SOCIAL IMPACT

REP 2021









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A Human-Centred Approach to Technology

Albert Einstein once said that "In the midst of every crisis, lies great opportunity". Far from underestimating the importance of the pandemic and the cost it has had in terms of lives and social impact, we think that this extraordinary chain of events presents us, as a society, with a great opportunity, with the chance to learn a very precious lesson. 2021 was supposed to be the year of the post-pandemic, of the reconstruction, of the **new beginning**. The reality is that we are still recovering from a global phenomenon that is not over yet and that has deeply impacted us at health, social and economic levels, changing the paradigms upon which modern society has been built until now and also the way we interact with technology. History should help us learn from past mistakes and not repeat them, and even if humanity has never been that good in applying that principle so far, we believe that we might have reached a point in our social evolution where a change is possible and, now more than ever, necessary. That change will be promoted by people. People are the key to everything. People are the resource and the solution to many issues

we are facing today as a society. And that change will be powered by an ethical use of technology focused on creating the conditions to bring humanity to a more responsible level of evolution, making society more inclusive and representative, promoting a sustainable and socially responsible approach to the economy, fostering and defending values like diversity, gender equality, and self-determination. We live in a world that, in recent years, has witnessed an ever-stronger connection between economics, health, environment. migration, and social development. Today, we cannot simply consider a social challenge on its own, as the result of some fortuitous events.

We have seen how a specific crisis always has strong connections to other aspects of society (for example, today a main cause of migration has to be found in climate change-related events that are having a profound impact on the environment affecting people not only in developing nations but also in developed and industrialized countries).



The task of decision-makers is to understand where the roots of those social challenges lie, face them, and prevent their growth. But the deep interconnection of the potential causes of crisis very often makes it hard not only to foresee the future but also to interpret the present. Hans Kluge, Europe Region Director of the Word Health Organization, explained the challenge very clearly when presenting the results of the project EARS (Early Al-supported Response with Social listening tool), launched by WHO and powered by Citibeats: "We have to harness the power of digital health and artificial intelligence. First of all, we need to **be better listeners.** And second, we need to anticipate better the concerns of the people."

We also live in a world profoundly shaped by technology, where the so-called digital acceleration is changing our way of working, interacting with each other, thinking, in a word, living. This change is happening right here, right now, every day at an increasing pace. We, as humans, are naturally limited to comprehend and absorb the sheer amount of data created and exchanged every day, every hour, every minute, every second. That's why we need to rely on technology to assist us in interpreting that data, and

understand the reality and what people are saying in the new, digital agora that is social media. At Citibeats, we believe that technology is just like any other governance-decisions-driven artifact. **Technologists** have the moral duty to help society. And to help a sound and healthy evolution of society, it is necessary to define an ethical framework within which technology must operate. For this reason, we consider absolutely fundamental to keep on working to secure the level of transparency, inclusiveness, and ethics in AI, as confirmed by our decision to implement the fAIr LAC self-assessment tool.

For almost 4 years, at Citibeats we have empowered multilateral organizations, governments, and private companies to understand how society changes and evolves in real time, to provide decision-makers with information and data necessary to make better decisions and improve citizens' lives. We have improved our technology to make it safer, more scalable, and faster, by implementing features like the automated reporting function to help decision-makers and data analysts do their job better and more rapidly.



There is a conversation going on out there, day and night. Citizens are talking.

We need to learn how to better listen to them and act. We need a human-centered approach to technology.

We need to bring humanity back to the heart of the decision-making process.

Those are our goals, and we hope are yours too.





Citibeats Around the World

From social inclusion to citizens' engagement, from disaster mitigation to infodemia monitoring, from gender violence detection to cultural heritage preservation. In these last four years, Citibeats has helped organizations around the world make better decisions by listening to people's needs, concerns, and opinions.



Where are we?

Angola Malaysia **Argentina** Malta Bahamas Mexico **Barbados** Morocco Belize Nicaragua Bolivia Nigeria Brasil Peru Canada Panama Chile Paraguay Colombia Peru Costa Rica **Philippines** Senegal R.D. Congo South Africa Ecuador Spain Egypt Switzerland El Salvador Thailand France United Guatemala Kingdom Guyana **United States** Haiti of America Honduras Dominican India Republic Indonesia Surinam Iraq Trinidad & Jamaica Tobago Japan Uruguay Jordan Venezuela Kenya Yemen

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Making the World a Better Place since 2018

In just four years, we have represented **over 70M voices** all around the world.

We have improved our technology so that now we can detect change in society **up to 90 days earlier** than traditional survey methods and the media.

We have informed **over \$1 billion** in social risk mitigation decisions, both in the public and private sectors, being able to detect early warning signs in social fast-changing environments. These are all confirmations that we are on the right track, that society and **decision-makers absolutely need to understand how society changes** and need to do it in real time, **to bring humanity back to the heart of decision-making**.









Time difference between how much quicker Citibeats delivers citizens' opinion-based data compared to traditional methods.



Under-utilised feedback from citizens and customers that is now part of decision-making.



Where organizations are applying Citibeats to better inform decision- and policy-making.



We have informed over \$1 billion in social risk mitigation decisions, both in the public and private sectors.

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Observatories for Xenophobia and Urban Needs



Inter-American Development Bank (IDB)













Challenge

Migration is a contentious issue, as it often leads to xenophobic behavior that is detrimental to social cohesion. It's an issue that Latin America and the Caribbean have been forcefully confronted with over the last five years, primarily driven by the more than 5 million Venezuelans who have been displaced from their country, 4 million of which have migrated and settled in other countries. In some cases. the integration has been accepted and supported. But not in all. It's the growing number of cases in which migrants have been confronted with prejudice that is of greatest concern, and one that must be monitored in order to prevent their social and economic exclusion.

Scope

Argentina, Chile, Colombia, Costa Rica, Ecuador, Panama, and Peru

References

- Big Data Insights on Migration & Xenophobia in Latin America
- How Artificial Intelligence Gives a Voice to Vulnerable Migrant Populations

Approach

We used our AI technology with social big data to analyze regional conversations from Twitter, online blogs, forums, and other digital media about different topics. The findings helped improve the understanding of the magnitude of xenophobic narratives and the social needs stemming from migration. Real-time, actionable information is key for developing the timely campaigns necessary to counteract these conversations. To design social interventions in the longer term and allocate proper resources, decisionmakers must be aware of relevant trends. Each observatory focused on specific topics such as:

- Observatory for Xenophobia: Criminality, Employment, Gender, Social Services, Coexistence, Health, General Insults, and Comments About Xenophobia
- Observatory for Urban Needs: Dwelling, Urban Infrastructure, Citizen Security, Regularization, Social Organization, Education, Public Services, Employment, Health, Food Safety, and Mobility

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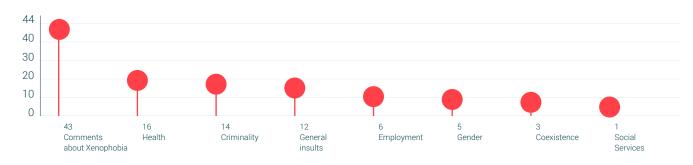


How we helped

Data collected from February 2020 through December 2020

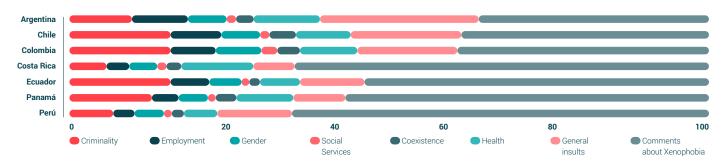
Distribution of the conversation among all categories

01.02.2020 - 20.12.2020 (%)



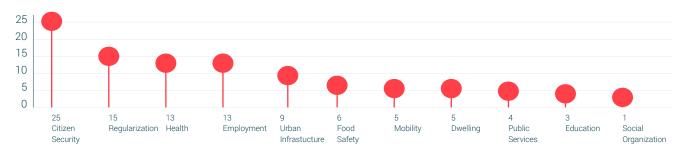
Distribution of the conversation among all categories by country

01.02.2020 - 20.12.2020 (%)



Distribution of the conversation among all categories

01.02.2020 - 20.12.2020 (%)



Distribution of the conversation among all categories by country

01.02.2020 - 20.12.2020 (%)



Discover how to monitor and interpret data for a positive social impact. Learn more about Citibeats' solutions.

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Early Al-Supported Response (EARS)

World Health Organization (WHO)















Challenge

Listening to people's questions and concerns is an important way for health authorities to learn about what matters to communities in response to COVID-19. Understanding where misinformation, disinformation, and infodemic originate and how they spread is fundamental to developing strategies to prevent and fight those misleading and potentially harmful narratives. At the same time, another crucial aspect is detecting the so-called "information voids" that promote the infodemic. Providing citizens with the information they need, when they need it, is key to counter the infodemic.

Approach

The World Health Organization (WHO) launched the Citibeats-powered Early Alsupported Response with Social Listening (EARS) initiative and the Vaccine platform in 39 countries, aimed at helping public health officials to combat misinformation and disinformation and determine where to channel limited resources.

Scope

Worldwide (39 countries)

References

- Public observatory EARS
- WHO Europe director Hans Kluge on why we need a global tech strategy to fight
- WHO launches pilot of Al-powered publicaccess social listening tool

How we helped

DATA



15 December 2020





9 languages analyzed



COVID-19 categories tracked



∷ Next steps

Health is destined to become one of the most important drivers for decision-makers, affecting the economic, political and social agenda of every country. Citibeats will continue working with leading organizations to help decision-makers understand citizens' concerns, opinions, and doubts around health and develop strategies that answer people's needs precisely and timely.

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CivicLytics Civic Big Data Analytics

Inter-American Development Bank (IDB)



























Challenge

As the COVID-19 outbreak began reaching Latin America, the IDB Group wanted to leverage the widespread use of new technologies and social media to complement existing data, to make decisions in a fast-changing context. Given the velocity of societal changes, it was clear that traditional data collection methods were not fast and accurate enough to reflect the real opinions and needs of citizens. This led to the creation of a new Civil Society/Citizen Participation Engagement Strategy to reduce the gap between public policy and people's opinions, and effectively contribute to the goals of reducing inequality and poverty, promoting productivity and innovation in Latin America and the Caribbean.

Scope

LATAM & the Caribbean (26 countries)

References

- 2019 Impact Report
- CivicLytics (Civic Big Data Analytics)
- CivicLytics Report: COVID-19 and the Citizenry: the first 120 days
- CivicLytics: Perceptions of Panamaniar Citizens on Economic Recovery

Approach

In collaboration with Citibeats, the IDB Group launched the CivicLytics Citizen Observatory, an initiative to collect and analyze hundreds of thousands of comments from citizens (on Twitter, Facebook public pages, forums, blogs, and digital media) to regularly report to all member countries. The initiative also included the creation of a public web to share the aggregated data and create widespread visibility of the challenges faced in the region.

How we helped

DATA







5 languages analyzed



categories tracked



:: | Next steps

Citibeats' technology has powered some of the most socially impactful initiatives promoted and financed by IDB, one of our oldest investors and partners. Together, we will continue monitoring society in LATAM and the Caribbean to help IDB members understand the perceptions and needs of people. This is key to designing and responding to those needs through strategies, operations, and initiatives aimed at improving citizens' living conditions and

fostering the economic, cultural, and social growth of these communities.

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Cut All Ties

ABD and ACRA











Challenge

The first EU macro-survey on Gender-Based Violence (GBV) carried out by the EU Agency FRA (Fundamental Rights Agency) in 2014 observed that 13 million women experienced physical violence; 3.7 million suffered sexual violence; 9 million were victims of sexual harassment. In Southern European countries, Gender-Based Violence is still significantly underreported due to a low level of awareness, shame, and a general social unacceptability:

- In Italy, over 31% of women have suffered some form of IPV (Intimate Partner Violence) during their lives, whilst 60% of minors, victims of sexual violence were girls
- In Spain, there is a general concern about the increase of GBV in the last 4 years; only in 2016, 569 female adolescents reported IPV cases

Approach

The project Cut All Ties aims at tackling Gender-Based Violence (GBV) through the design, implementation, and validation of a Training and Education Program based on gamification and new technologies to raise awareness, prevent and reduce GBV among 15-17 years old youngsters in six high schools of Barcelona, Madrid, and Milan.

Scope

Barcelona, Madrid, Milan.

References

- The project 'Cut All Ties' is launched to prevent and reduce Gender-Based Violence among youngsters
- https://cutallties.org/s
- 'Cut All Ties', un projecte per prevenir la violència de gènere entre el jovent
- Best Practise Report

∷ How we helped

The Best Practice Report

The <u>Best Practice Report</u> collects some of the experiences that took place or are taking place across Europe to prevent GBV in teenagers, addressing mainly its identification and the deconstruction of stereotypes that theoretically normalize inequalities and falsely justify GBV.

The AI Text Analytics Report

The AI Text Analytics Report collects the findings using artificial intelligence to understand the narratives of GBV in Spain and Italy. Citibeats' technology allows monitoring huge quantities of citizens' opinions according to the topic of interest, including narratives of gender violence. By monitoring these conversations, the concerns and issues of different countries or regions can be understood, providing an order of magnitude (which aspects are of greatest concern in my country) and identifying trends (which conversation is growing). In this way, valuable information is obtained for decision-making and action.

In order to better understand opinions, perceptions, and attitudes around gender narratives, both gender violence-related, and the broader gender narratives that feed into gender violence, the project

Cut All Ties has carried out brief research based on two methods:

- 1. Apply Citibeats' AI text analytics platform
- 2. Elaborate and disseminate an anonymous survey addressed to youngsters.

The specific objectives of this research were:

- To explore predominant narratives in social networks (Twitter, forum, blogs) around Gender-Based Violence and broader gender narratives that are related to Gender-Based Violence, particularly those linked with relationships, harassment, and other expressions and forms of violence
- To look into perceptions and attitudes of youngsters 14-17 y/o on topics related to gender equality, sex-affective relationships, and gender stereotypes

These two methods are complementary and combined since analysis online offers a high volume of content which enables better analysis and broader identification of challenges; meanwhile, the anonymous survey with 14-17 y/o enables comparison of results to validate and frame the use of the analysis of the online comments.

80,000 opinions analyzed

∷ Next steps

Citibeats will support all the Cut All Ties activities related activities such as:

- Impact evaluation and impact assessment reports
- Design of a Capacity-Building Training (C-BT) in 6 high schools to support preventing and identifying GBV in youth early affective-sexual relationships
- Creating 6 groups of young feminists that once trained, will lead the actions in the selected institutes
- Validating of the CBT in the different high schools, training 120 youngsters and 120 teachers
- European raise-awareness campaign: more than 200 awareness actions developed by youngsters to prevent GBV in youth sexual-affective relationships through The Social Coin methodology.
- Transnational Impact Evaluation of the effectiveness of the pilot in changing social norms/behaviors of youngsters
- National and European dissemination campaign which includes the creation of a network of stakeholders and project advisors, national conferences, and a European seminar

Citibeats was also in charge of designing and implementing an app to be used in different schools (in Milan, Barcelona, and Madrid) starting from the beginning of 2022. Through the app, students will be able to launch a series of challenges in order to promote awareness around gender equality and educate teenagers and students about gender violence.

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Amazon Project

Inter-American Development Bank (IDB)























Social Impact Report 2021 26

Challenge

Understanding the perceptions and needs of people is fundamental for governments and multilateral organizations. Knowing what citizens really need is key to designing and responding to those needs through strategies, operations, and initiatives aimed at improving their living conditions.

Scope

Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, and Suriname.

References

- Amazon basin: What citizens' concerns and perspectives are?
- Social Understanding for Bioeconomic Initiatives in the Amazon Basin
- El BID y Citibeats: una alianza en pro de la economía y la preservación del Amazonas

Approach

The project promoted and financed by the Inter-American Development Bank (IDB), and powered by Citibeats' technology, focused initially on 7 countries (Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, and Suriname) and took into account different topics (health, security, biodiversity, education, investment, bioeconomy and more). From November 2020 to July 2021, the project included the analysis of almost 300,000 opinions expressed by citizens on digital documents (blogs, forum comments, tweets, news, websites, etc.) about the Amazon region.

The goal of the analysis was to include voices of Amazon citizens to:

- Better understand the perceptions and needs of people who live and or work in the region
- Improve the design and implementation of projects, initiatives, and policies answering citizens' needs
- Support the so-called "biobusinesses", as a key factor to pave the way for sustainable economic growth of the region, focused on promoting the preservation of the Amazon basin and, at the same time, of the traditional indigenous knowledge

How we helped

DATA



comments analyzed since December 2020



6 countries covered



3 languages analyzed



categories tracked



∷ Next steps

In the short term, the project in collaboration with Citibeats has allowed the IDB to strengthen the data collection process, gathering information by directly interacting with more than 500 representatives of indigenous peoples, Afro-descendant groups, farmers, local and regional organizations. Likewise, it has contributed to adjusting and fine-tuning the proposal for the development of various bioeconomy projects. As a result, in October 2021, the Green Climate Fund approved a financing for the Amazon Project of \$279 million, being one of the most important financing issued by the Fund. In the medium term, this initiative will help design projects at a national level and allocate funds to those areas with the

greatest needs (for example, promoting access to credit for women in the Amazon basin; improving the sanitary conditions of people and the environment; promoting recycling policies; integrating ancestral practices to improve the implementation of bio-businesses; adopting methods to save water and technological developments to monitor and prevent illegal activities, from artisanal mining to poaching).

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Data Analytics to Improve Public Deliberation in Colombia

United Nations Development Programme Colombia



















Challenge

The management of the COVID-19 crisis reversed the country's socio-economic progress. One of the most affected groups has been the Colombian youth. Difficulties such as school dropouts, the lack of policies that promote their labor income, the sustained fall in occupied youth, and the general increase in unemployment rates have generated feelings of hopelessness.

Scope

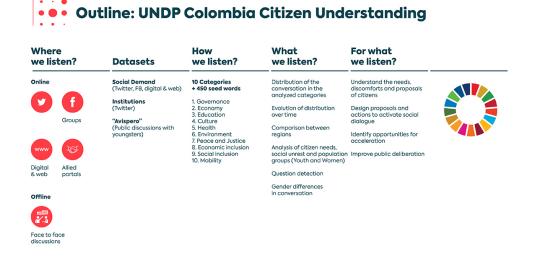
Colombia

References

- Data analytics to improve public deliberation in Colombia
- Analítica de datos para mejorar la deliberación pública en Colombia

Approach

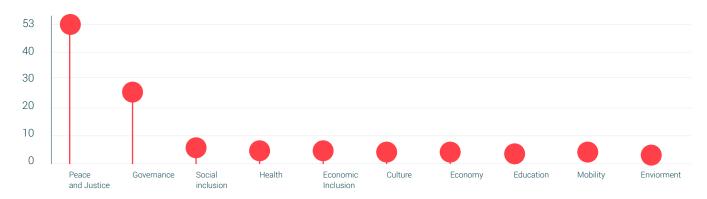
Citibeats facilitates social understanding of the current situation in Colombia through real-time monitoring and follow-up of opinions and proposals expressed in digital and face-to-face spaces. With this process, UNDP seeks to identify the main topics of interest to the population, contribute to making better and more informed decisions, and identify new fields of action in the near future. The diagram below summarizes the citizen understanding project we are implementing in Colombia.



∷ How we helped

Distribution of the conversation among the analyzed categories

July-October 2021 (%)



Next steps

Citibeats and UNDP Colombia collaboration will continue to get more depth and precision of data. This will help UNDP enrich its systemic understanding of Colombia's current situation and Colombian youth, propose appropriate actions that will enable UNDP to contribute to improving public deliberation in the country.





Key Achievements

During the last three years, Citibeats has informed over **\$1 billion** in social risk mitigation decisions, both in the public and private sectors, being able to detect early warning signs in social fast-changing environments.

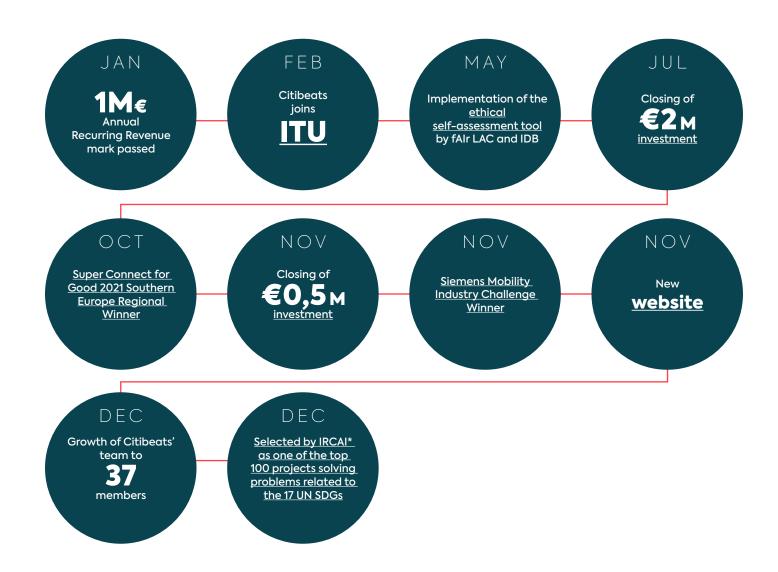
Among the most impactful use cases with a positive social impact, there are:

- CivicLytics the citizens'
 Observatory for Latin
 America and the Caribbean
 created in collaboration
 with Inter-American
 Development Bank (IDB).
- EARS the World Health
 Organization's social
 listening platform
 to show real-time
 information about how
 people are talking about
 COVID-19 online to better
 manage the evolution
 of the infodemic and
 the pandemic.
- The initiative promoted by the United Nations Development Programme (UNDP) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) to curb misinformation about COVID-19 in the Dominican Republic.





Key Milestones in 2021





^{*}International Research Centre on Artificial Intelligence

A Technology Built Around People

Citibeats' proprietary AI technology, combining **NPL** (Natural Language Processing) and **ML** (Machine Learning), analyzes large amounts of **unstructured text data** and other types of files where text can be extracted to identify **in real time**, social trends, low signal trends, and concerns.

Our goal is to offer models that represent reality in the most accurate way, reducing bias of any kind and thus giving voice to all opinions. During our transition towards a pure SaaS model, we took some technological steps and implemented a series of features to make our technology more sustainable, intuitive, scalable, and responsive.

- Moving of our server infrastructure from London to Stockholm: this allowed us to reduce the costs in terms of electricity and water consumption and CO2 emissions making our solution more sustainable.
- Launch of a new version of our dashboard. The new dashboard allows for more complete reports featuring intents complaints and segments (organization, female, male) filters, among other improvements.

- Introduction of the Top Stories function, a new feature to give social data analysts relevant information in plain text about the most common topics in people's conversations.
- Implementation of a standard connector to easily add Facebook data to any project.
- Downloadable data from the API in a CSV format that includes intents and demographic information, allowing our customers that want to consume our data from the API to connect to their BI tools or other systems.
- Creation of the Reports section on the dashboard. The function allows analysts to create reports using charts of the dashboard, adding texts, images, graphs, etc. The reports created by the user can then be easily shared with other people, making the dissemination of the information faster and easier.

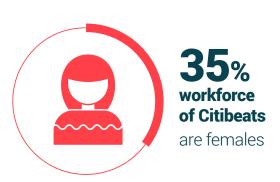


Gender Equality as a Core Value

Gender equality is one of the core values of the Company as witnessed by a strong presence of females in each department of Citibeats and also in decision-making positions.



33%
tech roles
(Engineering + Product + Presales)
covered by females









Super Connect for Good - Siemens Mobility Industry Challenge

Citibeats was awarded the Southern Europe Regional Award and the Siemens Mobility Industry Challenge Award.

LINK

Smart City Projects & Tech Solutions: **Toronto Region-Catalonia**

LINK

Gender Data Impact & Innovation Series - Synthesis and Application of Gender Data

LINK

Gender Data 101

LINK

ITU Webinar

Digital Transformation for Cities and Communities: The Role of Digital Technologies on Aging and Health

LINK

Foro GovTech Colombia

LINK

Apolitical

How to Use Data for **Better Policymaking**

LINK

Smart City SuMMit

LINK

4th Virtual World **Health Organization** Infodemic Management

Conference: Advances in Social Listening for Public Health

LINK

EFMI's 31st Medical Informatics Europe Conference (MIE)

LINK

Ètica i Intel·ligència Artificial: Impacte en el sector turístic

LINK

Innovación en el sector público

Conversatorio INE 2021 -

LINK

IDB Lab

Detección de sesgos y discriminación en el análisis de los datos en soluciones IA

LINK

Digitalización y participación ciudadana

LINK

IDB Lab

Tools for an Ethical and Responsible Artificial Intelligence

LINK

XI Congreso CNIS 2021

LINK

































