

Helping Local Communities Fight COVID-19

Leading through the crisis

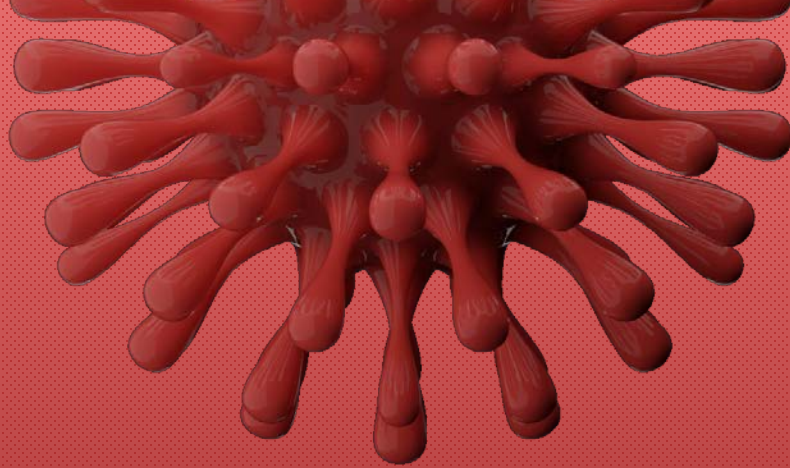
This presentation is intended to provide a perspective on the evolving situation and implications for Communities and Public Health Departments. The outbreak is moving quickly, the strategy still alterable depends on how the authorities can respond, and what happens next.

Overview

Strategy

Obligation

Preventions



Overview01

Overview

Challenges

Timeline

The Community Level Response to SAR-CoV-2

By Gabriel Neculai Aftenie





Romania



Brașov County

Population (2019): 635.084 inhabitants

Population Density: 117.9 pax/Km²

Urban: 428 pax/Km² Rural: 40.9 pax/Km²

Male: 307.429 Female: 327.655

Hospitals: 38 – State Owned: 25 Private: 13

(until Nov.12.2020)

Total Tested: 22522

Total Infected : 12.575

Who are the stakeholders

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus.

It is highly transmissible and carriers may be asymptomatic, unknowingly infecting family, friends, coworkers and members of the general public.

The first line of community defense are General Practitioners coordinated by the local County Public Health Departments.

This virus greatly affects the elderly, persons with preexisting health conditions and those who are institutionalized both in regard to physical health and mental health.

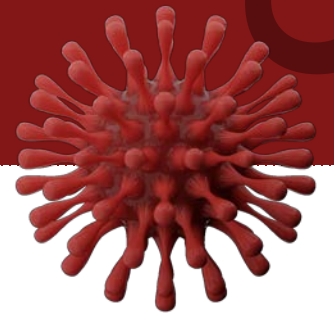
Overview

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Who are the vulnerable populations

- Medical personnel – Doctors, Nurses, Assistants and auxiliary staff
- Elderly persons, especially those who live in assisted residential homes
- Chronic patients with pre-existent conditions
- Patients who undergo dialysis or radio/chemotherapy treatment
- Elderly teachers, professors and auxiliary staff



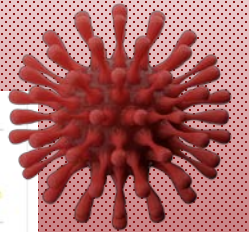
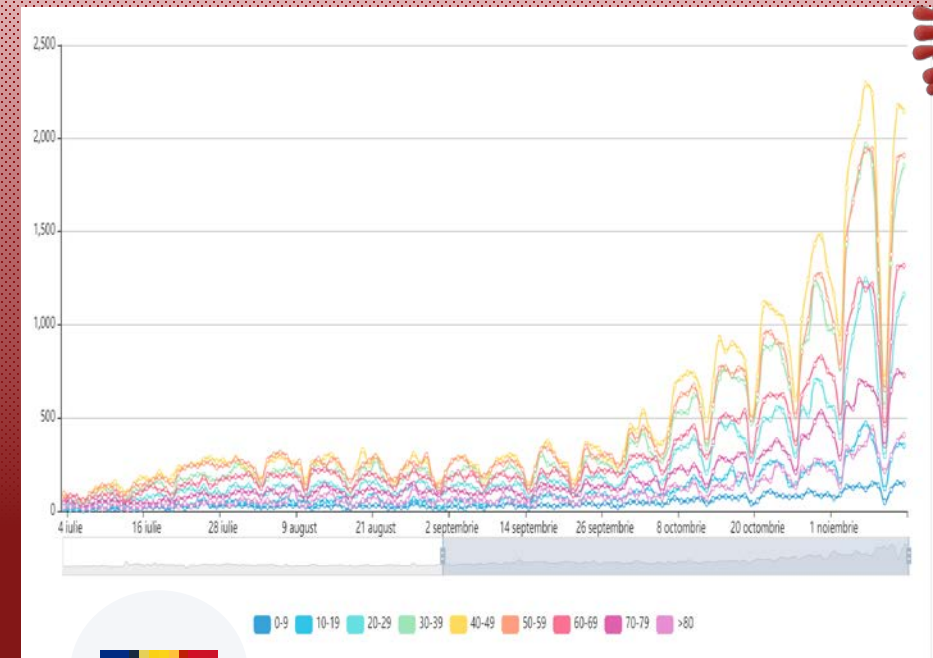
Overview

Coronavirus Cases - Romania Update

The actual infection toll from COVID-19 is likely to be higher than the number of confirmed positives – this is due to limited testing and contact tracing in the community

[LIVE UPDATED](#)

Romania



The data collect from this Resource: <https://datelazi.ro/>

Last Updated on November 12, 2020



Overview

How can we contain the spread?

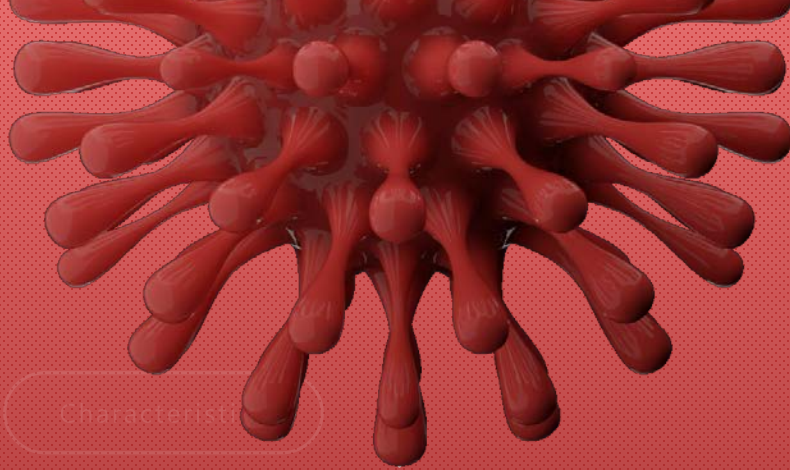
The only manner in which we can prevent the spread of the virus is with the collection of data from the population and its dissemination to General Practitioners, Residential Homes Administrators, Dialysis and Radio/Chemotherapy Centers, School Boards and Schools for rapid response and containment

Lab Results

Patient
Interviews

Patient
History

(Self)
Monitoring



Characteristics

Challenges

Timeline

Characteristics

Challenges

02

State of preparedness to change, find solutions
and improve



Challenges

COVID-19 appeared in a period when the state of preparedness was low to inexistent and the initial response of the WHO to signals coming from Wuhan did not alarm the authorities.

After the WHO declared the Pandemic, the Local and Central Authorities concentrated on purchasing PPE and Ventilators, *not* on communication with individual citizens and inbetween the Public Health Departments.

Common technical issues:

- ▶ **Aged IT equipment**
- ▶ **Lack of professional communication systems**
- ▶ **No Digital Data Repositories**

Human Resources issues:

- Low number of epidemiologists on staff
- Lack of trained emergency telephone response staff
- Frequent turnover due to exhaustion, overexertion and mandatory overtime
- Only temporary positions can be hired



Serious issues:

- Lack of PPE for front line workers – including GPs.
- Lack of formalized communication between PHDs
- Distrust between stakeholders
- Frequent changes to legislation and reporting needs
- Analysis paralysis - Passing the buck between authorities.

Challenges

What do we need?

The Local Public Health Departments need to implement:

01

9SOS – A simplified and intuitive data entry systems that can be used securely in a work from home / hybrid scenario with regular qwerty keyboards and screens (*not touch tablets*).

02

Sufficient *Permanent Professional Staff* who is trained to handle the present and future epidemiological situations.

03

Needs analysis and specific continuous training for PHD staff, GPs, School Medical Assistants who can provide services during states of emergency or alert.

04

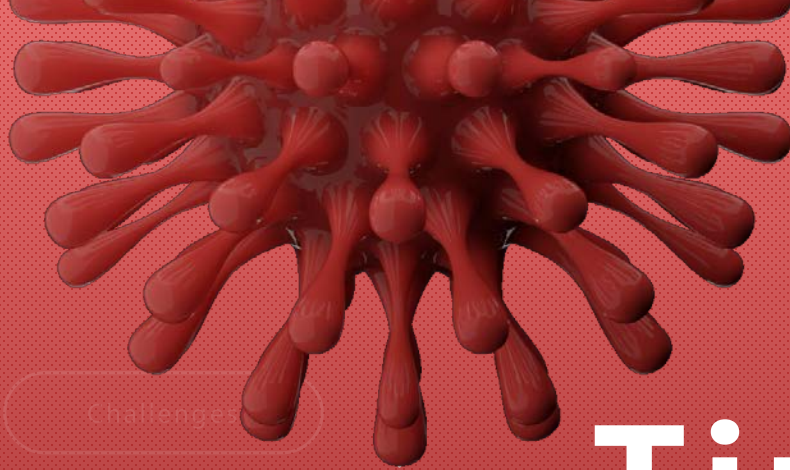
Call Center PBX with call allocation, recording and integration with CRM systems for easy access to information

05

Clear Standard Operating Procedures at the level of Romania to be used and followed unitarily.
Procedures for information sharing between PHDs regarding available testing and hospital capacities.

06

Process visibility and Business Intelligence tools for management in order to priorities and adjust resources depending on needs and free capacities.



Challenges

Timeline

Characteristics

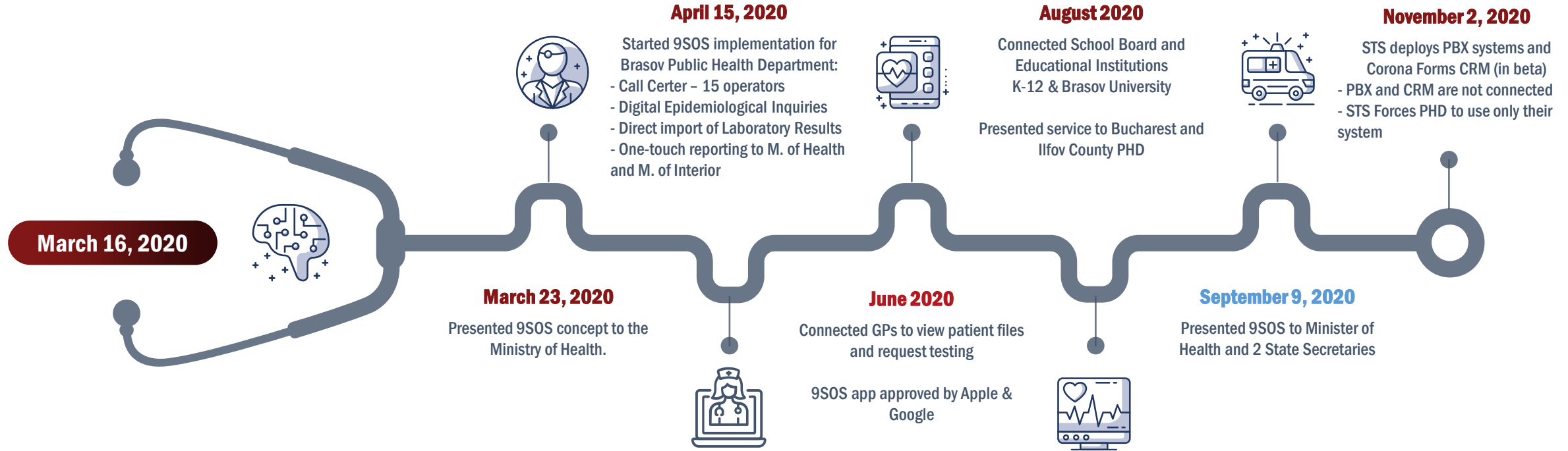
Partners

Timeline - COVID-19

03

A timeline of the coronavirus disease outbreak



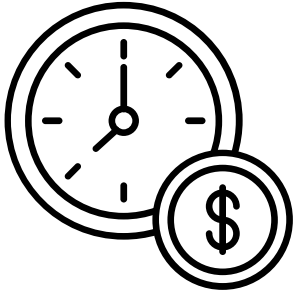


9SOS is presently in service at the Braşov County Public Health Department and managed over **22500 case files and over 50000 calls** since it was introduced.

All telephone calls were registered and traceable, with periodic usage reports for additional resource allocation.
 Calls were **answered in 60 to 90 seconds** from first ring.
 Conversation notes were taken for each call so **callers do not repeat themselves**.
 Operators have access to notes for faster solutions, updates and congruent response.

General Practitioners receive **secure communications** regarding their registered patients, **share documents** and can **request Covid specific testing** from the PHD.

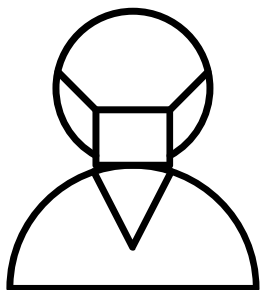
School/University Medical Assistants can view the list with Covid-19 affected employees, pupils and students – taking immediate measures to contain the outbreak.



Peak levels —

Four time horizons to consider when developing peak level estimations





Steps

Adapt to The New Normal

01

Digitalization of processes and document management flows in local institutions

02

Resource Management with BI

03

Keep Strong!
Stay safe!

03

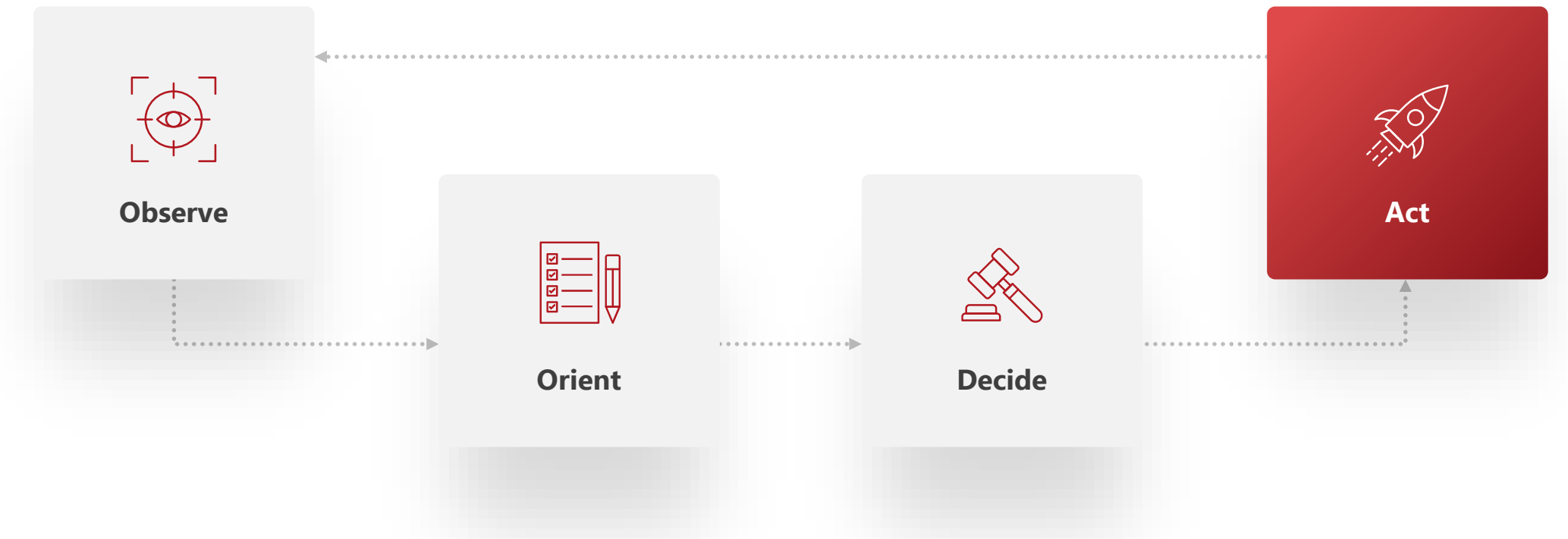


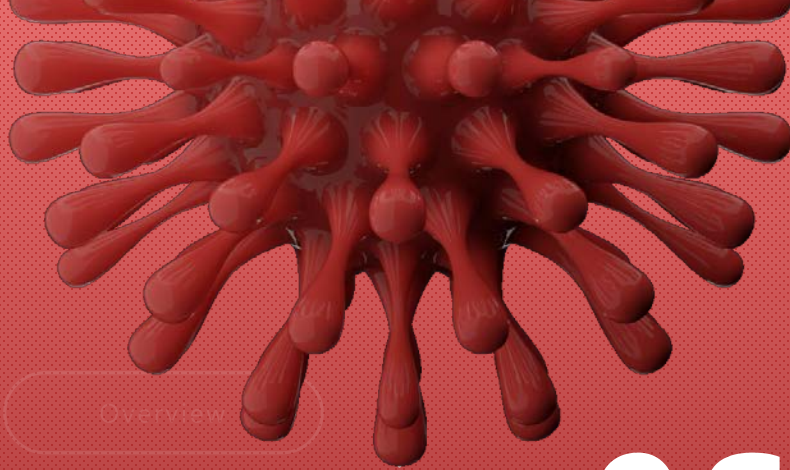
Digital Optimization

Most administrative services can be transferred online and individuals no longer need to stay in ques for paper documents.

Steps

Use The OODA Loop to Continuously Adapt Action Plans





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Partners

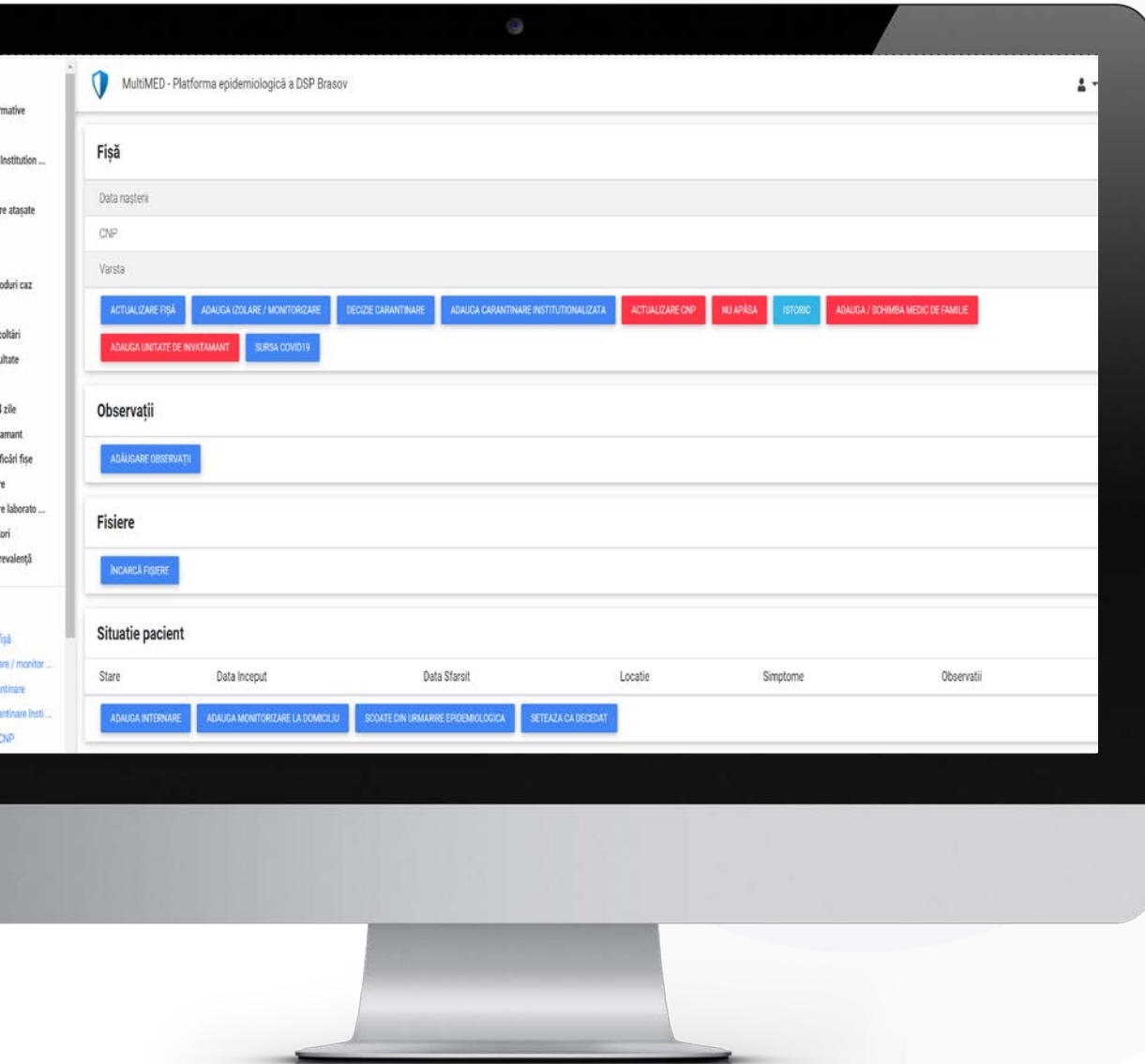
9SOS

Characteristics

Features, Evaluation, Testing and Monitoring for
Epidemiological Response and Management

04





Apps —

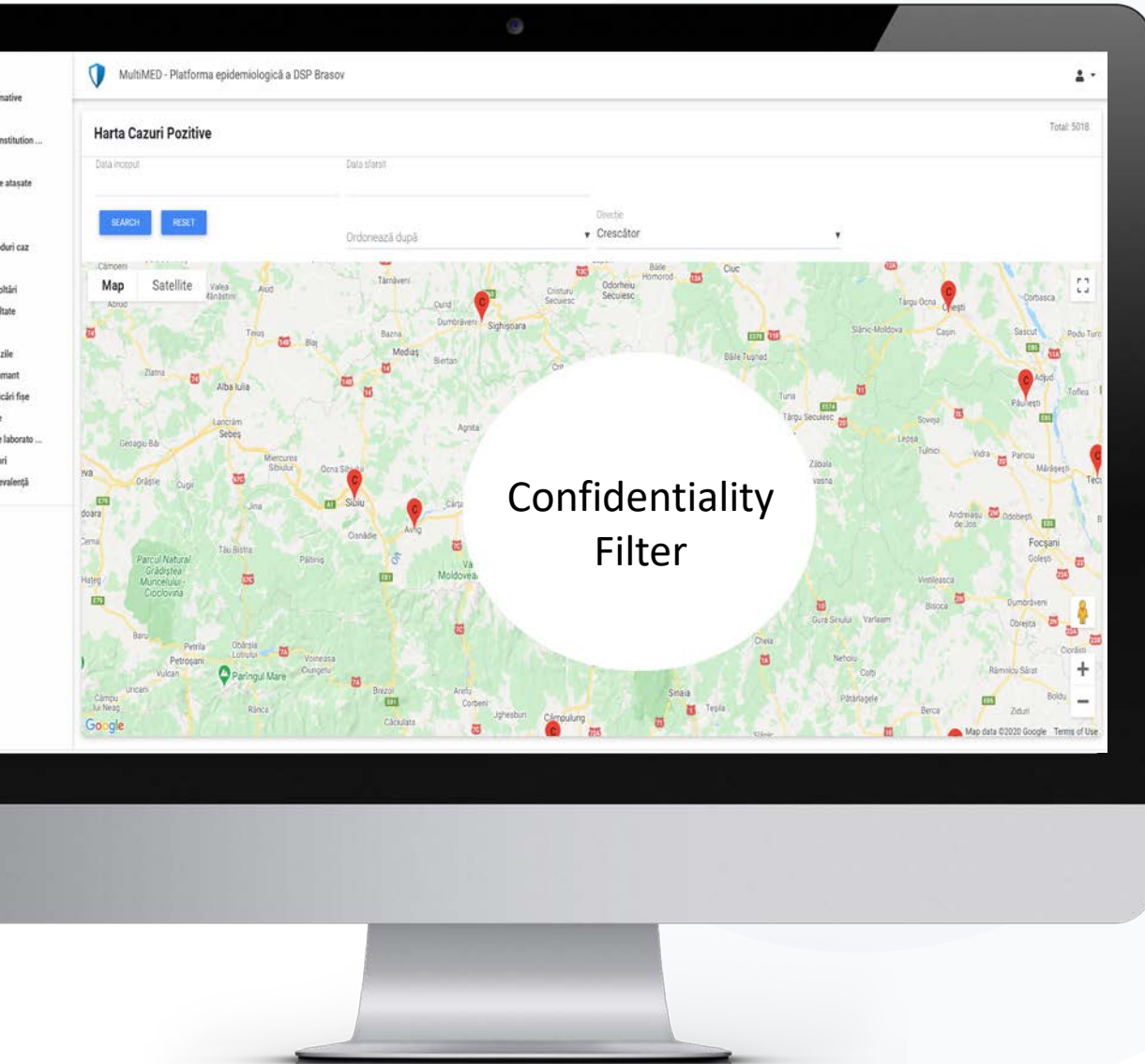
MultiMed – 9SOS Software

The best solution for managing the current outbreak and future ones.

MultiMed – 9SOS is the hub of the entire service with connections to the Professional PBX system, Lab and CoronaForms import data, accepts JSON objects from the mobile app.

The information is accessible with SSL and VPN to authorized personnel, depending on their level of access:

- Call center operators
- Epidemiologists
- PHD Management structures
- General Practitioners
- School Medical Assistants



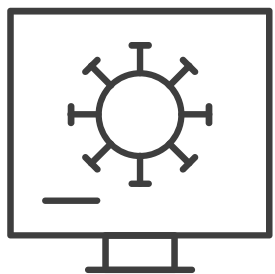
Apps

MultiMed – 9SOS Case Distribution Map

Each address is mapped geographically with pin point accuracy in real time. The Authorities can take action and manage the situation based on geographical spread.

The patient declared address is used to map each case and superimpose it over a geographical map, zooming in to street level and zooming out to county level.

Based on this data we can have time progressions and “animate” the outbreak’s movement through the territory.



Apps

Coronavirus Tracing Apps

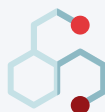
Application for tracking virus specific symptoms connected to Brasov County Health Department



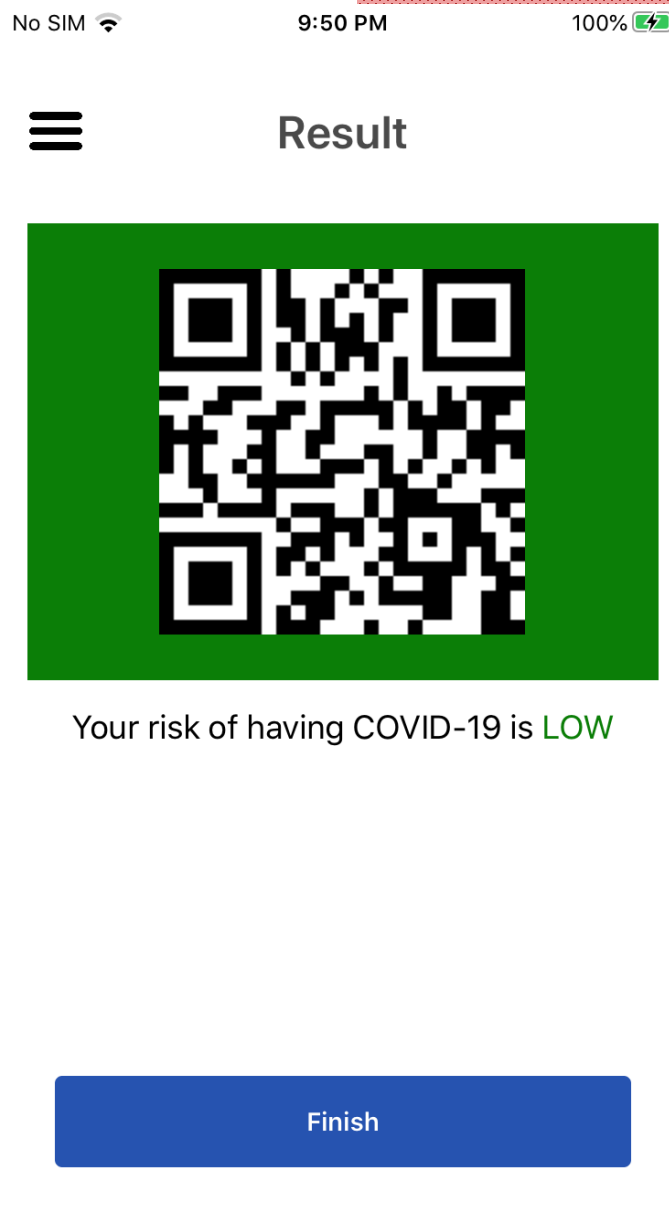
Tracing



Protect



Collect

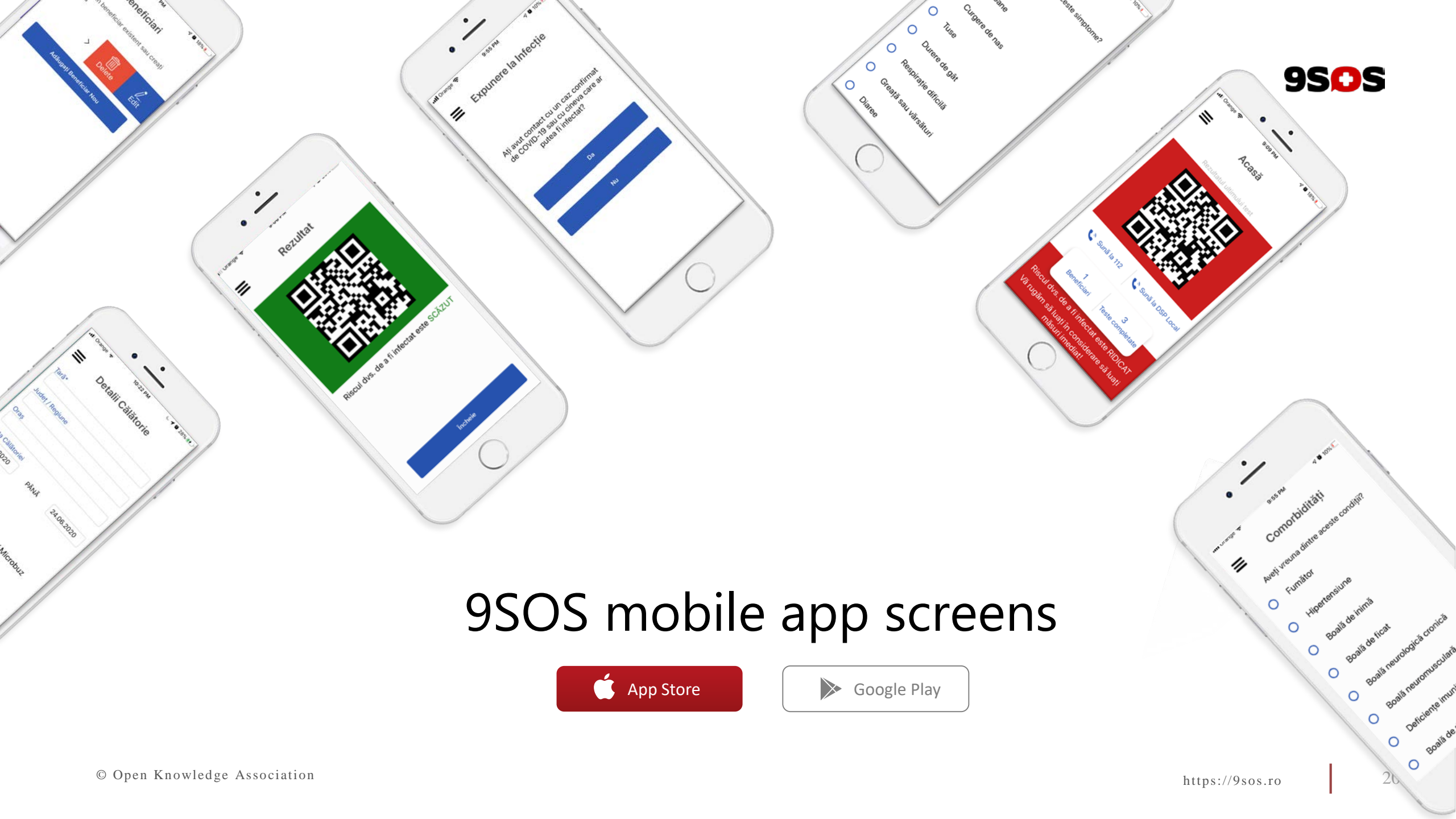


9SOS Apps

Find out to Learn More

<https://9sos.com>

The mobile app can be used for any type of outbreak, not just SARS-Cov-2 (Covid-19).



9SOS mobile app screens

 App Store

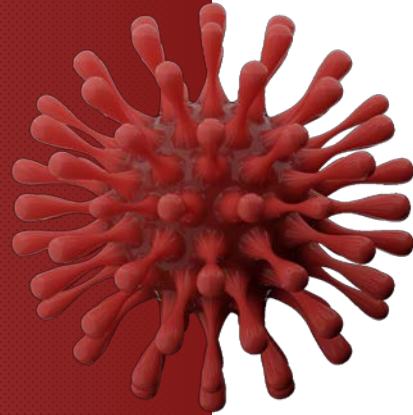
 Google Play

Overview

Characteristics

Partners

Contact



Characteristics

Input Data for Covid-19 Community Analysis

Structure of inputs from the community

Telephone Calls

General Practitioners

Lab Results

eMail

Social Media

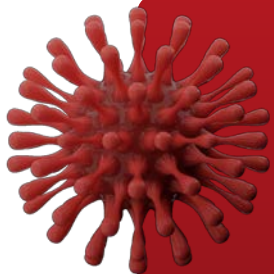
Assisted Care Homes

Dialysis & Radio/Chemotherapy
Centers

Mobile App

Telephone Call Features

98% of all interactions regarding the SARS-CoV-2 virus and Covid-19 are based on telephone calls from citizens who require medical aid and advice, legal interpretation of current legislation, status of legal formalities such as quarantine decisions and paid medical leave documents.



Why Phone Calls?

Most people have access to mobile telephone services and prefer to talk to a human regarding their condition and situation.

Due the high contagion rate, people feel that an instant response is better than to wait for a GP appointment or email reply.

**Symptom
Differentiation**

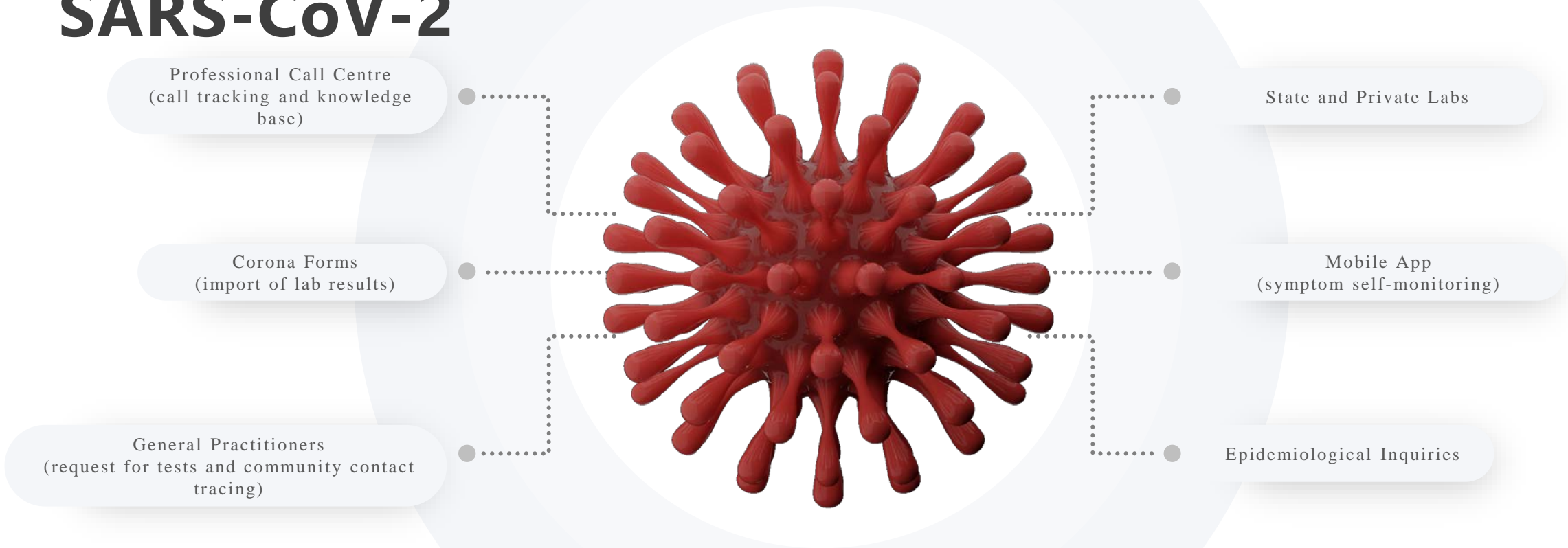
**Quarantine Status of
Patients / Travelers**

Test Result Inquiries

Emotional Distress

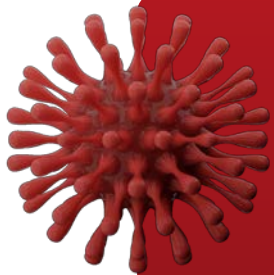
Characteristics

9SOS Data Inputs for SARS-CoV-2



Platform Characteristics

The 9SOS platform is a central data repository and communication platform for epidemiological events, used by the Local Public Health Department to manage the personal data of individuals affected by Covid-19, be they positives, suspects, direct contacts or persons that fit the vulnerable population criteria.



Data Sharing is KEY

Community transmission of viral events cannot be contained if the people on the ground do not have real-time, relevant data at their disposal.

Each authorized user should have access to limited information according to needs

01

Only the Local Public Health Department had access to collected information and reported to the Local and Central Authorities.

02

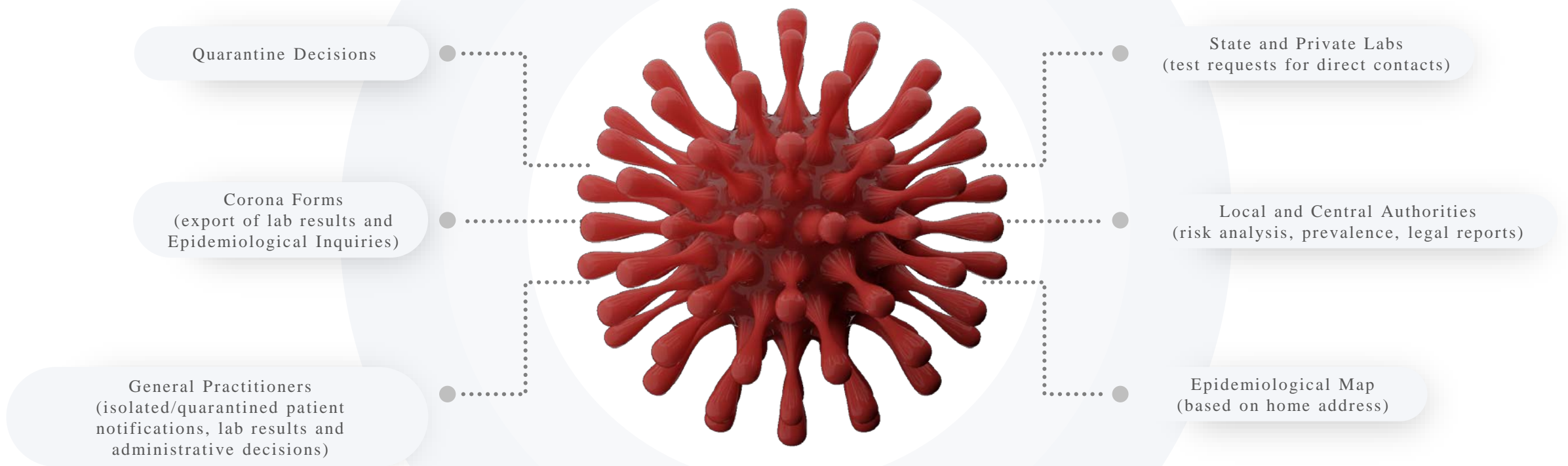
General Practitioners receive information about their registered patients, share documents securely and are able to request tests based on preliminary evaluations.

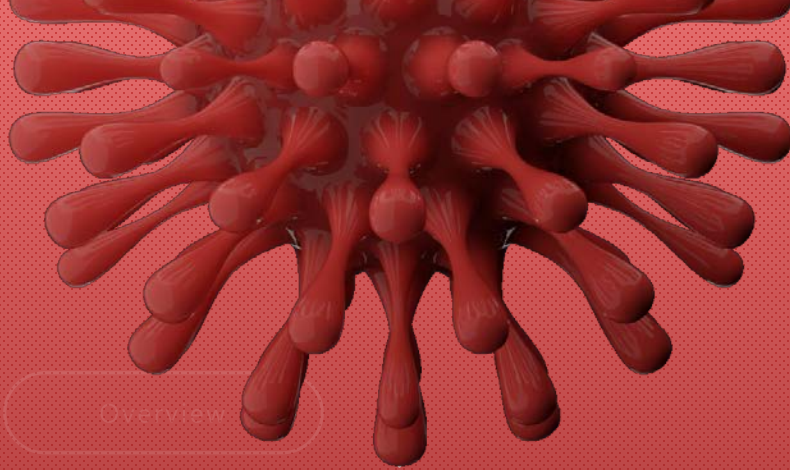
03

School Boards, Schools and Universities receive *limited* information about affected employees, registered pupils and students.

Characteristics

9SOS Data Outputs for SARS-CoV-2





Overview

Characteristics

Partners

Contact

Consortium 05 Members

Who are the founding partners?



Who are They?

A group of people who devote their time and energy to helping human civilization

RBL Task Force



Task force

Get In Touch

Contact Us

If you would like to find out more about how we can help you, please give us a call or drop us an email.

Gabriel Neculai Aftenie



+40 722 566 55



info@9sos.ro

Thank You