Internet connectivity

- ❖ Promotion of **accessible and affordable Internet connectivity for rural and urban indigenous peoples** in order to create local content and facilitate communication in indigenous languages.
- ❖ Support to indigenous peoples in the digital age to **develop, disseminate and update new protocols to collect, store, access and share digital data and information.**

Access to digital information and content, information services and language technology for indigenous peoples

- ❖ An analysis of the presence of indigenous languages in cyberspace is required in order to identify linguistic, technical and sociocultural challenges, including surveys on the availability and use of workable language technologies to measure increases in indigenous language coverage.
- ❖ Creation of capacity building programmes for managers, including online, for **promoting digital content and revitalizing indigenous languages** through existing and new tools and platforms. Strategic use of language technology to support the teaching and learning of indigenous languages.
- ❖ Adoption of appropriate right to information laws that acknowledge the **right to public information in indigenous languages, including online**, is essential.
- ❖ Promotion of **networks of digital activists and champions for the teaching and learning of indigenous languages**, as well as the exchange of best practices related to the use of technology.
- ❖ **Creation of alliances** between indigenous peoples, the government, civil society organizations, academic institutions and other public and private organizations to address current and future technological challenges.
- ❖ Establishment of a working group mandated to define and follow up on **language technology uses for under-resourced languages** within the context of the implementation of the future Global Action Plan of the International Decade of Indigenous Languages.
- ❖ Organisation of regular events on **Language Technologies for All (LT4All)** aiming at scientific exchanges among multi-stakeholders coordinated within a global forum.

- ❖ Participation and **empowerment of indigenous young people as main actors in the development of digital strategies** for the access, use and dissemination of information and knowledge in their languages.
- ❖ Generation of balanced collaboration agreements between researchers and indigenous peoples, who are recognised for their important contribution to the preservation, documentation and promotion of indigenous languages.
- ❖ Provision of adequate funding to make resources, such as repositories and online archives, accessible to indigenous peoples to support their efforts to revive their languages.

Indigenous media

- ❖ Support for the **development and recognition of indigenous peoples' media**. More support and opportunities for the production and dissemination of original content by indigenous media, particularly radio, and a greater presence of indigenous people in the media generally, with an aim to increasing the share of broadcasts in indigenous languages.
- ❖ Better access to technical, organisational and financial resources for the creation of indigenous media. Enhanced capacities of media professionals will contribute accurate reporting on indigenous issues. Adoption of new legal instruments to ensure proper application of intellectual property rights principles and protocols for broader production, use and dissemination of indigenous cultural heritage materials.

1.3. UNESCO's Internet Universality Indicators national assessments: Initial findings and policy recommendations on local content and language indicators

The **UNESCO Internet Universality Indicators** (IUIs) contain 303 indicators (including 109 core indicators) developed under 6 categories, 25 themes, and 124 questions. On top of the ROAM (Rights, Openness, Accessibility to all, Multistakeholder participation) categories, 79 cross-cutting indicators have been developed concerning gender equality and the needs of children and young people, sustainable development, trust and security, and legal and ethical aspects of the Internet. In addition, the framework includes 21 contextual indicators concerned with the demographic, social, and economic characteristics of a country. These indicators are widely acknowledged as a unique and comprehensive tool relevant for all stakeholders and countries, to assess and improve Internet policies at the national level and also to foster digital collaboration at the international and regional levels.

At national level, these indicators aim to assess achievement and gaps of Internet development and policies via an inclusive multistakeholder methodology. The national assessment process proves to be a holistic approach for individual countries to operationalise the ROAM principles and to achieve evidence-based policy reform and improvement.

UNESCO has been working with stakeholders from an increasing number of countries to **implement national assessments of Internet development using the indicators**. The national assessments are progressing in **21 countries** across five continents. The national assessment process has attracted high-level attention and support from countries' key ministers, policy makers, and other actors, and its strong impact on policy improvement has been evident, with the multistakeholder approach and mechanism being strengthened to promote human rights in the policy making process at the national level.

Among these 303 indicators, it is important to note that under the Category A referring to *accessibility to all*, a number of indicators were designed covering multiple issues of technical access and availability (connectivity, usage), and economic and social aspects of accessibility such as **local content and language** to make effective use of the Internet for empowerment purposes, such as:

- ❖ Proportion of population whose principal language and script are available on leading online services.
- ❖ Availability of content on government websites in all languages with significant user groups within the population.

As shown in the IUIs assessment report of **Kenya**, Kenya has multiple languages spoken in its various regions. The constitution recognises three national languages: English, Swahili and Kenyan Sign Language.⁸ Under section 15 of the Programming Code, broadcasters are required to “provide sign language insert and subtitles in all newscasts and in all programmes covering emergencies and events of national significance to facilitate enjoyment of the programming by Persons with Disabilities”.⁹ The Communications Authority of Kenya, which regulates broadcasting, requires licensees to air 40% of local content which is wholly or partially produced in Kenya and either in Kenya's indigenous languages or the official languages.¹⁰ Some of these stations broadcast online on platforms such as YouTube, therefore contributing to promoting cultural heritage online.

One of the recommendations emerged from the assessment is to **urge the government to develop a policy that guarantees its websites have content in local languages and formats**

⁸ Constitution of Kenya 2010, art.7, <http://www.klrc.go.ke/index.php/constitution-of-kenya/108-chapter-two-the-republic/173-7-national-official-and-other-languages>

⁹ Programming Code for Free-to-Air Radio and Television Services in Kenya 2015, https://kfcg.co.ke/wp-content/uploads/2016/07/Programme_code.pdf

¹⁰ Communications Authority of Kenya, “The Programming Code for Free-to-Air Radio/Television Services in Kenya”, 2nd Edition March 2016, p.29, <https://ca.go.ke/wp-content/uploads/2018/02/PROGRAMMING-CODE-FOR-FREE-TO-AIR-BROADCASTING-MARCH-2016.pdf>

that are widely understood. This includes local languages as well as videos, for example with instructions on application for passports.

According to the IUIs assessment in **Senegal**, to date, there are no original government websites available in languages other than the official language (French). It should be noted that the availability of government websites in the national languages is not yet a priority since only the percentage of the population literate in each of the main national languages varies between 0.04% and 2.0% with 18.2% of men against only 8.1% of women.

Therefore, the assessment report recommends the government to **define and enforce guidelines to encourage the production and online availability of public interest content in national languages** (e.g. in audio form), especially as debates on subjects of public interest, such as in the National Assembly, are also held in national languages.

In **Benin**, the IUIs assessment shows that although few in number, local language applications do exist. These include "Fongbé", an application for learning the Fon language commonly spoken in Benin. Benin, like other West African countries, does not have a policy for developing local language content on the Internet, which is deplorable for the maintenance of cultural diversity.

Thus, a major recommendation to the government is to **encourage the production of sites and applications in local languages.**

In **Brazil**, the assessment shows the existence of 237 local languages, 217 are living and 20 are extinct. There is no content on government websites in languages other than Portuguese. It is important to consider, however, that even though Portuguese is the most widely spoken language, the 2010 Census in Brazil pointed out the existence of 274 other languages spoken by approximately 815,000 indigenous people, who represented 0.4% of the Brazilian population at that time.

The Brazilian Civil Rights Framework for the Internet provides that government e-services should seek to be compatible with "various terminals, operating systems, and applications for their access". Although there is no evidence regarding the implementation of this guideline, the Ministry of Planning, Development, and Management acknowledges that the federal government is not in full compliance.

The assessment report recommends the government to **promote the local content availability online and expand and improve policies for the preservation and promotion of cultural heritage online.**

Based on its deep engagement with IGF community in the past 15 years, launched a **Dynamic Coalition (DC) on Internet Universality ROAM-X indicators** at IGF 2020, as a new shared space for sharing experiences and raising awareness of the value of these Internet Universality indicators and good practice in applying them in more countries. This Dynamic Coalition will also be used to strengthen UNESCO's synergies and partnership with IGF MAG and all stakeholders, National and Regional IGFs (NRIs), BPFs and other DCs to jointly advance the evidence-based Internet policies at national, regional and global levels.

1.4. UNESCO and IDNs

UNESCO has been very active in another field that is very relevant for local content over the Internet: the promotion of internationalised domain names (IDNs) which allow people to register and use domain names in non-Latin alphabets.

Following the development of [IDN recommendations](#) by the Internet Engineering Task Force (IETF) in 2006, the Internet Corporation for Assigned Names and Numbers (ICANN) introduced the [IDN Program](#) dedicated mainly to supporting the planning and implementation of IDN top-level domains (TLDs). In December 2009, UNESCO and ICANN [signed an agreement](#) to collaborate on the internationalisation of the Internet; among other commitments, UNESCO agreed to inform member states about IDNs, encourage the involvement of other UN agencies in Internet multilingualism efforts, and engage its network of experts in the process.

Although multiple IDN TLDs have been introduced over the past years, the number of IDN TLDs is still significantly below the percentage of population using non-Latin alphabets. The [IDN World Report](#), a research project of EURid and UNESCO, offers a periodic overview of the state of IDNs deployment and use.

From 2 million in 2009 to 8,3 million in 2020, the IDNs growth is significant, but there is still a lot to be done; for instance, more efforts are needed to ensure the universal acceptance of IDNs, i.e., enabling domain names and email addresses in non-Latin scripts to work in all software applications (including browsers, email clients, etc.). As ICANN is preparing guidelines for a new round of new generic TLDs (gTLDs), there is pressure to introduce “positive discriminations” to favour the emergence of new IDNs from areas of the world currently cut out from the general progress of Internet domains.

2. Empowering indigenous youth to create a more culturally and linguistically diverse Internet: Rising Voices

Across Latin America, there has been an emerging movement of indigenous youth who have been leveraging the Internet and digital media as a way to create a more culturally and linguistically diverse Internet. Many of these young people who consider themselves digital activists (or language champions, advocates, or promoters) are tweeting, blogging, recording audio podcasts, editing articles in Wikipedia, making YouTube videos, and localising free software all in their native languages using free and relatively easy-to-use tools that provide lower barriers to access.

In this framework, [Rising Voices](#) – the outreach initiative of [Global Voices](#), formed in 2007 – is working with networks of indigenous language digital activists who are adopting and adapting technology, digital media, and the Internet to promote and revitalise their native languages by

producing all types of digital content in their languages. This is everything from news to oral histories that are made available online.

Through the **Activismo Lenguas (Language Activism) initiative**, Rising Voices has been facilitating spaces for peer learning and exchange by organising or co-organising in-person gatherings, creating social media campaigns, and convening a **network** of indigenous language digital activists (functioning as a peer-led network that shares experiences and good practices). Rising Voices has also developed a beta version of a **directory of digital projects** that use the Internet and digital media to promote and revitalise indigenous languages of Latin America. This crowd-sourced online directory is designed to provide an overview of different types of digital projects that are promoting indigenous languages and culture, through the sharing of best practices and strategies to address linguistic, technical or socio-cultural challenges. This directory can be searched according to country, language, or digital tool being utilised.

The majority of Rising Voices' members are volunteers and are not remunerated for their work. There is an interest in exploring more sustainable models for their digital activism. Accessing state or non-governmental funds is a part of this strategy, but many also take to crowdfunding or other services that help subsidise their community work.

3. Preserving local languages and fostering the development of local content through Wikimedia projects

As an organisation dedicated to providing free knowledge for everyone, everywhere, the **Wikimedia Foundation** has engaged in a number of initiatives to make the Wikimedia projects more relevant and useful in a local context. Additionally, there are certain elements underpinning the Wikimedia projects which make them an ideal forum for the development of local content and the preservation of local languages.

3.1. Structural incentives

3.1.1. Non-profit platform

Much of what makes the Wikimedia projects an attractive platform for the preservation of local language and culture is the foundation's dedication to being an ad-free, non-profit platform. When a for-profit platform investigates expanding into a new market or language, there are certain considerations and requirements that do not apply to the Wikimedia Foundation. This includes things like: the cost of translation for things like terms of service and other policies, the cost of content moderation in an unfamiliar language, and compliance with local financial and corporate law. Often, these costs are disproportionate to the amount of expected monetary return for a for-profit company. This does not mean that there cannot be profitable development of local content and languages, but that it is likely not best accomplished on a global scale, but instead through

national or local efforts. That said, economic incentivisation through government programmes can possibly help to create markets for the preservation of language and culture.

3.1.2. Separation by language, not country

The Wikimedia projects are language-respecting at their core. They are separated by language, not location, which allows for Wikimedia projects in smaller languages to develop at their own pace, and have a dedicated location where their language will not be overcrowded by languages spoken by larger populations in the same geographic location.

3.1.3. Anyone can edit

The community editing model is a key structural element of the Wikimedia projects that makes them a useful forum for the preservation of local content and language. All of the content on the Wikimedia projects is created and edited by volunteers. This means that different language communities can decide for themselves (within Wikipedia's policies) what content they want to focus their time and energy on. Further, the information on the Wikimedia projects, curated by native speakers and locals, is useful for the communities that develop it. While local communities are not monoliths, the customisability of Wikipedia helps it to be not only a repository for local languages and knowledge, but also a useful tool for the very communities developing it.

3.1.4. Aligned, not identical goals

Many of the goals of the Wikimedia projects align with those dedicated to cultural preservation and the development of local languages. The proliferation of digitally recorded language and the development of an online encyclopaedia are mutually aligned goals. Because Wikipedia is currently made up of a series of diverse, interconnected, comprehensive, written articles, it is attractive to people and groups interested in preserving language. Additionally, the ability to embed multimedia files in the articles (i.e. someone speaking a particular language) allows for language preservation to happen on multiple levels. While there is still much that Wikipedia needs to address with regard to the preservation of local language and culture (see "existing issues" below), the scope of the project creates a better forum for these activities than many online platforms focused on social interactions, which can be both repetitive and limited in breadth.

3.2. Specific initiatives

3.2.1. Indic language projects

One of the largest initiatives on Wikipedia to preserve local language and culture has been focused on Indic languages. [Since 2012](#), the Wikimedia Foundation has taken a number of steps to encourage comprehensive coverage of Indic languages on Wikipedia. These initiatives turned into a more formal partnership with Google in 2017 to [launch a programme](#) called Project Tiger

(now GLOW - Growing Local language content On Wikipedia) in partnership with the Center for Internet and Society and the Wikipedia community in India to increase local content in 12 indic languages. This programme both provided material support (Chromebooks and Internet stipends donated by Google) and incentives for article creation (a contest with prizes). This initial project helped volunteers create 4 500 new articles in indic languages, and the improved insights into Google's [translation tools](#) gained through the project have now allowed for [over half a million articles](#) to be translated on Wikipedia. While these tools still require significant [human oversight](#), this partnership has been helpful for encouraging translation on Wikipedia, with subsequent success in creating and improving over 14 000 Wikipedia articles in its latest iteration.

3.2.2. Incubator

One of the ways that small language Wikimedia projects can get a start without the pressures and issues which come with being a large, visible project is through the [Incubator programme](#). This programme, which has been in place since 2006, allows anyone to create a “test wiki” in a language which is not already represented. These test wikis are then developed by the originator and ideally, other volunteers who share the same language, and eventually will be voted on by a language committee of volunteers to determine if the project will be hosted by the Wikimedia Foundation. By creating a safer space for users to test out new local language wikis, the Incubator avoids some of the issues which are mentioned below.

3.3. Existing issues

3.3.1. Vulnerability to manipulation

While Wikipedia's “anyone can edit” format makes it easier for the development of local content and documentation of local language, it also means that small Wikipedias, including those in local or indigenous languages are vulnerable to manipulation or vandalism. For example, it was recently discovered that over [30 000 entries on the Scots language Wikipedia](#) were written by an American teenager who did not speak the language. In forums which are open to the public and have little oversight due to the rarity of the language spoken, extra safeguards or oversight may need to be put in place to ensure that manipulation, even well-intentioned manipulation, does not occur.

3.3.2. Format restrictions

One issue that has come up frequently around the preservation of culture on Wikipedia is the limited format of an encyclopaedia. While Wikipedia allows some multimedia – video, photos, sound clips – the format is still fairly rigid and focused on the written word. In cultures where expression is more traditionally or exclusively verbal, this makes Wikipedia a less-than-ideal forum for comprehensive preservation. Thus, it is important to consider the mode of preservation in discussing good practices about preserving local content.

4. Indigenous languages digitisation initiatives

4.1. Integrating indigenous languages: Drops language learning app

Drops – a language learning app – was the first multilingual language app to offer Icelandic, Maori, Samoan, and Hawaiian, encountering a positive response from its user base. The impact that Drops was able to have through the launch of these indigenous languages was not just digital access to the language, but support of global, national, and local linguistic preservation efforts, particularly in the Asia-Pacific Region. Since the launch, thousands of people have studied these languages via the Drops app (Icelandic: 219 000, Hawaiian, 51 000, Maori: 49 000, Samoan: 16 000, Ainu: 55 000). In some cases, numbers of learners are greater than the number of native speakers.

In a [joint initiative between the IYIL 2019](#), Drops and the Hokkaido University, and following the official recognition of Ainu people and language by Japan, a new indigenous language was added to Drops. In September 2019, Drops launched Ainu, being the language's only digital expression in the world. Drops also supported the Upopoy Ainu National Museum and Park, opening in spring 2020, by developing an interactive Drops display so visitors could interact with the Ainu language first-hand.

4.2. Translation Commons: Language Digitization Initiative

Translation Commons – a partner of the IYIL 2019 – launched the **Language Digitization Initiative** dedicated to providing various [resources](#) – toolkits, pilot studies, guidelines and training – to indigenous communities to help improve their access to information.

Part of these resources is a guide to help indigenous communities bring their languages online. The "[Indigenous Languages: Zero to Digital](#)" guide helps different indigenous languages that want to get started with using their language online, for both web-based and mobile implementations. With two main flowcharts to show the basic workflows in digitisation, the guide is very easy to follow; it also includes a more technical section with details on technical implementation. By using questions answered with Yes-No, the communities are guided to the next step they need to undertake with the available resources and people. It offers concrete actions for each response, a guide to perform specific tasks, pointers to resources and tools and suggestions for next steps.

4.3. Canadian Indigenous Languages Technology Project

Implemented by the [National Research Council Canada](#), the [Canadian Indigenous Languages Technology Project](#) develops speech- and text-based technologies to assist the stabilisation, revitalisation and reclamation of indigenous languages. Such technologies are aimed to support indigenous language educators and students, enhance the accessibility of audio recordings, and support indigenous language translators, transcribers and other language professionals.

Technologies	Context	Aim
<p>Speech-based technologies</p>	<p>There are thousands of hours of recordings of Indigenous languages from across the country.</p> <p>The recordings can be difficult for Indigenous communities to access and make use of because they are not always fully transcribed, and sometimes are missing metadata (information about what languages are being spoken, who is speaking, etc.).</p>	<p>To create software that will automatically segment and label audio files while they're being recorded (or shortly afterwards).</p> <p>To build and test audio-indexation software that makes it possible to search through existing recordings, including recordings made decades ago, to find keywords or phrases.</p>
<p>Text-based technologies</p>	<p>The complexity of words in Indigenous languages – in which single, long words made up of many small pieces known as morphemes, can often express what other languages express with entire clauses – poses difficulties for software applications (including both educational and professional software) that lack language-specific word-handling capabilities.</p> <p>Teaching how to form words is a central concern in Indigenous language education.</p> <p>Word complexity, and, in some languages, the complexity of the writing systems, mean that writing in accordance with official community standards is difficult for many learners.</p>	<p>To design, in collaboration with instructors, educational tools that support exploratory learning of word formation.</p> <p>To develop tools for spell-checking and grammar-checking, for integration with desktop and mobile applications, to help language users at all levels to follow their community's writing standards.</p>

5. The role of media: Preserving local languages and fostering the development of local content through radio/TV stations in local languages

Local radio and TV stations are useful avenues for promoting and preserving local languages, while also supporting the production of local content (including cultural production). In countries where Public Service Media (PSM) exist, the promotion and protection of minority languages is an essential part of their mission. In such countries, there are hundreds of local channels (TV and radio) that are aimed to serve and reach segments of populations that are not served by the main channels.

For instance, various countries in Europe and in the Mediterranean Basin have radio and TV channels – now moving into the web – that preserve and give new life to local languages on the edge of disappearing. Examples include S4C in Welsh in Wales, TG4 in Gaelic in Ireland, TV 3 in Catalan in Catalunya, RAI Sardegna in Sardinian language, but also tamazight-tv4 in Algeria and Tamazight TV, in Morocco in the Berber language, among many others. Other successful examples of this transition of pre-existing broadcasting services to the Internet can be also be found outside these regions, for instance in New Zealand.

5.1. Promoting the Welsh language on TV and online: S4C

Based in Cardiff (Wales, the UK), S4C (Sianel Pedwar Cymru – Channel Four Wales) is the only Welsh language television service. Its mission is to support the use and development of the Welsh language to ensure its future as a viable language.

The channel started broadcasting Welsh language programmes in 1982; at that point, there were 22 hours of such programmes broadcasted every week, alongside English programmes from the Channel 4 service¹¹. It has since evolved into an “wholly Welsh language channel” broadcasting over 115 hours of programmes each week.

Programmes broadcasted by the S4C range from sport and entertainment, to news and drama. It also has specific programmes dedicated to children and teenagers.

S4C has moved from being a traditional TV channel to one that also makes its programmes available online, thus catering to a wider audience and adapting itself to the digital age. S4C programmes are now [available online and on demand](#) via digital platforms such as [s4c.cymru](#), BBC iPlayer, YouView, [tvcatchup.com](#) and [TVPlayer.com](#) throughout the UK, and can be accessed through the S4C App for Apple and Android devices. Selected programmes are available to watch internationally at [s4c.cymru](#).

¹¹ Channel 4 was established by the UK government during the 1970s, to function alongside BBC 1, BBC 2, and ITV.

The channel prides itself in having pioneered the use of the Welsh language on digital platforms. One successful example is **Hansh**, a service for young people which was launched in 2017 and is now offering content on Facebook, YouTube, Instagram and TikTok, and a podcast service. In March 2020, the service marked a significant milestone: it reached 1 million viewing sessions across Twitter, Facebook and YouTube. Another example is Comedi S4C – a digital platform launched in 2019 as a space where people can experiment their comedy-related skills. Occasionally, the channel is providing live digital news content from major events on Facebook.

S4C has also launched a S4C Clic video player (available including in app stores), which attracted 100 000 subscriptions in six months only. S4C Clic is being constantly improved with new functionalities and it sometimes offers unique digital content exclusively channelled through it.

S4C is working closely with the National Centre for Learning Welsh to promote the Welsh language at the national and international level. In 2019, the two entities created a special platform for Welsh learners on the S4C Clic player, offering relevant S4C programmes.¹²

In the context of the COVID-19 pandemic, S4C launched a pop-up digital channel to allow people to express their thanks for the role played by the essential public services. The channel also provided free or heavily subsidised advertising space for small firms and charities doing work related to alleviating the consequences of the pandemic.

Over the past years, one of S4C's goals has been to develop and improve its digital presence and form the basis of a Welsh language digital cluster. In June 2018, the S4C Board approved a budget of £3m for investments in new digital content, digital infrastructure, and a dedicated digital team to lead developments in this area. In the 2019/2020 fiscal year, S4C increased its investment in digital services by 24%, acknowledging the importance of digital platforms for promoting and preserving the Welsh language. The channel has also commissioned research to serve as a basis for the development of a more comprehensive digital news service for its audience. The channel has a Digital Project Board which leads its digital programme and monitors progress.¹³

5.2. Adopting a digital first approach to promoting Māori language: Māori Television

Launched in 2004 and funded by the Government of New Zealand, the Māori Television has as its mission to contribute to the protection and promotion of the Māori language and strengthen its place in the country's national identity.

In 2019, the television adopted a “digital first approach” to modernise its services for the digital age and ensure that it remains competitive in the dynamic media environment. Motivating its shift

¹² S4C, “Welsh Language Standards Annual report”, March 2020,

https://dlo6cycw1kmbs.cloudfront.net/media/media_assets/Adroddiad_Blynnyddol_Safonaur_Gymraeg.pdf

¹³ S4C, “Annual Report and Statement of Accounts for the 12 month period to 13 March 2020”, March 2020, https://dlo6cycw1kmbs.cloudfront.net/media/media_assets/s4c-adroddiad-blyn-2019-20.pdf

to a “Digital First transformation of the newsroom”, Māori Television notes that it needs to engage with the next generation where it is, because “they are critical to language revitalisation”.

Under the slogan “Māori news anywhere, anytime, on any device” and aiming to be “the leading course of Māori content in places where [its] audience is”, the station launched an dedicated online platform – teaomaori.news, promoted as “a visually driven space to consume Māori news with simplified layouts, easier search function, overhauled home for reporters, and social embedding within article”. Delivering content online has, in turn, led to an increase in the station’s audience, from both within and outside of New Zealand. In fact, the station is consistently recording its biggest growth in audience numbers via digital channels.

The television works with local communities to support and cover grassroots initiatives. As part of this endeavour, it has started deploying livestreaming at local events.¹⁴

Aware that its audience is sourcing content through digital platforms such as Google, Facebook, Netflix, and Apple, Māori Television intends to focus on building relationships with such companies as part of its efforts to drive the distribution of diverse content and grow revenue streams.

One of Māori Television’s key goals is to grow the digital presence and consumption of Māori content. For this, the station aims to improve its digital production capability and ensure that it has the necessary digital infrastructure to support its work. In its Statement of Intent for 2020–2023, the station notes that it has been experiencing funding constraints that have impacted its ability to invest in more digital infrastructure and innovation. But it also says that it continuously looks for opportunities to improve its financial sustainability through the commercialisation of content, collaborative partnerships, and the commercialisation of existing resources.¹⁵

5.3. Promoting the Berber language on TV and online: Tamazight TV4 (Algeria) & Tamazight TV (Morocco)

In Northern Africa, two TV channels based in Algeria and Morocco have made strides in preserving and promoting the Amazigh (Berber) language.

Algeria-based TV4 (also known as Tamazight TV) is a public national television channel launched in 2009 by the state-owned group EPTV. It provides content in several variations of the Berber

¹⁴ Māori Television, “2019/2019 Annual Report”, <https://www.maoritelevision.com/sites/default/files/attachments/Māori%20Television%20Annual%20Report%202019.pdf>

¹⁵ Māori Television, “Statement of Intent for 2020–2023”, <https://www.maoritelevision.com/sites/default/files/attachments/Māori%20Television%20Statement%20of%20Intent%202020-2023.pdf>

language. In addition to traditional broadcasting, the channel is also increasingly present online, as its programmes can be followed via digital platforms.

In Morocco, the Tamazight channel started broadcasting in 2010 and is now delivering 80% of its programmes in the Berber language. The channel, owned by the National Corporation of Broadcasting and Television of Morocco, can also be followed online. In the context of the COVID-19 pandemic, Tamazight was included by the Moroccan Ministry of Education in a list of TV channels selected to broadcast remote classes for children while schools were closed.¹⁶

6. Facilitating access to COVID-related information in local/indigenous languages

6.1. UNESCO-led initiatives

The COVID-19 pandemic has highlighted once more the important role of the Internet and related digital technologies in our societies. As lockdown measures were put in place in countries around the world, and people's lives started to change in the fight with the pandemic consequence, the Internet has become central for accessing information about the spread of the disease, but also for education and work. In this context, it became increasingly important to make sure that people have access to relevant information in their languages.

UNESCO, as a UN agency with a significant amount of work dedicated to supporting multilingualism and local languages, has put in place initiatives to facilitate access to accurate, clear and reliable information in indigenous languages.

The Secretariat of the 2019 International Year of Indigenous Languages has created the dedicated webpage [Covid-19 Pandemic: Language Matters](#) hosted on the [IYIL 2019 website](#). It includes a collection of good practices and resources in and about indigenous languages related to COVID-19 prevention, as well as statements and policy guidelines issued by other UN agencies and organisations, and information about relevant initiatives that aim to tackle the negative impact of the pandemic on indigenous communities worldwide.

The page is updated with new resources on a regular basis, and an associated social media campaign is carried out on the IYIL 2019 [Facebook](#), [Twitter](#), and [Instagram](#), reaching thousands of indigenous peoples worldwide.

On the occasion of the International Day of the World's Indigenous Peoples on 9 August 2020, UNESCO produced a [Bulletin on "Indigenous Peoples and the COVID-19 Pandemic"](#), featuring relevant initiatives and targeted actions undertaken by UNESCO Sectors and Field

¹⁶ Safaa Kasraoui, "More Moroccan TV Channels to Broadcast Remote Classes", Morocco World News, 23 March 2020, <https://www.morocoworldnews.com/2020/03/297270/more-moroccan-tv-channels-to-broadcast-remote-classes/>

Offices to address the negative impact of the global crisis on indigenous peoples. The section “[Media and Communications](#)” covers issues related to access to accurate preventive information on the Internet and through digital technologies for users of indigenous languages.

In the framework of its Social and Human Sciences webinar series, UNESCO [hosted a discussion](#) on “Inclusion in the time of COVID-19” dedicated to indigenous peoples. The webinar looked at how the pandemic has adversely affected the enjoyment of basic rights by indigenous peoples and highlighted the importance of developing context-specific local responses that will help protect fundamental rights.

In connection with the [UNESCO Media and Information Literacy \(MIL\) Alliance COVID-19 Response](#), one webinar focused on MIL for indigenous people. The webinar gathered indigenous actors from Australia, Brazil, and Costa Rica and highlighted the challenges faced by indigenous communities and case studies of initiatives that seek to ensure the accessibility of credible information and knowledge in local languages and enhancing their MIL capacities to combat misinformation and disinformation and to tackle racism and discrimination by mobilising more inclusive online and offline indigenous communities.

Through partnerships with the UNESCO-led MIL Alliance (GAPMIL) Youth Committee, the MIL Alliance Youth Ambassadors developed the Health Information Literacy Alliance. Verified COVID-19 and MIL-related information was translated and distributed in 70 languages including indigenous dialects from Brazil, India and the Arab region. To counter the spread of disinformation connected to the new coronavirus, UNESCO produced a series of [audio](#) and [video](#) messages as well as [MIL learning resources](#). These resources were translated and adapted in 45 languages, including indigenous languages from Africa and Asia. In Myanmar, for instance, to reach the maximum audiences, UNESCO resources were translated and adapted in 19 local languages. The same was done in Africa. UNESCO, with its partners (Radio France International and France Media Monde), made available the resources in Fulfulde, Mandingue, Swahili, and Wolof. UNESCO is committed to further support the member states with new audio, video, and MIL graphics resources for indigenous communities.¹⁷

6.2. Wikimedia Foundation initiatives

The Wikimedia Foundation has been aware of the importance of local language and local-specific content in times of global emergency, like the COVID-19 pandemic. Currently, there are articles about COVID-19 in over [175 languages](#) on Wikipedia, over half the languages represented on the encyclopaedia in total. In order to improve coverage of COVID-19 in African languages in particular, the Foundation and several volunteer chapters (including the Yoruba User Group and Wikimedia South Africa) formed a [partnership with Moleskine](#) to translate articles into 16 African

¹⁷ UNESCO, “Media and Communications with indigenous peoples in the pandemic”, <https://en.unesco.org/news/media-and-communications-indigenous-peoples-pandemic>

languages. [This partnership](#) created a broad campaign calling for translations to 50 pre-written articles in English, including a [promotional video](#) raising awareness about the campaign.

The Foundation also has a collaboration agreement with the World Health Organization (WHO), focusing on [releasing WHO content](#) such as public-health related infographics, videos, and other COVID-19 related resources under a free license (CC BY SA 3.0) to be shared on Wikimedia Commons. Public health information about COVID-19 is critical to ensuring healthy communities, and Wikipedia has become an important resource for people to access information about the pandemic over the past months. This collaboration aims to build on the work done by volunteers to ensure Wikipedia's coverage of the pandemic is up-to-date, comprehensive, and reliable.¹⁸

6.3. Booklets in indigenous languages

To strengthen prevention against the COVID-19, the Hutukara Yanomami Association in Brazil has launched booklets in five different languages.

"If anybody is feeling sick, don't share tobacco or gourds, spoons, plates or glasses. Don't go to the cities!". This and other recommendations have been translated from Portuguese into four of the six languages Yanomami (Yanomam, Yanomami, Ninam and Sanöma) and also for Ye'kwana – languages of the two peoples that inhabit the Yanomami Indigenous Land.¹⁹

¹⁸ Wikimedia Foundation, "The World Health Organization and Wikimedia Foundation expand access to trusted information about COVID-19 on Wikipedia", October 2020, <https://wikimediafoundation.org/news/2020/10/22/world-health-organization-and-wikimedia-foundation-expand-access/>

¹⁹ Instituto Socioambiental, <https://www.socioambiental.org/>

IV. Protection, preservation and promotion of cultural heritage

Guiding questions

- ❖ How to promote and protect cultural heritage with the use of digital technologies?
- ❖ What are the challenges related to the protection of intellectual property rights associated with cultural heritage in the digital age?
 - Who has the right to share, access, document information in digital form?
 - What mechanisms are in place or being developed to address such challenges?
 - Who is working on such issues and what have they managed to produce?

1. The role of libraries in preserving cultural heritage and making it available via digital tools

Libraries and other cultural and heritage institutions have long used digital tools to preserve existing expressions of local culture and make it available to the wider public. **Digitising heritage materials** is one of the key ways of preserving cultural or documentary heritage materials (see, for instance, the [2015 UNESCO Recommendation concerning the preservation of, and access to, documentary heritage including in digital form](#)). The [International Federation of Library Associations and Institutions \(IFLA\)](#) has created a [2015 Recommendation Checklist](#) to help users understand and map progress made towards their implementation at the national level.

Such efforts can, of course, include traditional and indigenous cultural heritage. Some examples include the [National Library of Australia's initiatives](#) to preserve and make available recorded interviews capturing oral histories, manuscripts, and more. Another example is [Cerdotola](#), a digital library safeguarding the cultural heritage and memory from countries around Africa. This work is carried out with respect for the materials and the communities from which they come, with best practices emerging in a number of countries. The [German](#) and [Qatar Digital Libraries](#) also offer unrestricted online access to valuable cultural heritage objects. Many national libraries also carry out digitisation work and projects – in the Netherlands, for example, the [National \(Royal\) Library](#) hosts [Metamorfoze](#), a nation-wide project for paper heritage preservation.

Meanwhile, public, academic and special libraries can be in a unique position to facilitate access to more specialised local materials and collections. For example, [Toronto Public Library's Digital Archive](#) offers free online access to thousands of digitised books, images, maps and other materials on local history in Toronto (and beyond) from their collections. Similarly, [Waterford Libraries](#) offer free online access to many local history materials – from maps to digitised newspapers, journals, photos, and more.

Moreover, many libraries and institutions are turning digital to open the cultural heritage data that their collections contain – see, for example, the [Digital Library of the Brasiliana Guita and José Mindlin Library](#). Making more cultural and heritage materials in the public domain available online in this manner can stimulate both access and further use and re-use of materials.

Such collections of digitised works in the public domain can spur creativity and generation of new content, services, ideas and more – see, for example, the [Europeana Creative Project](#) which focuses on creative re-use of digitised cultural heritage materials from around Europe. Furthermore, through digital unification projects, libraries are also using digital technologies to bring together collections which have been scattered for reasons of migration, conflict, colonialism or other cause. IFLA has looked to provide [guidance](#) for libraries engaging in such activities.

1.1. Language in focus

Digitisation initiatives can also be an important step towards making available more materials in languages which are not as well-represented online (so [other than](#) English, Russian, Spanish, Turkish, etc.). For example, in Singapore, within the framework of the [Tamil Digital Heritage Project](#), the Indian Community's gift of a local Tamil literature collection published between 1965 and 2015 was proofread and annotated by volunteers and digitised by the National Library Board. Now, a large volume of texts can be accessed at the [National Library Board's portal](#).

1.2. Beyond print materials

As the examples above begin to show, such digitisation initiatives do not focus on reading materials alone – there are examples of maps, photos and other images which can be used creatively for more engagement or uses. [Moreland City Libraries](#) in Australia, for example, have created online puzzles based on the local history image collection. **The National Archives of Singapore** carried out and recorded [oral history interviews](#) – of which about 17 000 hours were made available online.

1.3. Preserving vulnerable materials

Digitisation initiatives often pursue **a double goal of easing access and ensuring preservation of the materials themselves**. The **University of Alberta Libraries**, for example, [have extended their efforts](#) to digitise and make available Alberta, Saskatchewan and Manitoba francophone heritage collections by selecting and preserving more recent born-digital content. Since web-based sources can be short-lived or vulnerable, this initiative aims to archive and conserve regional heritage materials born online.

Similarly, the [digitisation of newspaper holdings](#) of the **Penn State University Libraries** (which also makes many valuable historic newspaper materials freely available online – see the [Pennsylvania Newspaper Archive](#)) has responded to the need to preserve some of the most vulnerable and deteriorating print materials in their collections.

In short, libraries and other memory institutions protect, preserve and ensure access to cultural, historical and heritable materials by digitising some of their collection and making them available online. This creation and distribution model, powered either by public domain status or exceptions to copyright, draws on the expertise of information professionals and a well-established network of institutions to drive equitable (e.g. not paywalled) access to valuable and locally-relevant digital content.

These efforts respect intellectual property rights and largely power access to materials in the public domain (or obtain the permission of rights holders otherwise). That being said, many have pointed out that **applicable intellectual property frameworks can pose challenges for such projects (e.g. especially for digitisation projects spanning several jurisdictions), and at times require more resources**. It is clear that for the vast majority of works, copyright terms have no relation to the commercial life of works, and so risk limiting access to works to those who are able to travel. Initiatives such as the **Internet Archive**, or efforts to increase access to out-of-commerce works in the European Union, aim to rectify these issues, although the only long-term solution for digital access across borders would be an international framework on exceptions and limitations.

In the meantime, there are also examples of fruitful collaborations between rightsholders and memory institutions that drive access to valuable heritage materials. [In Lithuania](#), for example, **Šiauliai County Povilas Višinskis Public Library and the Cinema Art Club of Šiauliai** have worked together to digitise and make available through several channels local authors' films and other video materials capturing the city's history and heritage. The [Indian community in Singapore worked together with the National Library Board](#) (NLB) to assemble, digitise and curate heritage materials on Indian Performing Arts in Singapore – such as videos, songs, scores and more – and they gave the NLB permission to archive the digitised materials online. Authors of books in Papiamentu have been happy to work with the National Library of Aruba to make works available through the **Internet Archive's National Emergency Library**.

2. Intellectual property in the context of traditional knowledge and traditional cultural expressions: WIPO work

This section looks at the role that intellectual property tools can play with respect to the protection, preservation and remuneration of creative works and collective wisdom, from a local content perspective, with a particular focus on the intellectual property protection of the traditional knowledge (TK) and traditional cultural expressions (TCEs) of indigenous peoples and local communities.

In this context, “local content” could be understood as digital content that contains or is based on elements of TK and TCEs, produced by local and indigenous communities and reflects their culture, whether or not this content is made available online.

Local content of this kind can be protected and promoted through the development of national, regional or international intellectual property laws for the protection of TK and TCEs or through practical initiatives that contribute to strengthening the capacities of indigenous peoples and local communities to protect their digital assets using existing intellectual property tools. The paragraphs below highlight WIPO’s normative work and practical services in this area.

Traditional Knowledge and Traditional Cultural Expression

Traditional knowledge (TK) is knowledge, know-how, skills and practices that are developed, sustained and passed on from generation to generation within a community, often forming part of its cultural or spiritual identity. Traditional knowledge can be found in a wide variety of contexts, including: agricultural, scientific, technical, ecological and medicinal knowledge as well as biodiversity-related knowledge.

Traditional cultural expressions (TCEs), also called "expressions of folklore", may include music, dance, art, designs, names, signs and symbols, performances, ceremonies, architectural forms, handicrafts and narratives, or many other artistic or cultural expressions.

Source: WIPO

2.1. Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore

Because the existing international intellectual property system does not fully protect TK and TCEs, many indigenous and local communities and governments have called for a legal instrument or instruments to provide protection for TK, TCEs and genetic resources (GRs). The [WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional](#)

Knowledge and Folklore (IGC) undertakes text-based negotiations to finalise an agreement on (an) international legal instrument(s) for the protection of TK, TCEs and GRs.

An international legal instrument would define what is meant by TK and TCEs, who the rights holders would be, how competing claims by communities would be resolved, and what rights and exceptions ought to apply. Importantly, it would also determine the scope of protection of TK and TCEs, which could entail recognising and exercising exclusive rights, i.e., excluding others from carrying out certain acts.

Thus, the adoption of such a legal instrument(s) could introduce new international rules to be taken into account by stakeholders wishing to access and use local content based on TK and TCEs, or considering the online dissemination of TK and TCEs.²⁰

2.2. Cultural Documentation and Intellectual Property Management Training Program

The **WIPO Cultural Documentation and Intellectual Property Management Training Program** develops an integrated set of practical resources and guidelines for indigenous and local communities on managing intellectual property options when digitising intangible cultural heritage. The initiative also assists communities to develop their own intellectual property policies, protocols and technology-based tools to manage access to their recordings and other forms of cultural documentation in a way that corresponds to their values.

The programme, first piloted in Kenya in 2008, provided members of the Maasai community from Laikipia with practical skills and technical knowledge needed, in the fields of cultural documentation, archiving and intellectual property management, for them to record, archive and manage access to their own cultural heritage. WIPO also provided the necessary digital recording equipment for them to document and digitise their own cultural heritage on an on-going basis. This enabled the Maasai community to create its own intellectual property – in the form of digital photographs, audio-visual material, sound recordings and databases – and subsequently exercise control and make informed decisions on access and use by third parties.

Upon request, WIPO continues to provide practical guidance to indigenous peoples and local communities on how to undertake TK and TCEs digital documentation projects, and how to address critical issues relating to intellectual property as they arise during the documentation process, thus helping them to preserve their TK and TCEs for future generations, empowering them to become intellectual property owners and to use intellectual property rights, and giving them tools to control access to their local content.

²⁰ More information can be found in WIPO, “Background Brief 2 – The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore”, 2016, <https://www.wipo.int/publications/en/details.jsp?id=3861&plang=EN>

“[Documenting Traditional Knowledge – A Toolkit](#)” provides information on the intellectual property issues that indigenous and local communities should consider when documenting their TK and TCEs.

2.3. WIPO Indigenous and Local Community Entrepreneurship Program

The [WIPO Indigenous and Local Community Entrepreneurship Program](#) provides assistance to indigenous and local communities to make strategic and effective use of intellectual property tools in their businesses.

As part of this initiative, WIPO launched a [Training and Mentoring Program for Indigenous Women Entrepreneurs](#) in 2019 to strengthen the capacity of women entrepreneurs from indigenous and local communities to make strategic and effective use of intellectual property rights, in support of projects based on TK and TCEs. The programme has a practical approach and consists of a training phase, followed by a mentoring phase. During the training phase, the women gather in a one-week workshop in order to learn about intellectual property rights, as well as business models, market access strategies and marketing of cultural heritage. They also have the chance to present their projects and receive feedback from experts and their peers, and to develop a strategy on intellectual property and project implementation. During the mentoring phase, participants are assigned mentors to guide them through the process of implementation of the intellectual property components of their projects.

For its first edition, twenty-four women entrepreneurs were selected from the hundreds of applicants. The profiles selected include digital artists who are planning, or have already initiated, a project based on TK and/or TCEs, which includes an intellectual property component. By strengthening these artists’ knowledge and skills on the intellectual property management of their TK and TCEs, the programme seeks to ensure that they are remunerated for their creative work, guaranteeing the creation of a sustainable model of business that generates positive changes for women and their communities. A second edition of the programme is planned to take place on 2021–2022.

“[Protect and Promote Your Culture: A Practical Guide to Intellectual Property for Indigenous Peoples and Local Communities](#)” provides information on the intellectual property tools that indigenous and local communities can use to promote their products and services, and prevent the misappropriation of their traditional knowledge and culture.

2.4. Webinars on e-commerce and intellectual property for entrepreneurs belonging to indigenous and local communities

WIPO's [webinars on e-commerce and intellectual property for local and indigenous entrepreneurs](#) aim at presenting intellectual property tools available to those entrepreneurs who wish to engage in e-commerce, which can help promote their TK-based goods and services, and overcome challenges related to protecting works, ideas and images in a digital environment.

During the webinars, moderated by indigenous representatives, experts on e-commerce and intellectual property, and entrepreneurs from local and indigenous communities, identify and provide answers to the main intellectual property questions and challenges entrepreneurs face in e-commerce and social media, including how to promote and protect indigenous digital art.

2.5. WIPO for creators

[WIPO for Creators](#) is a consortium that aims to raise awareness and increase knowledge among creators, including creators from local and indigenous communities, on the intellectual property rights and related processes required for them to efficiently manage their data and be fairly acknowledged and compensated for their work.

Among other activities, the consortium endeavours to fulfil its objective by organising conferences, seminars and other programmes to raise awareness of creators' rights; producing and managing an online platform including educational videos to inspire, raise awareness and increase knowledge of creators' rights; support the development and/or the promotion of services and IT solutions regarding creators' rights (such as systems of identifier assignment and documentation of works, performances and recordings); and providing tailored mentorship for creators.

3. Other efforts to support local/indigenous communities to preserve their cultural heritage and knowledge and protect their intellectual property

It has for long been the practice that researchers who collected representations of native and indigenous life, language and cultural materials became owners of intellectual property rights for such collections. But such practices have often failed to take into account the rights of the native and indigenous communities themselves over their own cultural heritage. As Local Contexts notes, "for many communities, issues around who owns these collections, and who decides who can control and circulate these is now a critical knowledge sovereignty matter".²¹ In this section,

²¹ Local Contexts, "Background Brief on Local Contexts and the TK Labels", 2017, <http://localcontexts.mukurtu.org/wp-content/uploads/2016/12/Local-Contexts-Background-Brief.pdf>

we look at several initiatives dedicated to addressing such issues and ensuring that indigenous communities have a say when it comes to the intellectual property associated with their culture (especially in the digital context).

3.1. TK Labels & TK Licences to empower indigenous communities to manage the intellectual property associated with their cultural heritage

Convinced that native, first nations, aboriginal, and indigenous communities have an inherent sovereignty over their cultural heritage, **Local Contexts** works to support such communities in the management of their intellectual property rights associated with their cultural heritage in the digital environment. The organisation is developing and implementing legal, extra-legal and education strategies to assist indigenous communities in navigating copyright legislation and the public domain status of their heritage. Its work is largely supported by funds and grants from the World Intellectual Property Organization, the Intellectual Property Issues in Cultural Heritage, the New York University Graduate School of Arts and Sciences, and Arcadia Foundation.

3.1.1. TK Labels

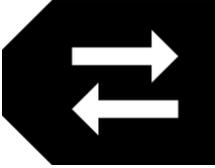
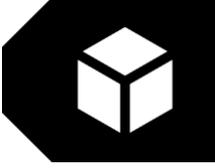
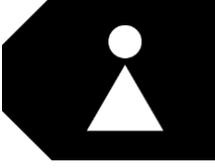
TK Labels have been designed as a way to empower native, first nations, aboriginal and indigenous communities to define the circulation routes and access obligations for digital cultural heritage materials. They enable relationships between indigenous and non-indigenous right holders by providing more information about indigenous materials to help those who want to use them outside of the communities make better decisions about re-use and circulation. The labels also helped various institutions, such as cultural ones, build better relationships with the communities whose collections they hold, own or manage.

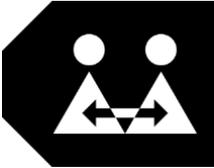
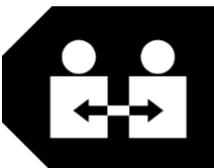
TK Labels provide indigenous communities with the tools to add cultural and historic content to their cultural heritage content in non-indigenous digital archives, libraries and museums around the world, and to their own digital heritage archives. The labels are meant to help users of traditional cultural knowledge understand the importance and significance of such material, even when it is in the public domain; they are designed to identify and clarify which material has community specific protocols of access and use associated with them.

There are currently 18 TK labels:

	<p>TK Clan (TK Clan)</p> <p>This label should be used when you would like external users to know that this material is subject to conditions for circulation relating to clan membership and or is according to protocols for clan relationships. Because these conditions have not historically been recognized, this Label helps make these conditions for use and circulation clearer. Specifically, the Label asks future users to respect culturally specific rules of use and to make informed decisions about using this type of material.</p>
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	<p>TK Multiple Communities (TK MC)</p> <p>This label should be used to indicate that multiple communities have responsibilities of custodianship and/or ownership over specific material. This label recognizes that no singular community has explicit control. Rather, rights and responsibilities for use are spread across communities through already existing community protocols and ongoing cultural relationships.</p>
	<p>TK Non-Verified (TK NV)</p> <p>This material has not been verified by the community. Reasons for this could include that it has not been appropriately vetted, has mistakes, omissions, derogatory language, lack of informed consent, or its process of creation was through dishonest research which did not follow proper community protocols.</p>
	<p>TK Family (TK F)</p> <p>This label should be used when you would like external users to know that this material is subject to certain conditions for circulation. This material is usually only shared between family members. Because these conditions have not historically been recognized, this label helps make these conditions clearer for future users. Specifically, it asks them to respect culturally specific rules of use and to make different and fair decisions about using this type of material.</p>
	<p>TK Seasonal (TK S)</p> <p>This label should be used when you want to let external users know that the material that is openly circulating has seasonal conditions of access and use. This could mean that some material should only be used and heard at particular times of the year. It could also mean that the environment and land where this material derives also influences and impacts its meaning and significance. This label can be used to help external users know that there are land-based teachings in this material which affect proper use and respectful understanding.</p>
	<p>TK Outreach (TK O)</p> <p>This label should be used when you would only like your cultural materials used for educational outreach activities. Outreach activities means to share works outside the community in order to increase and raise awareness and education about your family, clan and/or community. Sites for outreach activities can include schools, universities, libraries, archives, museums, online forums and small learning groups. Depending on what kind of context and the possibilities for increased circulation of this material, this label helps TK holders and users to develop new possibilities in the fair and equitable reciprocal exchange for use of this material in outreach activities. This exchange might include access to educational or other resources that your community has difficulty accessing under other circumstances.</p>

	<p>TK Verified (TK V)</p> <p>This label should be used when you and your community are satisfied with the way in which your traditional knowledge materials are being represented online or offline. This label affirms that appropriate conditions for access and use are in place and that whoever has made this material accessible has made accommodations for cultural protocols associated with the knowledge. It lets users know that the right thing is being done by your community protocols and standards.</p>
	<p>TK Attribution (TK A)</p> <p>This label should be used when you would like anyone who uses this material to know who the correct sources, custodians, owners are. This is especially useful if this material has been wrongly attributed or important names of the people involved in making this material or safeguarding this material, are missing. This label allows you to correct historical mistakes in terms of naming and acknowledging the legitimate authorities for this material. This label asks for future users to also apply the correct names and attribution.</p>
	<p>TK Community Use Only (TK CO)</p> <p>This label should be used when you would like external users to know that this material is subject to certain conditions of circulation namely that this material is usually not circulated beyond the family, clan or community. Because these conditions have not historically been recognized, this label helps make these conditions clearer for future users. Specifically, it asks them to respect culturally specific rules of use and to make different and fair decisions about using this type of material.</p>
	<p>TK Secret / Sacred (TK SS)</p> <p>This label should be used when you want to let external users know that the material that is openly circulating contains secret/sacred information and that it has specific conditions of access and use. These conditions potentially include restrictions upon access. Using this label helps to alert external users that this material is special and requires respectful and careful treatment. It asks users to make different decisions about using it and, importantly, to discuss any potential use with you.</p>
	<p>TK Women General (TK WG)</p> <p>This label should be used when you want to let external users know that the material circulating should only be shared between women in the community. This is a women's general label and indicates that there are restrictions of access and use to women within the community based on customary law. This label can be used to help external users recognize that with this material there are specific protocols and conditions of use. This label is designed to recognize that some knowledge is gendered, and that certain knowledge can only be shared among specific members of the community. It should be used to complement already existing customs and protocols of access and use.</p>

	<p>TK Women Restricted (TK WR)</p> <p>This label should be used when you want to let external users know that the material circulating freely is actually of a highly restricted nature. This is a women’s highly restricted label and indicates that there are restrictions of access and use based on customary law. This label can be used to help external users recognize that with this material there are very specific protocols and conditions of use. This label is designed to recognize that some knowledge is gendered, and that certain knowledge expressions can only be shared among specific members of the community. Only authorized [and/or initiated] women within the community should be using this material.</p>
	<p>TK Men General (TK MG)</p> <p>This label should be used when you want to let external users know that the material circulating should only be shared between men in the community. This is a men’s general label and indicates that there are restrictions of access and use to men based on customary law. This label can be used to help external users recognize that with this material there are specific protocols and conditions of use. This label is designed to recognize that some knowledge is gendered, and that certain knowledge can only be shared among specific members of the community. It should be used to complement already existing customs and protocols of access and use.</p>
	<p>TK Men Restricted (TK MR)</p> <p>This label should be used when you want to let external users know that the material circulating freely is actually of a highly restricted nature. This is a men’s highly restricted label and indicates that there are restrictions of access and use based on customary law. This label can be used to help external users recognize that with this material there are very specific protocols and conditions of use. This label is designed to recognize that some knowledge is gendered, and that certain knowledge expressions can only be shared among specific members of the community. Only authorized [and/or initiated] men within the community should be using this material.</p>
	<p>TK Non-Commercial (TK NC)</p> <p>This label should be used when you would like to let external users who have access to your material know that it should only be used in non-commercial ways. You are asking users to be respectful and fair with your cultural materials and ask that it not be used to derive economic benefits or used in any way that makes it into a commodity for sale or purchase.</p>
	<p>TK Commercial (TK C)</p> <p>This label should be used when you are happy for an external user to use your cultural material in any way, including deriving future economic benefit. With commercial use you will have no control over how the work is circulated. We would encourage you to establish contact information to help you have direct negotiations with those external parties who would like to use your work under</p>

	<p>this label. This is in order to help prevent derogatory treatment and cultural offense.</p>
	<p>TK Community Voice (TK CV)</p> <p>This Label should be used when you would like to encourage community members to share their knowledge, stories and experiences. This Label would usually be used within a community-based archive to encourage the sharing of stories. This Label indicates that the current narrative or explanation that accompanies this material is incomplete or partial and that many community voices are needed to help make sense and understand the event, photograph, recording or heritage item. The Community Voice Label encourages multiplicity in the telling, listening and sharing of community histories and cultural knowledge.</p>
	<p>TK Culturally Sensitive (TK CS)</p> <p>This Label should be used when you would like external users to know that this material has special sensitivities around it and should be treated with great care. These sensitivities could include: that it has only recently been reconnected with the community from which it originates, that the community is currently vetting and spending time with the material, and/or that the material is culturally valued and needs to be kept safe. This Label could also be used to indicate that there are cultural sensitivities around this material arising from legacies of colonialism, for instance, the use of derogatory language or descriptive errors within the content and/or content descriptions.</p>

The TK Labels have been developed and tested in collaboration with native communities and cultural institutions. Local Contexts works to constantly refine how they are implemented into catalogues, archival management systems, and other content management systems.

One example of TK Labels implementation is <http://digitalsqewlets.ca/index-eng.php> – a website dedicated to promoting the language, history and traditions of the Sq’ewlets People living in the British Columbia.²²

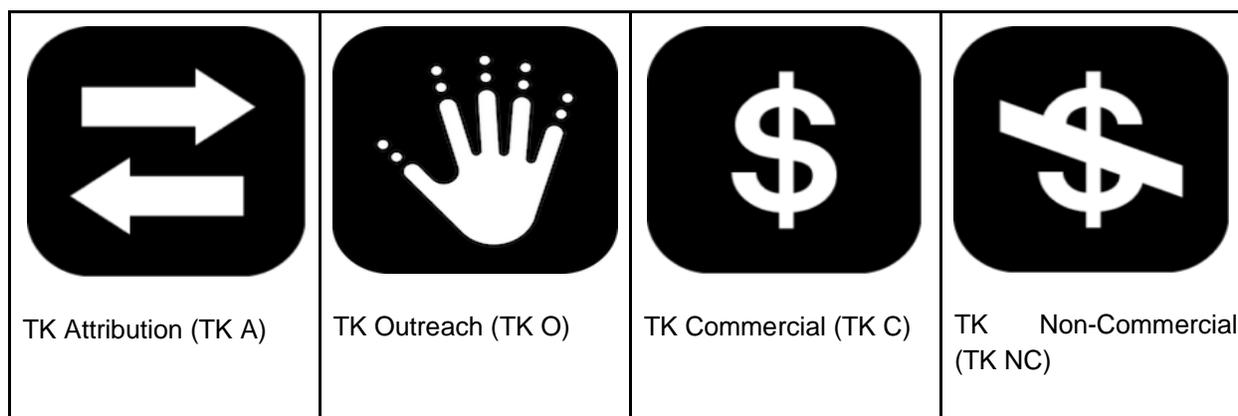
3.1.2. TK Licenses

The TK Labels are complemented by TK Licences, offering indigenous communities options to manage their cultural heritage materials in line with their specific legal status.

TK Licenses have been developed to address the diversity of indigenous needs in relation to intellectual property. They are aimed to serve as educative and non-legal interventions addressing

²² More examples can be found at <https://localcontexts.org/sharing/#collaborations>

the large amount of indigenous cultural heritage material that circulates without indigenous perspectives or protocols regarding fair and equitable circulation and use.



3.2. Providing tools for digitising and sustaining indigenous knowledge: Indigitization

Based in British Columbia (BC), **Indigitization** is an initiative dedicated to facilitating capacity-building in indigenous information management, and to clarifying processes and identifying issues in the conservation, digitisation, and management of indigenous community knowledge.

Indigitization is based on a collaboration between indigenous communities and organisations, the Irving K. Barber Learning Centre, the Museum of Anthropology, Northern BC Archives (UNBC), and X̱wi7̱wa Library, and the Centre for Teaching, Learning and Technology.

Indigitization Toolkit

The **toolkit** is a collection of resources to support and guide digitisation projects in indigenous communities. It also serves to support communities in the management of their information. The overall goal behind the toolkit is to help safeguard the access of future generations to valuable community information and ensure the long-term preservation of these resources.

3.3. Supporting indigenous rights to develop, control and govern indigenous data: ENRICH

ENRICH – Equity for Indigenous Research and Innovation works to support indigenous communities to develop, control and govern indigenous data. The initiative’s goal is to help respond to the challenges of accelerated production and use of data across government, scientific and innovation platforms which can exacerbate the appropriation of indigenous knowledge and the alienation of indigenous peoples from a digitally enabled future.

ENRICH supports the development of indigenous based protocols, indigenous centred standard setting mechanisms, and machine-focused technology that inform policy, transform institutional and research practices, and reform relationships between indigenous communities and wider society. It works to help enhance indigenous control of indigenous data and indigenous self-determination, to articulate indigenous notions of privacy, and enhance indigenous peoples' capacity to make decisions about how and under what circumstances data that derives from indigenous contexts can be used.

The Biocultural Label Initiative

Building on the TK Labels initiative, the [Biocultural Labels](#) (BC) are aimed to address issues of ownership, access, and control over indigenous biologic data and related digital collections. The goal is to support the meaningful participation of indigenous peoples in the ethical use of data and maintain the opportunity for equitable benefit-sharing should commercialisation opportunities arise from the use of that data.

There are [six BC labels](#), currently being piloted in New Zealand:

- ❖ Provenance BC Label (BC P)
- ❖ Open to Commercialisation BC Label (BC C)
- ❖ Open to Collaboration BC Label (BC OC)
- ❖ Consent Verified BC Label (BC CV)
- ❖ Multiple Community BC Label (BC MC)
- ❖ Research Use BC Label (BC R)

4. Promoting the ethical sharing of, and open access to, cultural heritage

4.1. Creative Commons Licences for sharing and preserving cultural heritage

The non-profit organisation Creative Commons (CC) has developed a set of [Creative Commons licenses](#) (now widely used) and [public domain tools](#) aimed to give individuals and organisations a free, simple and standardised way to grant copyright permissions for creative and academic works, ensure proper attribution, and allow others to copy, distribute and make use of those works.

Some of these licenses and tools can also be used to share and preserve cultural heritage online. Licenses such as [CC0](#), for instance, allow galleries, libraries, archives and museums (GLAM) to communicate to the public how digital cultural heritage objects can be used. More and more GLAMs used such licenses to open up their collections for digital access (via the Internet), thus ensuring that more people can have access to them.

Similarly, the [Public Domain Mark 1.0](#) can be used by GLAMs to indicate the public domain status of cultural heritage materials made available online.²³

4.2. Sharing cultural heritage: Open GLAM

The [Open GLAM initiative](#) works mainly in digital cultural heritage, particularly with a focus on works that are already out of copyright (because it has expired) and are currently being digitised by cultural heritage institutions.

The initiative tries to raise awareness on the importance of maintaining those reproductions of public domain works in the public domain, in order to allow the public to take advantage of the re-use possibilities offered by the Internet.

Open GLAM also collects case studies and examples from cultural heritage professionals through its [Medium publication](#), on issues such as:

- ❖ [Accessibility & openly licensed content](#)
- ❖ [The case for Open Access to cultural heritage](#)
- ❖ [Protecting digitized cultural heritage & traditional knowledge](#)

5. Using tech solutions to manage and publish cultural collections

Brazil has an interesting example of a project developed in a multistakeholder fashion to foster the use of digital technologies to manage and publish cultural collections: the [Tainacan platform](#).

Tainacan is a repository platform that allows users to manage and publish digital collections in an easily-accessible manner. Its key goal is to assist cultural institutions in their efforts to organise, publish, and promote their collections. The tool can also be used for individual and collective

²³ Brigitte Vezina, "Using CC Licenses and Tools to Share and Preserve Cultural Heritage in the Face of Climate Change", April 2020, <https://creativecommons.org/2020/04/26/cc-licenses-tools-share-and-preserve-cultural-heritage-in-the-face-of-climate-change/>

cultural repositories. The platform was developed through a partnership between the Federal University of Goiás, the University of Brasília, and the Brazilian Institute of Information in Science and Technology, with support from the Brazilian Museum Institute and the National Arts Foundation.

Tainacan is available as a free, open source software licensed under GPLv3. It is based on open-source and user-friendly technological solutions, and it operates in an integrated way with the WordPress platform.

So far, the solution has been used by more than 70 cultural institutions, universities and other entities in Brazil to digitise their collections and make them available online. One example is the [Museu do Índio \(Museum of the Indigenous\)](#), which has developed an online platform allowing access to ethnographic collections of indigenous peoples in Brazil.

6. The digitisation of intangible cultural heritage

UNESCO defines **intangible cultural heritage (ICH)** as the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals, recognise as part of their cultural heritage ([UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage](#)).

ICH is manifested in domains such as:

- ❖ Oral traditions and expressions, including language as a vehicle of the intangible cultural heritage
- ❖ Performing arts
- ❖ Social practices, rituals and festive events
- ❖ Knowledge and practices concerning nature and the universe
- ❖ Traditional craftsmanship

Obligations of states under the [UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage](#) (extracts)

Art.11. Each State Party shall:

- (a) take the necessary measures to ensure the safeguarding of the intangible cultural heritage present in its territory;

(b) among the safeguarding measures referred to in Article 2, paragraph 3, identify and define the various elements of the intangible cultural heritage present in its territory, with the participation of communities, groups and relevant non-governmental organizations.

Art.12.1. To ensure identification with a view to safeguarding, each State Party shall draw up, in a manner geared to its own situation, one or more inventories of the intangible cultural heritage present in its territory. These inventories shall be regularly updated.

ICH is subject to [various threats](#) that jeopardise its existence and its availability for future generations. These range from environmental degradation and cultural globalisation, to demographic issues, and economic pressure. In the face of these threats, **digitisation initiatives** can help preserve, protect and promote ICH.

[UNESCO's Guidance Note for Inventorying Intangible Cultural Heritage](#) encourages digitisation efforts, by noting that “interactive digital platforms for inventories can enable community members who have Internet access to adapt, renew or add information concerning their intangible cultural heritage”.

Through its [Intangible Cultural Heritage Fund](#), **UNESCO** supports multiple projects focused on preserving ICH in digital forms. One example is the [Inventory of intangible culture of craftsmanship in the core of Historic Cairo](#). The project, to be implemented by the Egyptian Society for Folk Traditions, is dedicated to preparing a community-based inventory of twenty types of crafts produced in the historic areas of Cairo, known as Historic Cairo, a World Heritage property. An online inventory of traditional knowledge related to these crafts will be maintained and made accessible to the communities, and inventorying will be promoted as an important tool in the long-term safeguarding process.

WIPO has a [Database of Codes, Guidelines and practices relating to the recording, digitization and dissemination of intangible cultural heritage](#).

In Asia-Pacific, the [International Information and Networking Centre for Intangible Heritage in the Asia-Pacific Region under the auspices of UNESCO \(ICHAP\)](#) has a project dedicated to [Restoring and Digitizing Intangible Cultural Heritage Resources](#) dedicated to digitising outdated or damaged analogue audiovisual resources held by Asia-Pacific countries, so they can be preserved, managed and used.

Below are some examples of projects focused on digitising ICH in Asia-Pacific:

- ❖ [Indigenous Sounds of Fiji](#)
- ❖ [Cultural Sounds: The Spirit of Vietnam](#)
- ❖ [Folk Music of Bengal](#)

- ❖ [Yapese Intangible Cultural Heritage: History, Legends, Myths, and Performing Arts of the Federated States of Micronesia](#)
- ❖ [Sounds from Mongolian Grasslands](#)
- ❖ [Melodies from Uzbekistan](#)

In Canada, the **Museum Association of Newfoundland and Labrador** – under a project commissioned by the Canadian Heritage Information Network – has developed a [How-to Guide for Digitizing Intangible Cultural Heritage](#). The guide is intended to help museums, archives and independent researchers in digitising their existing collections of intangible heritage related materials. In addition to offering concrete guidelines on how to digitise ICH, the guide also outlines a few arguments in support of such processes:

- ❖ Digitisation helps making cultural material more accessible to the public. Accessibility of a digital collection can help raise awareness about forms of ICH at local, national and international levels. This, in turn, may help revitalise or ensure the longevity of certain traditions or customs of local communities.
- ❖ Digitisation can help museums prepare for upcoming advances in collection storage and exhibitions.
- ❖ The online exhibition of digitised collections contributes to ensuring that wider audiences can access those collections. In addition, the online space can serve as an environment where community members can engage with local materials and even contribute materials themselves to digital collections.²⁴

In the **European Union**, several member states (such as Belgium, Bulgaria, Greece, Latvia, Netherlands, and Slovakia) are implementing projects dedicated to the digitisation of ICH such as living arts, traditional dances, and elements of roma culture.²⁵ One example is the Inventory of Intangible Cultural Heritage of Flanders – immaterieelerfgoed.be, established by the Flemish government in Belgium and dedicated to highlighting intangible heritage such as festivals or social customs.

²⁴ Canadian Heritage Information Network, “Digitizing Intangible Cultural Heritage: A How-To Guide”, <https://www.canada.ca/en/heritage-information-network/services/digitization/guide-digitizing-intangible-cultural-heritage.html>

²⁵ European Commission, “Cultural Heritage: Digitisation, Online Accessibility and Digital Preservation”, 2018, <https://ec.europa.eu/digital-single-market/en/news/european-commission-report-cultural-heritage-digitisation-online-accessibility-and-digital>

V. Protection, preservation and promotion of other forms of local content in the digital age

Guiding questions

- ❖ How can local communities and local creators make use of digital technologies to develop, promote and protect creative content/products/services?
- ❖ How can the Internet be leveraged to allow communities to (continue to) access content and culture, in the face of various challenges?

1. Libraries as facilitators of local content creation

Libraries help create and make available locally relevant content – not least by encouraging creativity among users, and digitising materials in their collections, wherever the relevant intellectual property frameworks make it possible. Such initiatives make use of technology to offer access to – and promote engagement with – local historic and cultural content; either **works in the public domain, materials shared with the permission of rights holders, or in-copyright works where access is possible under copyright laws.**

In the Netherlands, for example, the **National (Royal) Library** has developed [Delpher](#), a website that has already made millions of pages of Dutch books, newspapers and magazines freely available online.

1.1. Driving engagement and co-creation

There are many examples of libraries and memory institutions driving online engagement with local content they made available – for instance, [online events organised by the National Library of Chile](#) for the Día del Patrimonio Cultural. They facilitate community engagement with heritage collections through a virtual tour, an online “journey”, lectures, and other activities.

There are also exciting precedents for engaging communities in co-creation and enrichment of local cultural digital collections – for example, through crowdsourcing. Examples include the **U.S. Library of Congress’ platform “By the People”**, where people [can review, transcribe, and tag](#) digitised typescripts or manuscripts from the Library’s collection; and **Boston Public Library’s [Anti-Slavery Manuscripts](#)**, where volunteers helped transcribe digitised hand-written letters between anti-slavery actors.

1.2. Content generation models

Aside from working with public-domain materials, libraries are also well-positioned to help generate local content. A recent example is the work of many libraries and other memory institutions across the world – from [China](#) to the [Netherlands](#) to [Canada](#) to the [USA](#) – to create archives documenting how their communities experience the pandemic. This can range from web harvesting to inviting submissions from their communities – to collect and bring together pictures, personal stories, journal entries and other materials that capture the living local history.

In addition, in the USA in particular, there have been recent discussions on how established institutions like libraries can help address a lack of local news sources in areas insufficiently covered by commercial news outlets. This emerging idea has seen a few libraries step in to create local content – for example [a weekly local newspaper, available both online and in print, prepared by the Weare Public Library](#); or the joint [Kansas City Public Library in Missouri and the Kansas City Star initiative “What’s Your KCQ”](#), where people can submit questions about their local history or news – and the answers will be made publicly available online.

There are examples of other forms of collaboration and resource-sharing – e.g. [a library in San Antonio hosting a non-profit news organisation](#) – that show how local and community-level news content generation can be supported. With financial viability [not the least of challenges](#) local news outlets are facing, such collaborations can offer interesting ideas on the possibilities of generating local news content.

In short, libraries also help promote local, historic and cultural content by offering opportunities for engagement online – from activities and events promoting viewership, to ways for the community to take part in the creation of such content. There are also interesting examples of non-commercial initiatives that stimulate the creation of local content, launched or supported by libraries and other memory and information institutions, which create locally relevant materials that can be accessed for free or at a low cost, helping alleviate financial barriers to access.

As well-established networks of institutions, libraries are able to help generate such content without being dependent on content-driven revenue; and such distribution models (as far as intellectual property frameworks permit) help more people in the community access quality local content at low or no cost.

2. Encouraging the creation of local content through easy-to-use free online tools

Local content creators can benefit from having access to easy-to-use and open online tools allowing them to improve their work and make it available online. Below are two examples of such tools that allow local authors to create e-books in their languages (including adding layout and

design elements). They are meant to encourage the creation of books by local communities and to help promote these among the public.

2.1. StoryWeaver

This [India-based web platform](#) is dedicated to all those interested in reading and creating multilingual children's books (educators, publishers, parents, authors, etc.). It allows authors to create their stories online, illustrate them with openly-licensed artworks, and then make them available in different languages. In addition, it offers tools to translate stories and make them available to more children around the world.

The platform also provides access to a rich repository of diverse children's stories in over 100 languages. In addition to offering more visibility to the creations, the platform gives authors the opportunity to showcase their work to publishers.

StoryWeaver has open licensing at its core, with the goal to provide inclusive access to content for all children. All works on the platform are licensed under a Creative Commons 4.0 license, allowing people to use, reuse, share or build upon the available content. But this does not prevent creators from sending their stories to other publishers too. All tools available for translation, formatting and illustration are available free of charge.

2.2. Bloom

[Bloom](#) is another web platform allowing access to, as well as the creation and translation of, books into multiple languages (and especially minority languages). The goal behind the platform is to build local capacity, so that more people belonging to local communities can get involved in building a large collection of local language books.

Bloom offers creation and translation tools which are easy to use and do not require extensive training. Such tools allow authors to create and design booklets, bilingual and trilingual books, comic books, and even electronic books in various formats (talking books, sign language diglots, books for the blinds, and motion books).

The overall content of the platform is made available under a [Creative Commons Attribution-Noncommercial 4.0 License](#), allowing for re-use.

Bloom's library offers access to over 6000 books in more than 400 languages, covering areas such as business, community living, culture, education, fiction, health and science. It is also building a [collection of books related to COVID-19](#), available in minority languages (there are now over 200 books in 170 languages available).

3. Providing funding and training for local artists to freely express themselves

An initiative of Hivos, the **Resource of Open Minds (R.O.O.M.) programme** is dedicated to supporting artists, culture and media producers, and creative hubs to freely express themselves, including through the use of digital tools. It supports the creative work of a new generation of artists and critical content producers who strive for openness and social change.

Active in Middle East and North Africa, Eastern Africa and Southern Africa, the programme has so far supported a variety of local artists, designers, animators, musicians and creative hubs. R.O.O.M. provides funding for audiovisual art and media projects that challenge social issues, and it organises training events and creates resources to help creators become more independent and sustainable.

One of the projects supported by R.O.O.M. is **PERSPECTIVE**, an initiative that encourages local artists to develop digital content to highlight social issues. The initiative is run by Umuntu, a digital production company based in Zimbabwe that combines augmented reality and music to “criticise the state of the past, present and future” within and beyond the country.

R.O.O.M. has also supported several creative projects dedicated to advancing new narratives about African women changemakers with the use of art and digital technologies. These projects involved local collaborations between women’s advocacy groups and creatives, resulting in a wide range of materials promoted both online and offline. In Tunisia, for instance, the **SHIFT** campaign brought together illustrators and writers to create a graphic novel about a diverse cast of Tunisian women changemakers. In Zimbabwe, the **Ibhaysikopo Film Project** produced a multimedia guide – **Towards a Digital Media Reporting Manual on Gender-Based Violence** – showcasing activists, journalists, artists, and academics to point out the significant obstacles faced by women in the media and film industry.²⁶

4. Web archives as a way to preserve access to local content

Run by the Portuguese Foundation for Science and Technology, **arquivo.pt** preserves millions of files collected from the Web since 1996 and provides a public search service over this information. It contains information in several languages but its focus is on contents in Portugal.

The main goal of the initiative is to preserve information published on the web for research purposes. Its reasoning is based on the fact that much of the information made available online

²⁶ Hivos, “Advancing new narratives about African women changemakers with art and digital technologies”, February 2020, <https://www.hivos.org/news/advancing-new-narratives-about-african-women-changemakers-with-art-and-digital-technologies/>

at a certain point ceases to exist at a certain point and it thus irrevocably lost. “If we wish future generations to have access to this information, it is important to archive and to preserve what is published on the web”, notes the creators of the initiative.

Similar to the Internet Archive in some ways, arquivo.pt provides comprehensive crawl of the Portuguese web, allows searches by term and URL address, and offers the possibility of automatic computation of the archived data for research purposes. Information collected periodically from the web is processed to make it searchable, providing a “Google-like” service that enables searching the past Web. This preservation workflow is performed through a large-scale distributed information system.

In January 2020, arquivo.pt was containing 7779 million web files, 22 million websites, and 466 TB of data in compressed format.

VI. Local content production: issues of sustainability and funding

Guiding questions

- ❖ How can digital technologies be leveraged to help local creators enhance their work and make it more sustainable?
- ❖ How can digital technologies help people “make a living” out of the production of various forms of content? To what extent can people/communities involved in local culture monetise it and make it a source of growth?
- ❖ What funding models are used by local initiatives that work to promote and preserve local languages?

1. Using digital tech to empower local artisans/producers

There are many communities around the world which have specialised in the production of local artisanal objects. These communities rely on their skills in crafts such as textile designing, handicrafts, the production of glass and leather goods, for instance, to make a living and ensure their sustainability. Other local communities have been traditionally involved in producing organic goods and rely on these productions as their main source of income. Digital technologies can help these communities become more sustainable.

1.1. Supporting local artisans: India's Digital Empowerment Foundation

In India, the **Digital Empowerment Foundation (DEF)**, in partnership with various governmental entities and private organisations (including Microsoft), has put in place the **Digital Cluster Development Programme** to support the development of local clusters that leverage digital technologies to improve and scale up local crafts activities as a way to create sustainable livelihood options and support inclusive growth at the local level.

Kaulava is one of the Foundation's core projects, dedicated to empowering the artisans, weavers and entrepreneurs in the Hanur village through digital technologies. The project encompasses multiple initiatives. Several community information and resource centres focus on building digital literacy among the local community and allowing them access to the opportunities offered by the Internet, including in terms of access to new markets for their products. A Wireless Network for Communities project provides last mile connectivity, allowing the community to develop and promote online businesses through e-commerce and social media, and empowering weavers to become entrepreneurs. Digital designing and archiving projects allow local weavers to bring in digital interventions in their design, as a way to ensure product diversification and enhance access to global markets, while also increasing the effectiveness and efficiency of the production processes. As a way to reduce youth migration, the initiative also focuses on developing the interest of the youth through digital literacy and modern digital designing techniques.

In 2017, DEF launched the **Uddyam – Warli project** to digitally empower the artisans of the Wali tribe to effectively access greater market share and profit through enhanced and sustainable business opportunities. The tribe is known for its sacred pictograms that are embedded in various woven, painted, or sculpted products. The project saw the integration of various digital solutions in different stages of weaving, designing and marketing of Warli products. It also included training programmes to empower local artisans to use computers and the Internet for various purposes, from accessing online public services and information about government funds, to accessing online skilling opportunities and to promoting their products online.

Another project is **Digikala**, dedicated to preserving the tradition of ikat weaving and empowering local weavers to sustain themselves in the competitive market. The project has involved developing digital literacy among the local community, creating a wireless for community project for the village, and putting in place a design archive for the community, among other activities. It has also enabled the creation of an online marketplace which the weavers can directly access and “feel empowered to take the tradition of ikat weaving to a digital future, without losing essence”.²⁷

²⁷ Digital Empowerment Foundation, <https://dcdpindia.org/digikala/>

1.2. Production of organic chocolate: Yanomami and Ye'kwana

The Yanomami and Ye'kwana of Brazil are more than 27 000 people who have been producing, managing and conserving the biodiversity of the forest for hundreds of years. In addition to their gardens with banana, cassava, tobacco, taioba, corn, cotton and others, they identify more than 400 wild species that are part of their diet, and know when and where to collect. On this menu is cocoa.

For some years now, the Yanomami and Ye'kwana have been innovating in the use of these resources, developing projects for processing and commercialising native products (edible mushrooms, Brazil nuts, handicrafts, native cocoa). For this, they have been incorporating digital technologies adapted to the forest, and new knowledge allowing the production of high-quality products.

With support from technicians of various NGOs in Brazil, these local communities have developed new processes for the production of high-quality organic chocolate from native cocoa, dominating its entire production chain, while preserving its habitat, the Amazon forest.²⁸

2. Building e-commerce infrastructures to support rural communities

In 2014, China-based Alibaba Group, in collaboration with the government, launched **Rural Taobao**, a strategic initiative dedicated to building e-commerce infrastructures that would allow rural communities to easily sell their handicrafts and manufactured goods. The overall goal behind the initiative is to drive inclusive economic growth in rural China through e-commerce.

The programme is implemented at local level in several stages:

- ❖ Setting up e-commerce service networks
- ❖ Improving logistical connections for villages
- ❖ Providing training in e-commerce and entrepreneurship
- ❖ Developing rural financial services²⁹

By offering e-commerce opportunities to rural communities, the Taobao initiative has helped improve economic conditions at the local level, drive job creation, and reduce income inequality,

²⁸ Instituto Socioambiental, <https://www.socioambiental.org/>

²⁹ Xubei Luo, "E-commerce for poverty alleviation in rural China: from grassroots development to public-private partnerships", March 2019, <https://blogs.worldbank.org/eastasiapacific/e-commerce-poverty-alleviation-rural-china-grassroots-development-public-private-partnerships>

leading to an overall improvement in the social and economic status of the communities. Virtual circles have been created where e-commerce is enabling rural inhabitants to become entrepreneurs by selling their products online, and part of the resulting income is then used to drive up e-commerce-based consumption as people start using the Internet to buy products that are not available locally.³⁰

3. Governmental (national or local) policies to promote and incentivise production of local content and services in local languages

It is a common practice all over Europe to have policies in place and related funding to support directly the production of content that are related to the identity or to the languages of local communities. These funding systems can work either directly, by attributing resources to the beneficiaries, or indirectly, by financing other bodies that commission the production of local content in local languages. This could be made through public service media, special funds for financing media with a local reach, cultural agencies, authors societies and many other tools.

A rich list of successful cases has been presented in the previous reports of the BPF Local Content, but it is important to remember that the same applies to the specific issues that are examined this year.³¹

4. The role of media: Local newspapers – between promoting local languages and dealing with sustainability challenges

La Voz de Galicia is a legacy, independent newspaper founded in 1882 whose mission is to defend democracy, freedom of thinking and opinions, and especially galician interests. In its more than 138 years of history, La Voz has been defined by its continuous technological transformation, to always be at the forefront of information, as well as by its commitment to proximity journalism throughout a singular model that publishes 13 different local editions in which regional, national, global and hyperlocal content are combined. That model has allowed La Voz de Galicia to become a leader within Galicia's audience and to be the 4th newspaper in Spain, with more than 492.000 readers and 18 million monthly unique visitors that choose La Voz as its main means of information.

³⁰ Jing Wang, "Taobao Villages driving 'inclusive growth' in rural China", November 2019, <https://www.alizila.com/taobao-villages-driving-inclusive-growth-rural-china/>

³¹ Previous reports of the BPF Local Content can be found at <https://www.intgovforum.org/multilingual/content/bpfs-outputs>

In 2016, La Voz de Galicia acquired another local legacy brand, La Voz de Asturias, shut down due to the economic crisis in 2012. The aim was to bring back to life the old and almost centenary newspaper – founded in 1923 – to act as a counter-power between the two large local newspapers in Asturias: El Comercio, located in Gijón, and La Nueva España, in Oviedo. Since then, it has been a digital only newspaper.

Both newspapers publish in two languages: Spanish and their local community language, Galician and Asturian, respectively.

As a local media immersed in its community, La Voz de Galicia has been a bilingual media, publishing in Spanish and Galician, since its establishment in 1882 – a feature only interrupted during the 40 years of dictatorship, when Galician was a prohibited language. The main reason for this is that Galicia is a community with two official languages in which both Spanish and Galician coexist and because La Voz has the aim of being a reflection of its community in all its complexity. As for La Voz de Asturias, due to Asturian not being an official language, its use is limited to cultural information.

To continue delivering the best journalism to its readers, during the past ten years La Voz has been intensively developing **a transition from a paper-first to a digital-first newspaper**. In that path, the most difficult part has been changing the internal workflows and the mentality of professionals that have been doing things in the same way for decades, and have had to go through a deep metamorphosis in their daily jobs.

Besides, for the past three years La Voz has started the shift of its business model, and therefore of the enterprise, and since April 2019 it has installed **a paywall which has made some of the content available only to subscribers**. La Voz de Galicia believes that the only possible way to make this a sustainable business, especially at a local level, is by readers committing to their referral media by paying a subscription. The future size of local news organisations will be determined by the volume of subscribers that can be reached, engaged and retained, and the price they will be eager to pay. This is because print sales have been subject to an inevitable fall, and due to the fact that local brands have to compete for advertising with technological giants, which are much more effective, and that place local media to the weaker side of the value chain.

Although technological solutions can make some workflows easier, in some aspects of the business intelligence, they are too expensive and become inaccessible to small, local news organisations (e.g. web analytic tools, content rights management, or marketing automation tools). In general, technological solutions are intended for large corporations, with also large budgets and access to high-level professional profiles. Therefore, the new business models that need to be implemented in the media industry can be a barrier for small and medium size local organisations, and hence leave many players aside in the mid-term.

The pandemic has accelerated some of this process and, as has happened in our daily lives, COVID-19 has also added some changes to the newspaper's workflow. From the organisational point of view, the pandemic has forced the newspaper to set up a working-from-home operation within a week, which affected 95 percent of the editorial staff. Despite that, it is still able to work

at a high level, with the highest increase in audience and subscriptions figures in its history. As for the informative point of view, the newspaper has gained a competitive advantage regarding its competitors in Madrid, and has become a more global newspaper. The pandemic could be seen as the first big news event in recent history that has a global-national-hyperlocal interest, and it is in that area that the newspaper sees an opportunity to continue growing.

VII. Recommendations

The initiatives and examples of good practices outlined in this report have served as a good source for a series of the recommendations that the BPF would like to underline below.

1. Protection, preservation and promotion of local and indigenous languages

- ❖ All relevant stakeholders have a shared responsibility to work towards a truly multilingual Internet, as a way to enable local and indigenous communities to take advantage of the opportunities offered by the digital space.
- ❖ International cooperation is essential in raising awareness about the need to promote multilingualism, but also in mobilising resources (human, financial, institutional, etc.) to support the availability of local languages and local content online. These issues should be more prominent on strategic global development agendas, which should also offer stakeholders more opportunities to contribute.
- ❖ Sustainable policies need to be put in place to ensure a universal, free and open online access to multilingual knowledge and information. Digital technologies can be leveraged to this aim.
- ❖ Funds need to be allocated to education and capacity development initiatives focused on fostering digital skills among local and indigenous communities, so that they become empowered to use digital technologies in a meaningful way to not only access, but also develop local content.
- ❖ There is an urgent need to empower and encourage users (be they end-users or professional organisations or institutions) to develop content in languages that are at risk of disappearing; the availability of such content will keep the languages alive.
- ❖ When discussing promoting languages online, particular attention should be paid to oral languages, which are the most difficult to be digitalised. Digital technologies should be more actively used for language documentation, and community members should be

supported in their efforts to preserve the traditional knowledge, practices and cultural expressions.

- ❖ Support to cultural diversity needs to be extended worldwide as a common practice, to face and counter the risk of global homogenisation.
- ❖ Policy makers need to facilitate access to knowledge, information, tools and resources in minority, lesser-used and indigenous languages, in digital formats. Legal frameworks should be in place that acknowledge the right to public information in local and indigenous languages, including online. Governments could also define and enforce guidelines to encourage the production and online availability of public interest content in local and indigenous languages, as well as the migration from existing tools (media, archives, etc.) into the online world.
- ❖ Sustainable and forward-looking policies and strategies are needed to preserve, support and provide access to indigenous languages in the digital age.
- ❖ Barriers such as insufficient access to the Internet and limited funding must be overcome in order to create enabling environments for more content creation in local languages.
- ❖ Governments, private sector actors and community initiatives can and should work together to help grow the presence of local and indigenous languages online. Such cooperation could include the provision of various incentives and forms of support for the development of local content (e.g. stipends, tech equipment, access to the Internet). Libraries and schools could play a pivotal role in this effort.
- ❖ Stakeholders should encourage the creation of networks of digital activists and champions who can promote indigenous languages. More sustainable models are needed for digital activists who support communities to use the Internet and digital media to promote and revitalise indigenous languages.
- ❖ Local and indigenous communities should be included in policy making processes that are aimed at developing digital strategies.
- ❖ The Public Service Media model to support services for minorities and local communities and languages needs to be extended into the Internet.
- ❖ Local and indigenous media (e.g. newspapers, broadcasters) should be supported (through technical, organisational and financial means) in their efforts to produce and disseminate original content, including in digital forms.
- ❖ Currently, tech companies – especially the large ones – have little to no economic interest to interact with local, indigenous or non-dominant languages. This is a situation that needs to be tackled and modified. Mechanisms similar to the ones that apply for universal service coverage in the telecom sector could be envisaged for the Internet world, to avoid that

global companies only concentrate on “low hanging fruits”, neglecting the complexity of communities in the real world.

- ❖ In the framework of the IGF (especially in the perspective of the IGF Plus model), a dialogue should be established with public institutions and the private sector with the goal to identify good practices that could be suggested for implementation across the world.

2. Protection, preservation and promotion of cultural heritage

- ❖ Governments need to develop enabling policies and allocate funds to support initiatives focused on the digitisation of cultural heritage, tangible and intangible.
- ❖ Libraries and other cultural institutions should be encouraged to make more cultural and heritage material available online, as this can stimulate both access and further use and re-use of materials.
- ❖ Intellectual property rights frameworks need to be clarified and, where necessary, enhanced, to support the digitisation of cultural heritage. International frameworks on exceptions and limitations to intellectual property rights could help address challenges – especially of cross-jurisdictional issues – in the digitisation of cultural/heritage material.
- ❖ When devising laws and policies to enable the preservation and sharing of cultural content online while respecting intellectual property rights, it is important to find ways to reward the creators of today, but also support the creators of tomorrow. This requires careful policy choices in order not to reinforce existing dominance but rather to promote local and indigenous creativity.
- ❖ Indigenous communities should be empowered to manage the intellectual property associated with their cultural heritage in ways that best respond to their needs and interests. Digital tools could be leveraged in this regard, for instance by allowing these communities to use digital labels to add cultural and historic context to their heritage when stored or made available in digital archives and platforms.
- ❖ Governments and the private sector should support local communities in their efforts to digitise their intangible cultural heritage, through funds, capacity development programmes, toolkits, etc.

3. Protection, preservation and promotion of other forms of local content in the digital age

- ❖ Public authorities should support local libraries and local cultural and media hubs in their efforts to engage local communities in the production of local digital content.
- ❖ More resources need to be allocated to the development of open online tools that can help local authors develop and make available content easier.
- ❖ More public and private funding and training opportunities need to be put in place to encourage local artists to freely express themselves.
- ❖ In the framework of the IGF (especially in the perspective of the IGF Plus model), a dialogue should be established with public institutions and the private sector with the goal to identify good practices that could be suggested for implementation across the world.

4. Local content production: issues of sustainability and funding

- ❖ Governments, international organisations, private sector actors and other stakeholders should actively support (with funds, technical resources, capacity development initiatives) local creators such as artisans to make use of digital tech to improve their conditions and bring more sustainability to local communities.
- ❖ Local content should be protected, preserved and used to create a sustainable model for the production and reproduction, distribution and redistribution of knowledge.
- ❖ More sustainable models for the remuneration of creative work need to be devised as a way to foster the development of local content.
- ❖ Funding initiatives need to be put in place to support small publishers – such as local newspapers, community media and services for minorities – in their efforts to ensure sustainability.
- ❖ Bridges need to be built between local community networks, local content production networks and local and community media in order to create synergies and new forms of holistic cooperation aimed to create locally sustainable digital ecosystems everywhere.

VIII. Annexes

Annex A: Public survey

1. As indicated in its work plan, the BPF intends to focus on how to protect, preserve and remunerate creative work and collective wisdom in order to create a sustainable model for the production, distribution and local fruition of local content in the digital age. Do you think you will be able to contribute to the BPF on local content? If so, please indicate a specific angle on which you could provide suggestions.

2. Having in mind this year's BPF focus, can you suggest any example of good practices to be incorporated in the BPF discussions and reporting? Please try to be specific in your response. Where possible, provide links where we can find more details about the examples you provide.

We would particularly welcome suggestions that shed light on: (a) Initiatives focusing on the use of digital tools to protect various forms of local culture. (b) Successful examples of remuneration of creative work (traditional and innovative ones over the Internet). (c) Successful examples of remuneration and protection of traditional/collective wisdom (traditional and innovative ones over the Internet). (d) Comparison of various existing models to protect different kinds of rights, and the opportunities and challenges they bring when it comes to the development and protection of local content. (e) Successful examples of approaches that help local communities develop their creative products/services (including in terms of hosting local content locally). (f) Best practices about the creation of virtuous circles to put in direct relations producers and final users through innovative solutions. (g) Approaches for protecting against risks of commercial takeover of local/indigenous identifiers of natural/cultural assets (e.g. the cases of “babaçu”, “cupuaçu” and the Japanese food companies).

3. Would you be interested to participate in the BPF session at the IGF meeting in November 2020 bringing some of your experience in this field? *

- Yes
- No

4. Which person/organisation relevant for the BPF's 2020 focus would you suggest we invite to contribute to the BPF work and/or the BPF session at the IGF in November? Please provide links or documents relevant for the discussion. *

Annex B: Contributions to this report

The following entities and individuals have submitted input for this report and/or contributed to its preparation:

- ❖ **International Federation of Library Associations and Institutions (IFLA)** | Valensiya Dresvyannikova, Stephen Wyber
- ❖ **La Voz de Galicia**
- ❖ **Open GLAM** | Evelin Heidel
- ❖ **Rising Voices** | Eddie Avila
- ❖ **United Nations Educational, Scientific and Cultural Organization (UNESCO)** | Cristina Cusenza, Irmgarda Kasinskaite, Xianhong Hu
- ❖ **Wikimedia Foundation** | Allison Davenport, Jan Gerlach, Jorge Vargas
- ❖ **World Association of News Publishers (WAN-IFRA)** | Elena Perotti
- ❖ **World Intellectual Property Organization (WIPO) – Traditional Knowledge Division** | Carla Bengoa Rojas, Paolo Lanteri, Victor Owade
- ❖ Carlos Afonso, BPF co-facilitator
- ❖ Giacomo Mazzone, BPF co-facilitator
- ❖ Sorina Teleanu, IGF Secretariat consultant (editor)

Panellists in the BPF Local Content session at IGF 2020 provided additional input that is reflected in the report:

- ❖ Eddie Avila, Rising Voices
- ❖ Allison Davenport, Wikimedia Foundation
- ❖ Rhodri ap Dyfrig, S4C
- ❖ Tomas Garcia Moran, La Voz de Galicia
- ❖ Irmgarda Kasinskaite-Buddeberg, UNESCO
- ❖ Wend Wendland, WIPO
- ❖ Stephen Wyber, IFLA

The BPF would also like to thank all those who have taken the time to respond to the public survey. Input collected via the survey has been considered in the preparation of this report.