

**citibeats**

**SOCIAL IMPACT  
REPORT 2019**



**UNDERSTANDING  
WHAT MATTERS  
TO PEOPLE**



# Powering a responsive society, by distilling opinions and making them measurable

While companies and governments race to become more data-driven, we need to find new ways to keep humanity in the data and in decision-making. If data is representing people, it can't be based only on what is easy to measure; it must be based on what is important to be heard.

To be more human, data needs to represent people's anonymous voices - their complaints about what is not working, their tip-offs about what's broken, their proud achievements or excitement for a coming change.

So far, this more human data isn't being used because of a technological barrier: it is text, instead of numbers.

Every time a new microscope is invented, it becomes an enabler to the development of new and better medicines that can improve millions of lives.

Can you imagine what citizens, governments and companies could do with a social microscope? A microscope that takes anonymous voices of the whole world, and transforms them into actionable information for a better society?

That's what this report is about. Since 2019, Citibeats has enabled a tool for decision makers, who have started to pave the way for how citizen-centered data can and should be used to generate a more human impact. We call it "response-able AI" - turning citizens' anonymous voices into better policies, more effective budget allocations, and earlier interventions.

To support them, we are specializing in providing a platform with a differentiated ethical framework: aggregated and anonymized data, bias and representativity calibration, and impactful use cases.

In this last year, we have turned more than 70 million voiced opinions into input on decisions affecting over \$150M in budgets - impactful decisions that were not previously taking citizens' viewpoints into account.

Over the next 3 years, we aim to influence \$2B in budgets that did not previously benefit from the 'collective intelligence' of citizen input. We believe that understanding what matters to people helps shape a more sustainable, fair and abundant society for all with the resources this world has.

## Citibeats Top 5 Impact Implementations of 2019



LatAm & the  
Caribbean  
**Citizen  
Engagement**

Spain  
**Social  
inclusion**

Spain  
**Disaster  
mitigation**

Dublin  
**Citizen  
Engagement**

Japan  
**Regulation &  
consumer  
protection**



# Social impact with 'response-able' AI

## Citibeats Theory of Change

### Challenge

People's opinions can help decision makers act faster and better, dedicating resources to where they will be most effective.

However, traditional methods of collecting opinions (e.g. surveys) are slow and costly, while new sources of text data are hard to analyse at scale.

### Input

Citibeats collects public opinions, by connecting to public sources and data from clients (call helpline transcriptions, CRMs, chatbots and more).

Citibeats' AI is applied to analyse thousands of opinions per day, using unique natural language processing and machine learning for rapidly-changing environments.

### Output

Actionable insights are provided through dashboards, reports and alerts to policy makers and decision takers.

### Outcome

1. Reduced feedback collection time and costs are reduced
2. Increased population and geographical coverage
3. Systematic inclusion of people's opinions in the decision-making process

Indicators used to measure outcomes and impact:

- 1.1 Difference in time to collect feedback
- 1.2 Difference in costs to collect feedback
- 2.1 Number of voices heard
- 2.1 Number of cities & countries reached
- 3.1 Policies influenced
- 3.2 Budgets influenced

### Social Impact

**Policies and investments are more people-centered and more responsive to social needs. This results in more social impact per dollar spent, as well as more fund allocation for these needs. Impacts are diverse and are observed per initiative.**



**\$150<sub>M</sub>****budgets informed**

Corporate and government budgets influenced by Citibeats data, where previously citizen or customer feedback was not used in the decision process.

**90****days earlier**

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

**+30****countries**

Where companies and governments are applying Citibeats to restructure their strategy around using civic feedback data.

**30<sub>M</sub>****voices represented**

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

# Citizen Engagement

Putting citizens' voices at the center of public decision making





## Challenge

Local councils are increasingly using data in their decision making. On the technical side, they are using sensors to measure air contamination and traffic congestions. The limitation here is that these tools can't tell us how residents feel about those levels, what they think should be done, and how it compares to other topics.

On the civic side, councils implement surveys or town hall meetings to collect citizens' feedback on this matter.. However, surveys are not very scalable - they are expensive, can be run a few times per year due to budget constraints, and responses only provide insights on the specific questions being asked.

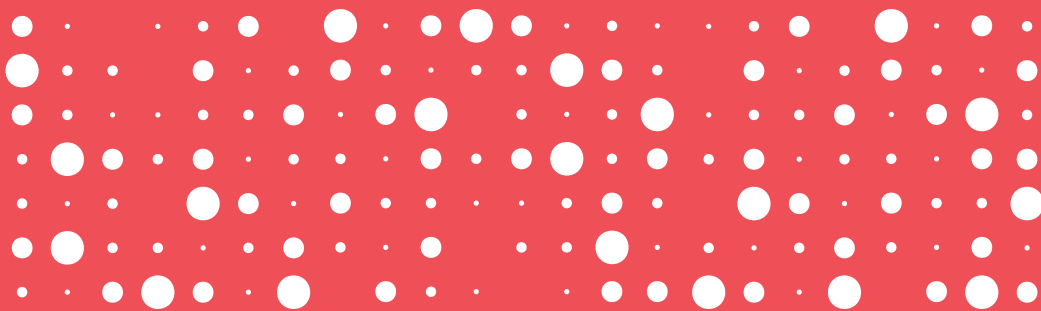
The challenge of these councils is to find new ways to understand people's sentiments at scale about rapidly-changing social issues.

## Approach

Smart Dublin, part of Dublin City Council, has been a pioneer in using Citibeats to demonstrate the range of ways this approach can be valuable at the local level.

At the highest level, Smart Dublin has been transforming qualitative feedback into quantitative indicators of top priorities - the leading of which the leading are homelessness and housing. The Council is reporting this in the Dublin Economic Monitor, placing innovative social indicators alongside traditional economic indicators such as GDP.

The collected information has been used tactically as input for decisions ranging from controversial investment issues to the improvement of public spaces - like adding designated bike lanes.





## How we helped

Time used to collect  
citizens' feedback:

**90**  
days  
earlier

Voices  
represented:

**250x**  
increase in civic  
feedback volume

## Next steps

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The vision is that citizen feedback can become more and more integrated into an increasing number of local decisions, by making these insights highly accessible and actionable across departments in local councils.



# Social Inclusion

Identifying diverse  
accessibility barriers to  
support advocacy





## Challenge

All too often, the voices of vulnerable groups and people at risk of social exclusion go unheard when it comes to decisions about public spending and infrastructure design. This is a particularly common flaw when it comes to creating inclusive and accessible cities for people with physical and cognitive disabilities, as there is a great diversity of needs from person to person. To put it simply, what works for one wheelchair user doesn't necessarily work for another, and so on.

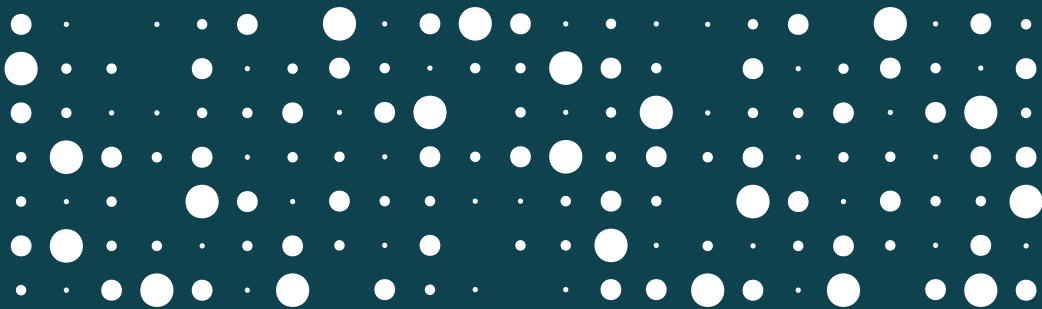
However, there is a growing opportunity for this population to share their personal experiences with (in)accessible infrastructure online. Automatically collecting and structuring this information can, for the first time, provide rich quantitative and qualitative evidence for identifying improvements to accessibility barriers.

## Approach

Fundacion ONCE, Spain's leading NGO for representing people with disabilities, has implemented Citibeats to develop a real-time 'Accessibility Map' of Spain. This map identifies and synthesises relevant complaints made by people with disabilities, and others around them, who become "sensors" of accessibility barriers.

With this approach, Fundacion ONCE has been able to capture temporally-relevant needs (such as the request to make national elections more understandable for people with cognitive disabilities) and geographically-specific needs (such as areas where e-scooters parked on sidewalks are limiting access for people with reduced mobility). These human stories, as well as quantified evidence of issues, support advocacy with companies, local and regional government.







## How we helped

Voices  
represented:

**250x**  
**increase in  
issue detection**

Policies influenced: Informed annual strategic plan & communication campaigns of Fundacion ONCE and accessibility initiatives of private companies who want to become more inclusive.

## Next steps

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Citibeats will continue working to identify projects that give more visibility to the needs of vulnerable groups by scaling up similar projects partnering with local and international civic organisations, and the public sector.



# Disaster Mitigation

Combining text and mobile data to guide disaster mitigation





## Challenge

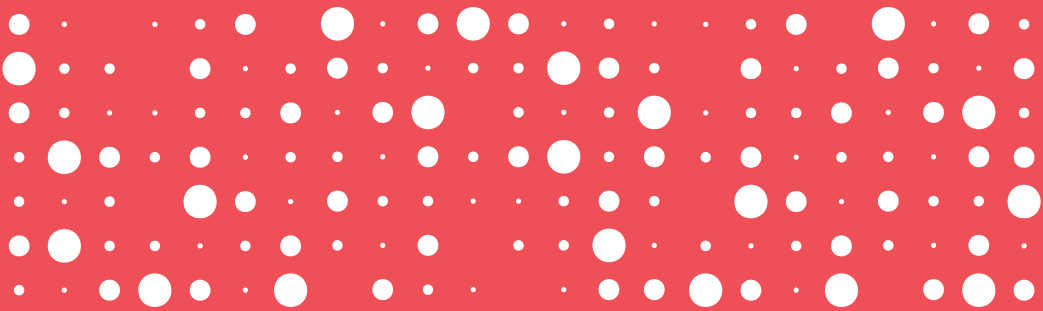
In September 2019, the east coast of Spain suffered severe floodings following a series of heavy rains ('gota fria') episodes. This caused 7 deaths, as well as damage to over 5,000 hectares of land, affecting 30,000 people and €190m in personal property damages.

As flooding events become more frequent as a result of climate change, governments across Europe are planning for wide-scale investment to make regions at risk more prepared. In order to effectively support this national investment, better data is needed at the local level to understand how and how and where the priorities for reinforcement are.

## Approach

In the last years, big data has begun to be used to inform disaster response. One of the leaders in this field is Telefónica's LUCA Big Data for Social Good team, who use mobile phone data to help guide policy by mapping the changed mobility patterns in the aftermath of an event, in order to inform policy.

To take this approach to the next level, Citibeats partnered with Telefónica to cross-reference social media data (geolocated based on mentions in the text) with Telefonica's mobility data, improving confidence levels and adding rich context - photos, damage types, requests and suggestions.



## How we helped

Areas  
covered:

**10**  
municipalities

Budgets informed: not defined, but  
corresponding to over

**€180m**  
in damages

## Next steps

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Telefónica and Citibeats will continue working together to bring this state-of-the-art approach not only to help local, national and multilateral organisations respond to natural disasters, but also to guide preparedness efforts for global social challenges like migration crises and climate displacement.





# Citizen Engagement

Informing responsive  
development policies  
and investments



## Challenge

The Group of the Inter American Development Bank (IDB Group) has launched a new Civil Society/Citizen Participation Engagement Strategy to “effectively contribute to the goals of reducing inequality and poverty, promoting productivity and innovation” in Latin America and the Caribbean.

Within the context of rapid social change in several countries in the region, one of the main challenges of the IDB Group is to compare and contrast the information provided by the different

economic indicators with that of traditional data collection methods - which includes information on citizen’s opinion and social trends that contribute to understanding the gaps between public policy and people’s perceptions.

The IDB Group wanted to leverage the widespread use of new technologies and social media to complement the current initiatives that are in place.

## Approach

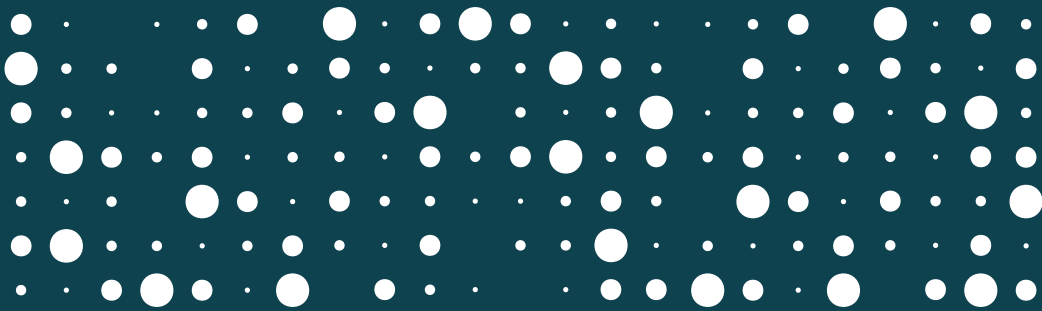
Citibeats has been invested in by IDB Lab, the ‘innovation laboratory’ of the IDB Group, in order to offer civic understanding analytics across the continent for local, regional and national actors, as well for the IDB Group itself.

With this partnership, IDB Group is exploring new uses of ‘collective intelligence’ to inform decisions related to diverse issues, such as gender, education, transportation, access to public services and more.

Moreover, IDB Group has launched fAIrLAC, an alliance between the public sector, private sector and civil society to ensure responsible application of AI in Latin America, which Citibeats is actively participating in and adopting in our product.









## How we helped

Countries  
reached:

**11**  
countries  
active

Voices  
represented:

**2M**  
voices per month  
for informing  
policy decisions

## Next steps

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The IDB Group and Citibeats will continue their collaboration to reach all countries in LAC and work towards identifying and responding to new social challenges by bridging the gap between traditional data analysis and citizens' perceptions.



# Regulation

Protecting consumers  
through a social early  
warning system



## Challenge

With food poisoning and accidents caused by substandard products, one of the first places consumers complain is online. The emergence of social media and help forums has given consumers a new channel to vent and resolve their problems.

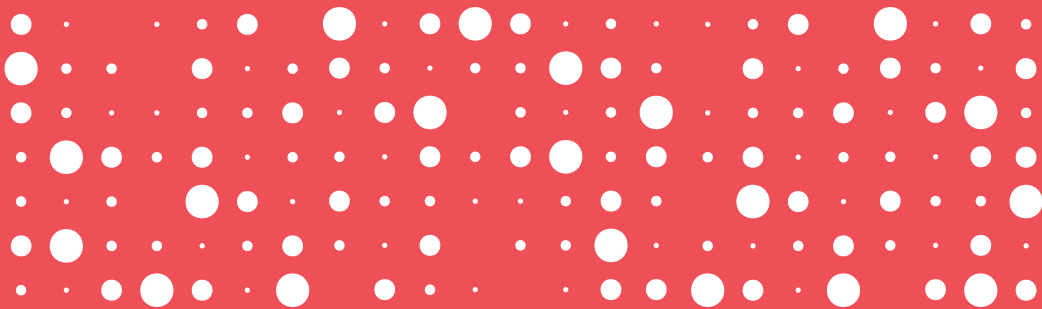
However, drawing actionable conclusions from these complaints is not easy. Every day in Japan there are thousands of complaints across hundreds of social media outlets and forums - about hundreds of companies and hundreds of products. It is difficult for regulators to build a coherent view of the market to inform policy and that results in concrete actions.

## Approach

Drawing on its strong data partnerships in Japan, NTT Data collects consumer complaints across channels, and configures Citibeats to analyse them for insights - such as the food types, associated products and companies, and geographic regions to which the complaints are referring.

This results in an 'early warning system', which regulators can use as a real-time monitor of emerging consumer protection issues. With this data, regulators can react faster to launch investigations or take actions to prevent the spread of health issues before they affect more consumers.





## How we helped

more consumer protection issues  
detected than before

x5

reduction in  
detection time

x2

## Next steps

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Citibeats is now being used by regulators across 3 continents, and our objective is not only to enable regulators to be more responsive, but also increase transparency and accountability of companies based on consumer feedback.



## Where we go next, we go together

The impact that we're having is driven by people who think differently and are excited to change how data is used for the better. If Citibeats is a new microscope, we're grateful to society's scientists who are putting it to good use.

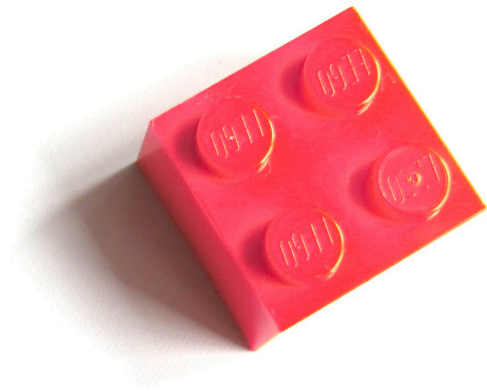
Thank you to our clients leading the work that is mentioned here, as you are the innovators in companies, government and non-profits who are pushing the limits of how data is used for social impact.

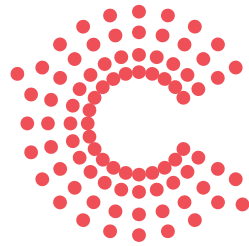
Thank you also to our partners, who glue together an understanding of the client problem with the building blocks of our solution.

We look forward to building a better microscope with you as a tool to help you solve new problems!

If you'd like to discuss your initiative with us, please contact [go@citibeats.net](mailto:go@citibeats.net)







**citibeats**