WeGO Smart Health Responder Webinar

Part 2 of 3
Exploring Effects and Results of COVID-19 in the Americas
Introduction

Chris Jo
Corporate Relations & Health Officer
WeGO Network

208 Members

156 Local Governments + 33 Corporations + 19 Institutions

Partners
This webinar highlights companies that were key partners in shaping successful policies in their countries, showcasing how other governments have dealt with the challenging crisis.

### Upcoming Webinars

**Digital Technologies & the COVID-19 Pandemic**
- **By:** UCL, (EN)terprise, Manchester
- **Date:** November 15, 2020
- **Time:** 9:00 AM (UTC 00)

- **By:** ECO
- **Date:** April 30, 2020

**COVID-19 Testing: The Role of LMPDs**
- **By:** ECO
- **Date:** April 17, 2020

### Webinar Archive

- **By:** ECO
- **Date:** April 30, 2020

#### COVID-19 Testing: The Role of LMPDs
- **By:** ECO
- **Date:** April 17, 2020

### Video Archive

- **Seoul’s COVID-19 Response**
- **Singapore’s Coronavirus Success**
- **Taiwan’s Quick COVID-19 Control**
- **Korea on Flattening the Curve**

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This page lists some of the companies that manufacture medical devices related to addressing COVID-19. If you need assistance in obtaining medical equipment, please contact us at 0800-1234567.
Opening Remarks

Jorge Muñoz
Mayor of Lima

Valérie Boissonneault
Director of Government of Quebec in Seoul

Ortiz Federico
Secretary of La Plata Municipality

Kyong-Yul Lee
WeGO Secretary General
Jorge Muñoz
Mayor of Lima
Greeting to all the WeGO Members,
Special Message

Valerie Boissonneault
Director of Government of Quebec in Seoul
Special Message

Ortiz Federico
Secretary of La Plata Municipality
City of La Plata, Buenos Aires Province, Republic of Argentina
City of La Plata. Federico Ortiz.

**STAGES**

**CONFIRMED CASES**

COVID-19 positive patient

Identification of close contacts from 48 hours prior to the onset of symptoms of the confirmed patient.

**Stage 1 IDENTIFICATION**

Stage 2 TRACING

Close contacts Database

Monitoring of close contacts until day 14 after contact with the confirmed patient.

Stage 3 TERRITORIAL MONITORING

Detection device. Active search of close contacts in the territory.

**SOFTWARE**

City of La Plata.
Federico Ortiz

City of La Plata, Argentina

Opening Remarks

Kyong-Yul Lee
WeGO Secretary General
Looking Forward: City Solutions & Preventive Measures

Digital Agency for Public Innovation, Mexico City

José Merino
Head of Department

Mariano Muñoz
Communication and Project Coordinator
COVID-19 Emergency Response in Mexico City

José Merino & Mariano Muñoz
Digital Agency for Public Innovation
Mexico City
1. What is the reproduction rate?
2. How much capacity we have to build?
3. How can we discriminate among cases?
4. How can we be aware and ready for all cases?
5. How can we regain prosperity without having a growth in cases?
Mexico City has a large, active population, information constraints related to testing, and the need for more hospital beds.

Given this, we designed an epidemiological model (modelo.covid19.cdmx.gob.mx) in order to:

- project the impact that the pandemic will have on hospital capacity
- estimate the number of patients requiring intubation and essential care

Based on this, decisions are made to:

- guarantee access to critical supplies
- take actions to retrofit existing hospital availability
Modelo Epidemiológico para la Zona Metropolitana del Valle de México:
Hospitalizados generales y predicciones del modelo
Epidemiological Model

Modelo Epidemiológico para la Zona Metropolitana del Valle de México:
Hospitalizados con ventilador y predicciones del modelo
Use of ICT activities during COVID19 (covid19.cdmx.gob.mx)

**Technology** for case detection and canalization through the health system (update: July 8)

- **SMS**
  - 500,286 users
  - 35,400 calls

- **Web**
  - 23,000 delivered
  - 2,554,939 views

- **Call center (Locatel)**
  - 1,500 phone tracers
  - 123 brigades
  - 12,558 people reached

- **Medical kits + economic support + groceries**
  - 2,554,939 views

- **Hospital availability**
  - hospitales.covid19.cdmx.gob.mx and App CDMX

- **Contact tracing**
  - 12,558 people reached
Easing of restrictions & Prevention of a new outbreak (covid19.cdmx.gob.mx)

Rule for easing restrictions:
Percentage of available hospital beds

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 65%</td>
<td>or 2 weeks of steady increase</td>
</tr>
<tr>
<td>&lt; 65%</td>
<td>or 2 weeks of steady decrease</td>
</tr>
<tr>
<td>&lt; 50%</td>
<td>or 2 weeks of steady decrease</td>
</tr>
<tr>
<td>&lt; 50%</td>
<td>or 1 month of steady decrease</td>
</tr>
</tbody>
</table>

Key measures:

- Different working schedules and strict sanitary restrictions for businesses
- Increase testing capacity (1500 per 100k) + phone contact tracing
Looking Forward: Innovation in the Time of COVID-19

(011).lab – Innovation in Government Lab at São Paulo City Hall

Vitor Cipriano de Fazio
Head of Department

Fernanda Balbino
Technical Director Partnerships
Innovation in The Times of COVID-19
WHY a public innovation lab in São Paulo?

SCARCE RESOURCES

RIGID STRUCTURE

UNCERTAIN FUTURES AND TECH CHANGES

DISTANCE BETWEEN CITIZENS AND GOVERNMENT

UNMOTIVATED PUBLIC SERVANTS
We are a public innovation team that was born in 2017 as a strategy to bring public management closer to people, increase management efficiency and the quality of public services.

3 working fronts

- Design and improve public services
- Mobilize public innovation communities
- Develop capabilities to innovate
Develop capabilities to innovate

We seek to bring about changes in the mentality, attitudes and skills of civil servants.
Mobilize public innovation communities

We bring civil servants closer to the problems experienced by the population. We connect civil servants to share practices and innovation.
Design and improve public services

The municipality needs to change the way it works to deliver services that are more connected to people's needs.
HOW do we design and improve public services?

Based on the core competencies of our team:

- Plain Language
- Qualitative Methods
- Open Innovation
- Behavioural Insights
- Design
- Knowledge Management
HOW do we design and improve public services?

- we **identify challenges** with a partner within the government;
- we set up a **multidisciplinary team** to work on this project;
- we motivate partners to transform the service **based on methodologies**;
- **team autonomy** to make decisions in view of the value and learnings of the process.
Working from Home

**CONTEXT:**

- In March, about **60 thousand public servants** started working from home due to the pandemics:
  - very different conditions
  - Schools and care facilities shut down
  - Lack of support for those with low digital literacy
  - Lack of training for remote team management
  - Disruption of performance tracking practices
Working from Home

OPPORTUNITIES:

- Cost reduction;
- Increase well-being in the public service;
- Accelerate new forms of delivering public services;
- Reimagine management practices.
Working from Home

PURPOSES:

- To understand the **challenges** civil servants were facing to adapt to remote work;
- To develop an **evidence-based strategy** to define those who stay at home and those that can, if needed, return to in-person work;
- In the long term, to create a policy that enables **hybrid** remote and in-person **work arrangements**, beyond the pandemic context.
Working from Home

**HOW:**

- Mixed and multidisciplinary teams;
- Project management with cycles of exploration, experimentation and synthesis;
- Premise of always testing and collecting data.
Working from Home

**HOW:**

- **Survey** to collect civil servants perspectives on working from home:
  - Over **4,000 respondents from 40 different municipal bodies**
  - Overall, civil servants have a positive perspective of remote work:
    - **41%** would like to continue working from home after the pandemic
    - **94%** declare to be up to date with their activities
    - **78%** have the same amount or more tasks
Working from Home

**HOW:**

- **Team managers perspective:**
  - 67% believe their teams are performing **better** their tasks remotely
  - 93% postulate their teams are well organized working from home
  - 86% believe their teams work well with technology
WHAT ELSE:

- Change management strategy
- Identify the main struggles and prototype solutions
- Address less conventional agendas in the public sector:
  - Performance tracking
  - Team management
  - Adaptable work arrangements
Working from Home

QUOTES FROM PARTNERS:

“In this project, I learned that it is possible to work remotely on complex projects in a collaborative way. I changed my perception of remote work. Now I know that it is possible to do it in a different way”

“I gained more clarity to think about different work arrangements to accommodate the different needs and realities of the public servants. The project brought up aspects that I had not thought of before.”
Behavioural Change in the COVID-19 context

**CONTEXT:**

- The pandemic of COVID-19 required many behavioural adaptations. The main ones: **social distancing** and **wearing face masks**.
- Voluntary lockdown in São Paulo:
  - need to incentivise non-compulsory behavioural changes
  - low compliance to sanitary norms
- Intervention: send SMS texts based on behavioural insights to the districts with the highest rates of COVID-19
Behavioural Change in the COVID-19 context

**METHODOLOGY:**

- Behavioural Insights Team with expertise in applying “nudges” to public services;
- According to the literature, text messages are effective for changing health-related behaviors;
- *Nudges* are an **affordable, cheap and efficient** way to communicate with the population;
- 96.5% of São Paulo’s inhabitants have a cell phone.
Behavioural Change in the COVID-19 context

**Methodology:**

4 SMS per person

- Inform, instruct and motivate;
- Different principles of behavioral sciences:
  - Reciprocity
  - Civic duty
  - Social norm
  - Risk aversion
  - Collective sense;

- **Impact analysis** to verify which version has better outcomes (RCT with data collected by telephone survey)
Behavioural Change in the COVID-19 context

**SMS EXAMPLE:**

- Principle of behavioural sciences applied: **Civic Duty**

*MUNICIPALITY OF SAO PAULO*: avoiding DEATH of family and friends is YOUR DUTY: going outside puts others at risk. Stay at home.
Behavioural Change in the COVID-19 context

PROJECT PHASES:

PHASE 1

- SMSs sent to 60 thousand people

PHASE 2

- Impact analysis with 7 thousand people (telephone survey)

PHASE 3 (starting now)

- Scale up: SMSs will be sent up to 12 million people in the districts with the highest contamination rates
Behavioural Change in the COVID-19 context

PROJECT PHASES:

PHASE 1
- SMSs sent to 60 thousand people

PHASE 2
- Impact analysis with 7 thousand people (telephone survey)

PHASE 3 (starting now)
- Scale up: SMSs will be sent up to 12 million people in the districts with the highest contamination rates
**Behavioural Change in the COVID-19 context**

**GENERAL CONCLUSIONS:**

- All versions indicated a **positive impact on people's understanding**, which implies the ability to adopt the desired behavior;
- The civic duty appears to perform slightly better than the others;
- SMS are an effective tool for informing specific details of information associated with a behavior.
What are we taking from this?

- Innovation as a driver to build up resilience and ability to adapt to the circumstances
- Closing the gap between the people and the government
- Opportunities to implement new interventions and promote change
THANK YOU!

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Fernanda Balbino
@011lab Director of Partnerships
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Reopening Cities: Approaches to NYC’s Economic Recovery

Industry Initiatives, New York City Economic Development Corporation

Sander Dolder
Vice President
Defining NYC’s Post-COVID Economy

Sander Dolder
New York City Economic Development Corporation
Four major crises are driving transformation at warp speed.

Trump Says Virus Will ‘Get Worse Before It Gets Better’ as Daily Deaths Top 1,000

- Abruptly departing from his early projections about the coronavirus, President Trump also urged Americans to wear masks.
- Nevada, Oregon and Tennessee reported their highest single-day death figures as the U.S. hit 1,000 deaths in a day for the first time in July.
- The U.S. military’s infection rate has tripled over the past six weeks. Here’s the latest.

End of 600 Unemployment Bonus Could Push Millions Past the Brink

A weekly supplement has helped millions of Americans pay their bills and cushioned the economy. As it expires, Congress will determine what comes next.

Congressional Republicans are close to resolving roughly $8 trillion coronavirus aid plan.

Opinion

Jennifer Senior
I Spoke to Anthony Fauci. He Says His Job Isn’t Pretty.

An interview with the man who has an important message for you.

Elizabeth Warren
To Fight the Pandemic, Here’s My Must-Do List

The Senate needs to act now. There is no time to waste.

Thomas L. Friedman
Trump’s Was-the-Day War

Susan E. Rice
Take the Next Step Toward Racial Justice

The Editorial Board
New Yorkers, Voting Could Get Much Easier for You

Sponsor Batak Lindell
Could Bill Be, Baki

Ages Callard
Should We Causal Aristotle?

Janelle Bouie
The Road to War in Portland

Boo Dowd
Can Trump Come Back?

Tom Friedman and Cyrus Shahpar
We Searched for Covid-10 Data. Here’s What We Couldn’t Find.
The culture wars have created a divided America
The pandemic has illustrated the best and worst in NYC’s ability to respond and adapt.
The subsequent economic crisis will profoundly reshape NYC’s economy

Exhibit 4: COVID-19 impact on industry sectors in the New York City metropolitan region

2. McKinsey Global Institute analysis based on Emsi Datarun 2020.1, LaborCUBE, BLS OES, Moody’s Analytics. “Employment at risk” reflects the income risk facing workers placed on unpaid leave, workers facing cuts to wages or hours worked, workers that exit the labor force, and workers that held multiple jobs and reduced the number of jobs worked as a result of COVID-19. Note: Analysis is for the MSA rather than for the 31-county region.
Parallely, rising inequalities are driving rapid societal change
The rules have changed, therefore we need to adapt

Advancing Behaviors
Some behaviors will return to their pre-crisis state virtually unchanged.

Transformed Behaviors
Some behaviors will return after the crisis, but look different in fundamental ways.

Collapsed Behaviors
Some behaviors will stop altogether or be displaced by a new behavior.
The need to understand, prototype, and collaborate is vital during periods of uncertainty.
NYC’s economy may face many undercurrents that will alter how we access, create, and support businesses.

<table>
<thead>
<tr>
<th>Digitalization and Automation</th>
<th>Corporate Takeover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locally manufactured and supplied</td>
<td>Life-long Learning</td>
</tr>
<tr>
<td>Rising Inequality</td>
<td>Cultural Rebirth</td>
</tr>
<tr>
<td>Rethinking Space</td>
<td>Loss of Privacy</td>
</tr>
<tr>
<td>Low Touch Society</td>
<td>Embracing Science</td>
</tr>
<tr>
<td>Flexible Economy</td>
<td>Mental Escape</td>
</tr>
</tbody>
</table>
Overarching values to a successful recovery in NYC’s 21st Century Economy need to include:

- Prioritize initiatives that increase **economic resiliency**, *not just* diversification and economic growth

- Design interventions to help create **wealth**, *not just* create good jobs

- Emphasize **ownership**, *not just* employment and economic contribution
To capture these shifts and values, we need to design our economy for flexibility.
We need to design our economy collaboratively
We need to design our economy for resiliency

Governor Cuomo Announces Largest Combined Solicitations for Renewable Energy Ever Issued in the U.S. to Combat Climate Change

JULY 21, 2020 | Albany, NY

Nation-Leading Offshore Wind Solicitation Seeks Up To 2,500 Megawatts of Renewable Energy Infrastructure Investment, Totaling More Than $400 Million in Public and Private Dollars for Port Infi Year; and Sends a "Buy-Clean" Demand Signal for Advanced Materials
And we need to design an economy for everyone
Reopening Cities: Addressing the Digital Divide During the COVID-19 Pandemic

Hector Dominguez
Open Data Coordinator
Smart City PDX

Elisabeth Perez
Interim Director
Office for Community Technology
Addressing the Digital Divide During the COVID-19 Pandemic

City of Portland, OR

Elisabeth H. Perez, Interim Director
Office for Community Technology

Hector Dominguez
Open Data Coordinator – Smart City PDX
Who is affected by the Digital Divide?

32,000 households are not connected to the internet.

Those not connected have annual household incomes of less than $75K.

Of the 32,000 unconnected households, at least 1/2 make less than $20,000/yr.

And at least 16,230 households do not have computing devices of any kind.

Each Building = 1,000 Multnomah County households.

Source: American Community Survey 2018 data.
Technology Kit Initiative

$3.5 Million in Federal CARES COVID-19 response funding for the distribution of technology kits and assistive devices to frontline organizations for distribution to community members they serve.

- Prioritize digital inclusion for BIPOC communities, individuals with disabilities, immigrants, women, individuals experiencing poverty or others at risk of isolation.
- Keep individuals connected to services through frontline organizations and build digital community.
- Keep individuals connected to education, employment, healthcare, social opportunities, and more.
Leadership Model

- City leadership convenes and allocates funds
- Stakeholder groups represent diverse community needs to shape policy
- Trusted frontline partner organizations distribute kits
Data and COVID19 response
Portland Privacy Principles

- Transparency and accountability
- Equitable data management
- Full lifecycle stewardship
- Data openness
- Automated decision systems
- Data utility
- Ethical and non-discriminatory use of data
Procurement and Privacy

Understand better information risks and costs
Assure compliance
Enhance public trust and transparency
Agile and integrated process
Federalizing assessments
Portland Urban Data Lake (PUDL)

DATA INGESTION
- Collect
- Import
- Load
- Stream
- Absorb
- Transfer
- Integrate

DATA CLEANING
- Correct
- Transform
- Conform
- Group

DATA SHARING
- API
- BI
- GIS

DATA SECURITY
- Store
- Secure
- Govern
- Document

DATA EXPLORATION
- Wrangle
- Slice/Dice
- Find patterns
- Uncover
- Identify
- Graph
- Chart
- Apply stats

DATA INTERPRETATION
- Model
- Predict
- Score
- Graph
- Chart
- Apply stats
COVID19 Priority datasets

https://regionalbarometer.oregonmetro.gov/

https://www.portlandmaps.com/
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Post-COVID Reality: Using Data to Make Cities and Workplaces Safe

WeavAir

Natalia Mykhaylova
Co-founder and CEO
Post-COVID Reality: Using Data to Make Cities and Workplaces Safe

Natalia Mykhaylova
CEO WeavAir
Coronavirus horror: Terrifying new study reveals disease can spread through AIR

AIR CONDITIONING spread coronavirus from one person to nine others in a Chinese restaurant, according to a new study.

*https://www.pandemictechnews.com/2020/05/13/airflow-is-a-crucial-factor-in-spreading-coronavirus-this-may-be-the-ultimate-solution/*
Do you know how safe is your commute?
How effective are the new cleaning routines?
If you HVAC is operated correctly?
11 years sensors R&D
Less than 25%

filters in our buildings &
transportation systems are effective
$30 M+ increase in OpEX
Safety hazards
Maintenance & upgrades
Insurance

HVAC filters are not always effective

<table>
<thead>
<tr>
<th>Ventilation system</th>
<th>Typical filter type</th>
<th>Retention capacity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialised HVAC systems (operating theatres, special laboratories)</td>
<td>H13 -14 [DIN EN]</td>
<td>MERV rating a) 16–20</td>
<td>Degree of separation b) 99.99%</td>
</tr>
<tr>
<td>HEPA filter</td>
<td>H13 [DIN EN]</td>
<td>16–20</td>
<td>99.95 %</td>
</tr>
<tr>
<td>HVAC systems for office buildings, churches, cruise ships, etc.</td>
<td>ePM1 [EN ISO]</td>
<td>9–13</td>
<td>&gt;80 %</td>
</tr>
<tr>
<td>Standalone air-conditioner (e.g. apartments, shops, restaurants)</td>
<td>- Fiberglass</td>
<td>1–4</td>
<td>&lt;40% 45%</td>
</tr>
<tr>
<td>- Polyester/pleated air filters</td>
<td></td>
<td>8–13</td>
<td></td>
</tr>
<tr>
<td>Pedestal fans</td>
<td>n/a</td>
<td>n/a</td>
<td></td>
</tr>
</tbody>
</table>

a) Minimum Efficiency Reporting Value (MERV), American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE);
b) Minimum separation efficiency for test particles, EN ISO 16890 (particle sizes 0.2 to 1.0 μm, depending on the filter type);
c) Particles, droplet nuclei of different sizes.
Cleaning frequency is important

COVID aerosol is not easy to filter
Accurate occupancy tracking is critical

Cluster in South Korean office building

Air-conditioning cluster in restaurant in Guangzhou, China
We need better solution

Traditional monitoring
- Not continuous

New sensors
- Not accurate

“More accurate environmental analytics would be a big win for us”
WeavAir offers end-to-end high accuracy HVAC monitoring solution to improve safety, reduce maintenance costs

- Save costs
- Reduce failure
- Reduce liabilities
WeavAir solution

Multi-sensor devices

Data-driven purification & maintenance

Software for preventative alerts & dashboards

APIs & control system

15 metrics + 5 indices
95%+ accuracy

*IP in sensors and data processing
Low integration costs

- Quick install
  - Works with HVAC
  - Part of existing workflow
  - Setup time < 15min

- Autonomous operation
  - Continuous accurate & direct insights

- Improved services & productivity
  - (Contractors)

- Reduced liability & costs
  - (Asset manager)
ROI <1 year

Time savings
- Environment factors
- Human factors
- Mechanical factors

Reduced downtime
- 10% CAPEX
- Failure reduction

Energy savings
- 50% OPEX
- Energy savings

30% OPEX
- Time, maintenance costs

$350K+ USD* cost savings per year

*per average building (100K sq ft)
COVID risk measurement & reduction

Measure risks
- Early warnings
- 20 risk factor metrics
- Remote, data-driven services

Reduce risks
- Cleaning rate
- Maintenance optimization
- Ventilation exchange rate

Improve public safety & awareness
Reduced operation & maintenance costs
Reduced risks
WeavAir in buildings

- Site Occupancy & Safe Distancing Index (area occupancy, COVID risk)
- Air Quality Index (temperature, humidity, pressure, dust, smoke, dust, VOC, CO, CO2)
- HVAC energy efficiency (smoke, noise, hazardous gases)
- Improved filter effectiveness (smoke, particles, gases)
- Public Risk Index (smoke, noise, hazardous gases, COVID risk)
WeavAir in vehicles
Applications

Vehicle fleets
- Logistics, taxi, public transport
  - Ventilation control, comfort, safety, perishable logistics

Clinics
- Hospital, dental, long term care
  - Ventilation control, comfort, gas leak detection, staff & patient safety

Industrial
- Pharma, food processing
  - Ventilation control, contamination control, occupational safety, regulation & QAQC, SOP compliance

Commercial
- Office buildings, & hospitality
  - Ventilation control, comfort, odour control, fire hazard prevention, CSR
16 tech awards across 4 continents
Case study: “Best in Innovation Award”

- Installation in train & subway station
- Improving effectiveness of air filtration systems
- Reducing maintenance cost
New technologies in development

**New algorithms**
Coupling WeavAir algorithms with open source datasets (partnership with data aggregation platforms)

**New integrations**
Integration of WeavAir sensors & algorithms with IoT network data (partnerships with IoT solutions providers)

**New sensor technology**
Optical sensor for detection of biohazard droplets in the air (partnership with sensor & purifier developer)
Q&A Part 2
Moderator & Speakers
For more questions, please contact our speakers

José Merino | Mariano Muñoz
Head | Communication & Project Coordinator
Digital Agency for Public Innovation

Vitor Cipriano de Fazio | Fernanda Balbino
Head | Technical Director of Partnerships
(011), Lab - Innovation in Government Lab at São Paulo City Hall

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Vice President
New York City Economic Development Corporation

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Interim Director | Open Data Coordinator Office for Community Technology | Smart City PDX

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