

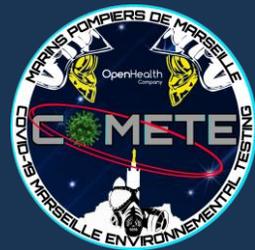
Covid-19 Variants Tracking in Communities Wastewater

Time for Action

Contre-Amiral Patrick AUGIER

Commandant le Bataillon des Marins-Pompiers de Marseille

COMETE Network
15th, March 2021
CONFIDENTIAL

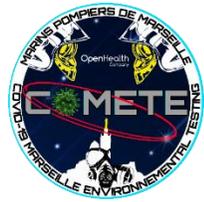


Agenda

- 1) The COMETE Network at a glance
- 2) Concrete success cases
- 3) Operational sequences
- 4) SaaS platform for real-time action
- 5) Deployment steps
- 6) Benefits of joining the COMETE Network



The COMETE Network at a glance



Founding members



- largest of the five elite units of the French civil security forces
- specialized in Nuclear - Radiological - Bacteriological - Chemical - Explosive risks (NRBCE)
- **>18'000 wastewater samples analysis during the Covid-19 outbreak**
- **expertise in sampling, filtration and extraction**
- **technical analysis capabilities** (including variant screening)
- specialized in aggregation, processing and literacy of **health data**
- **operating data monitoring for French Health Authorities** (HAS, ANSM) and international surveillance networks (GIHSN)
- **coordination and development of the network**,
- **real-time data platform**, hosted in Vannes (FR) on a highly secured site
- compliance with the French Data Protection Authority

A network focused on operational excellence – Associate members

BIOMERIEUX (Systems and reagents for first-line SARS-CoV-2 screening)

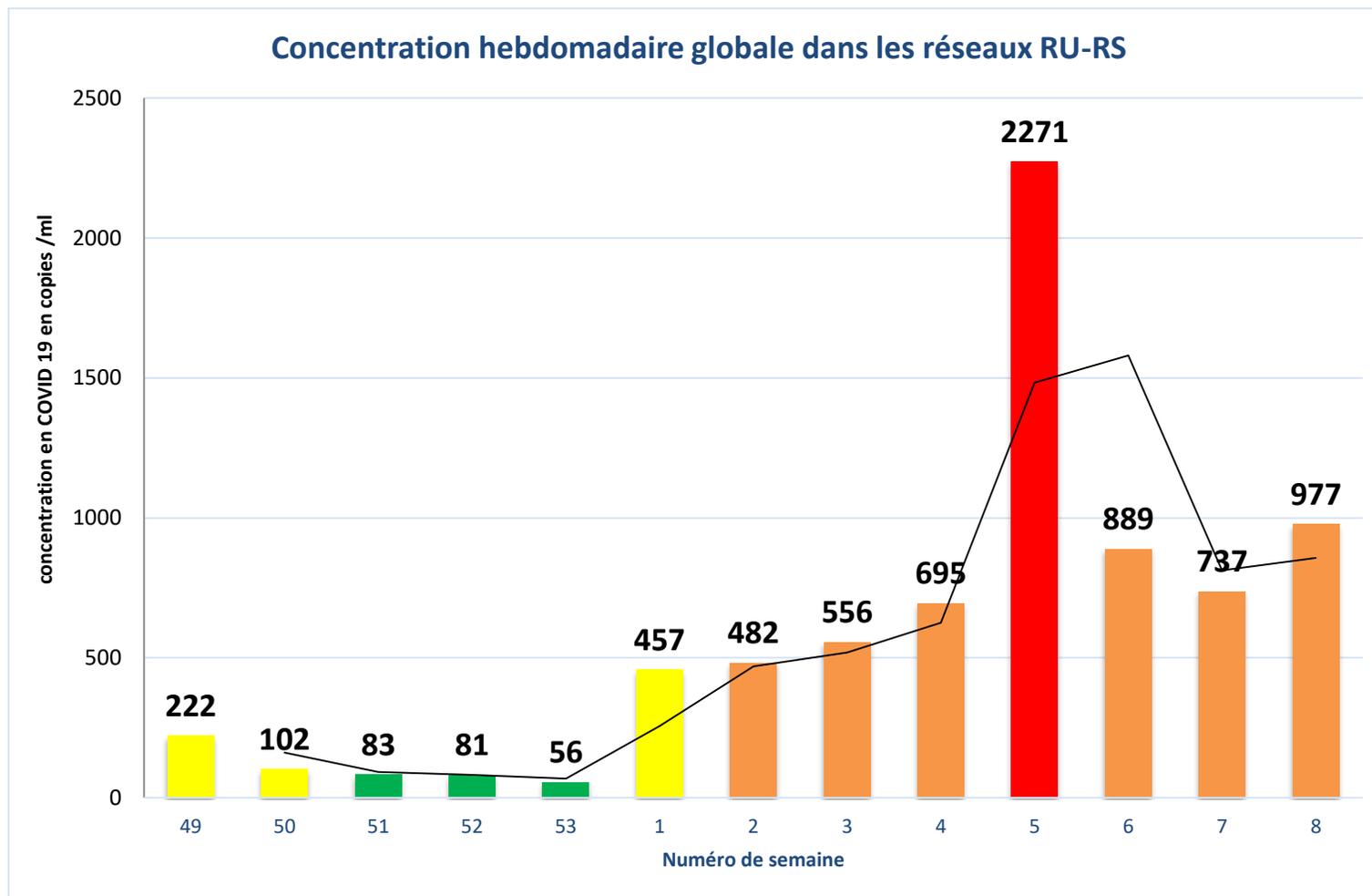
C4DX (Overflow analysis)

BIOSELLAL (Variants screening kits),

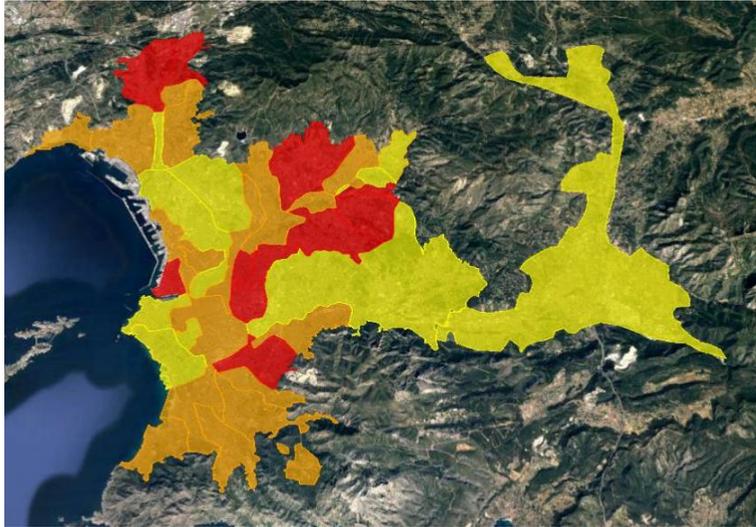
SICPA (data process integrity)

Some operations

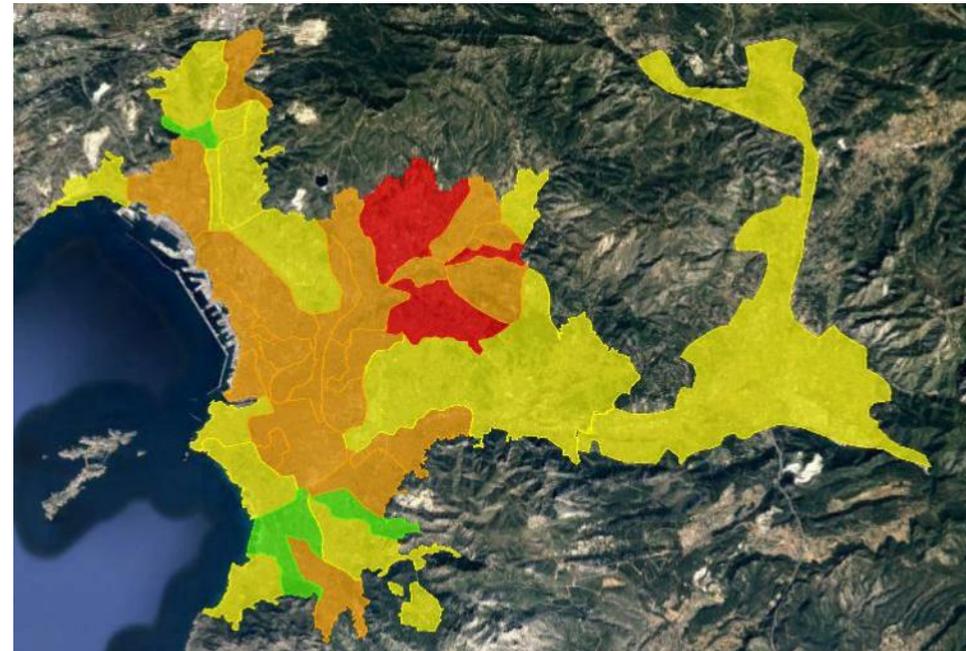
- Charles De Gaulle aircraft carrier decontamination
- Intervention on the pandemic front line in Moselle & Dunkerque



■ Niveau faible ■ Niveau modéré ■ Niveau élevé ■ Niveau très élevé



Concentration des eaux usées en virus SARS-CoV 2
par bassin versant, BMPM, 24/02/2021



Concentration des eaux usées en virus SARS-CoV 2 par
bassin versant, BMPM, 03/03/2021

 Niveau faible  Niveau modéré  Niveau élevé  Niveau très élevé

Concrete Success Cases of Clusters Avoided in “Sensitive” Sites



1- Cluster avoided in a nursing home in Moselle, France, within 48 hours.

- Day 1 AM : rescue intervention of French BMPM in high risk cities of the North-Est region, immediate sampling in wastewater plants for each district of the community.
- Day 1 PM : analysis and mapping of districts where the variants were circulating the most
- Day 2 AM : sampling of wastewater at sensitive sites in positive districts
- Day 2 AM : identification of contaminated sensitive sites, surface testing of areas inside the nursing home
- Day 2 PM : individual PCR testing of the population living or working in the contaminated areas.
- Day 2 PM : isolation of the unique individual who was positive to COVID-19, asymptomatic and super-spreader. Decontamination of the nursing home. Back to normal operation. Cluster avoided.

2- With the same method, a cluster was also avoided in a nursery in Marseille, France, and children were able to go back to school safely after 72 hours.

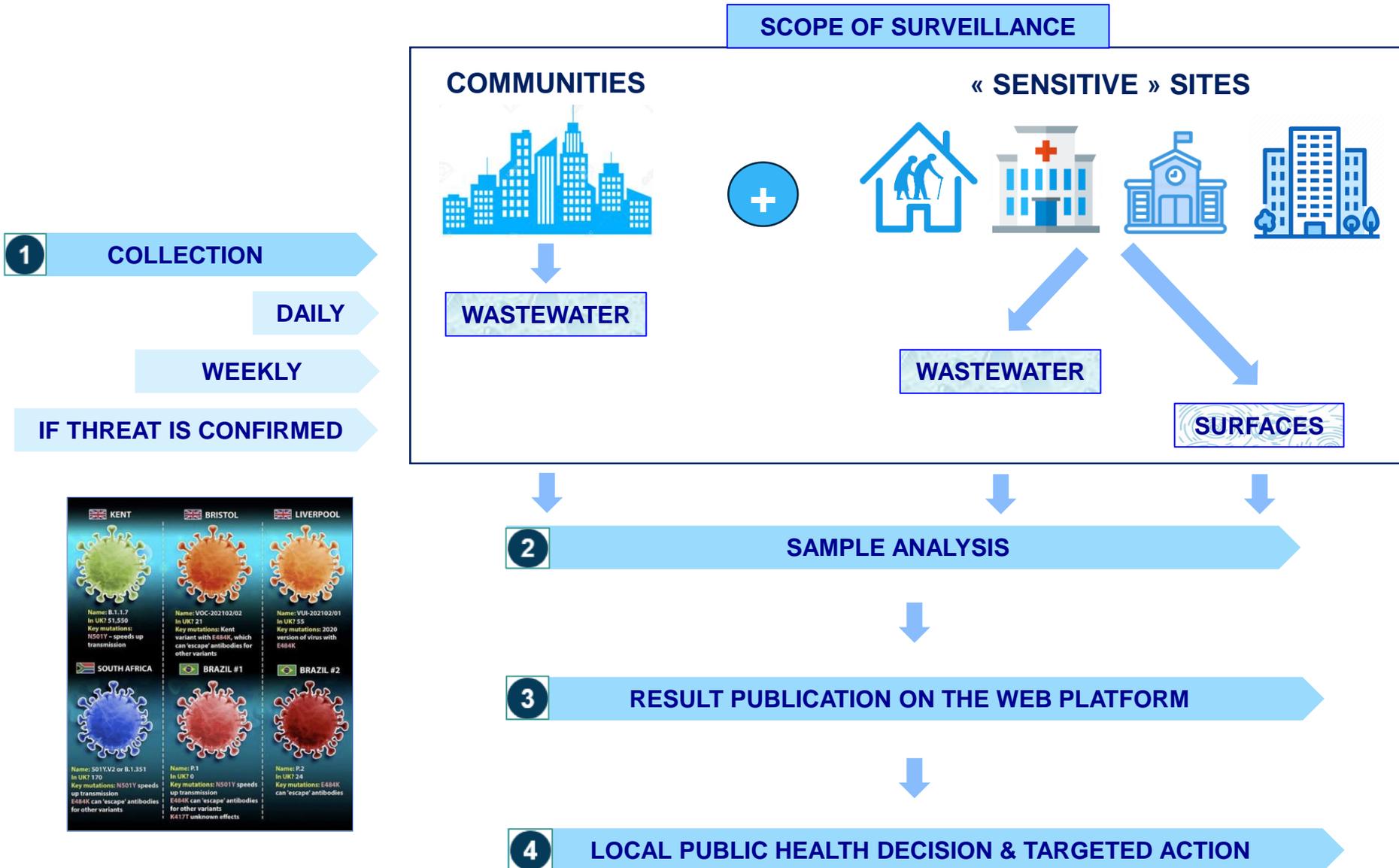
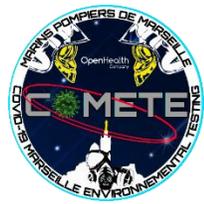


The following communities already joined the COMETE network and adopted the collective territorialized health monitoring system

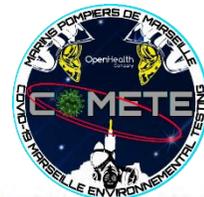
Cities : Marseille, Nice, Toulon, Dunkerque, Pau, Avignon, Briançon (France)

Regions : Dordogne, Morbihan (France)

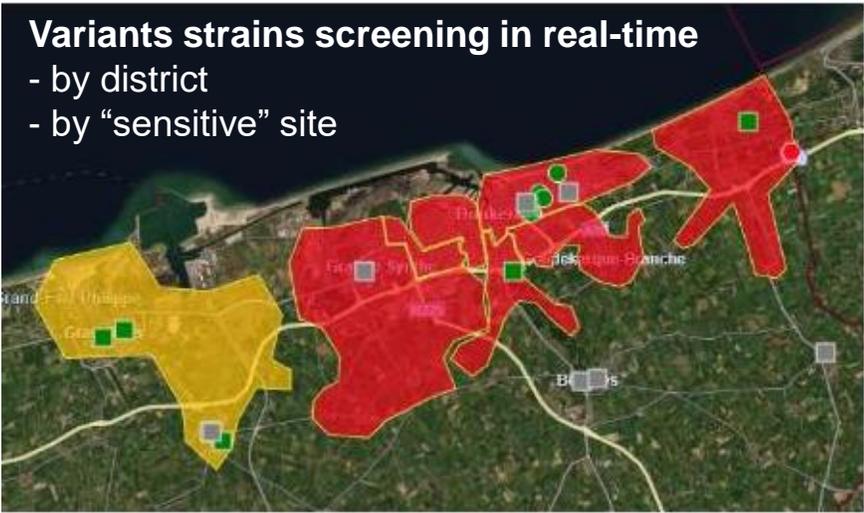
Operational Sequences of the COMETE Network Approach



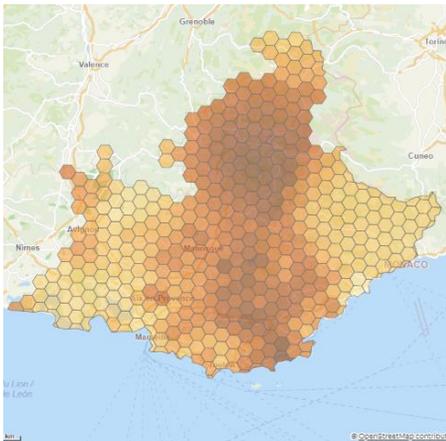
SaaS Platform for Real-Time Analytics & Cartographies



- Multiple explorable online dashboards & cartographies
- Results available in **day+1**
- Unlimited **access 24/7**, multi-users
- Documentation available to explain each dashboards & each indicator calculation method (**data literacy**)
- **Intuitive end-user interface**

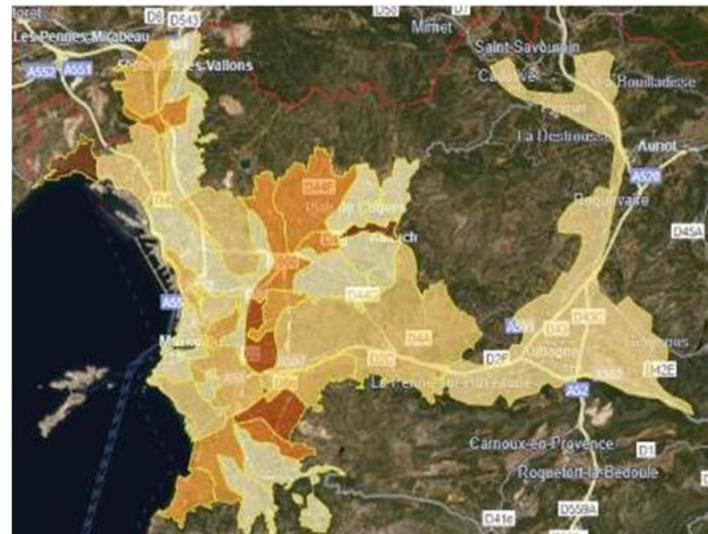


Integration & cross-reference of additional data sources (e.g. population data)

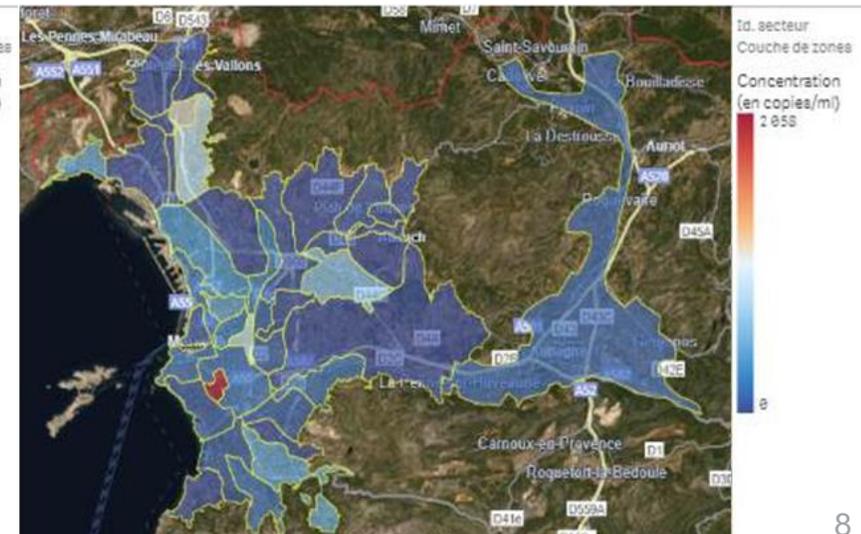


Daily tracking of variants strains in real-time by district (in Marseille, France)

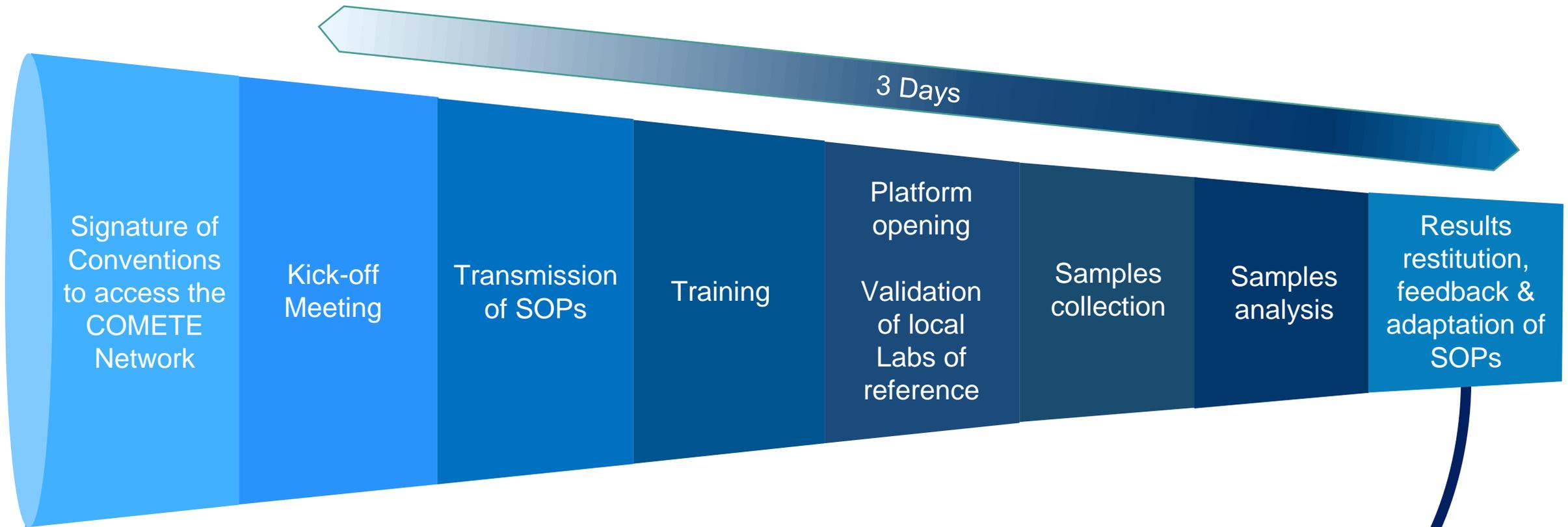
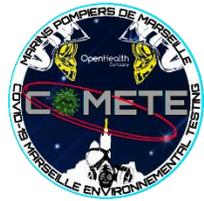
“Brazilian” and “South African” variants



“English” variant

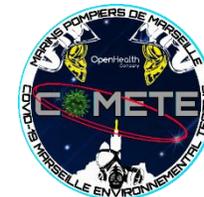


Deployment Steps of the System within a Few Days Only

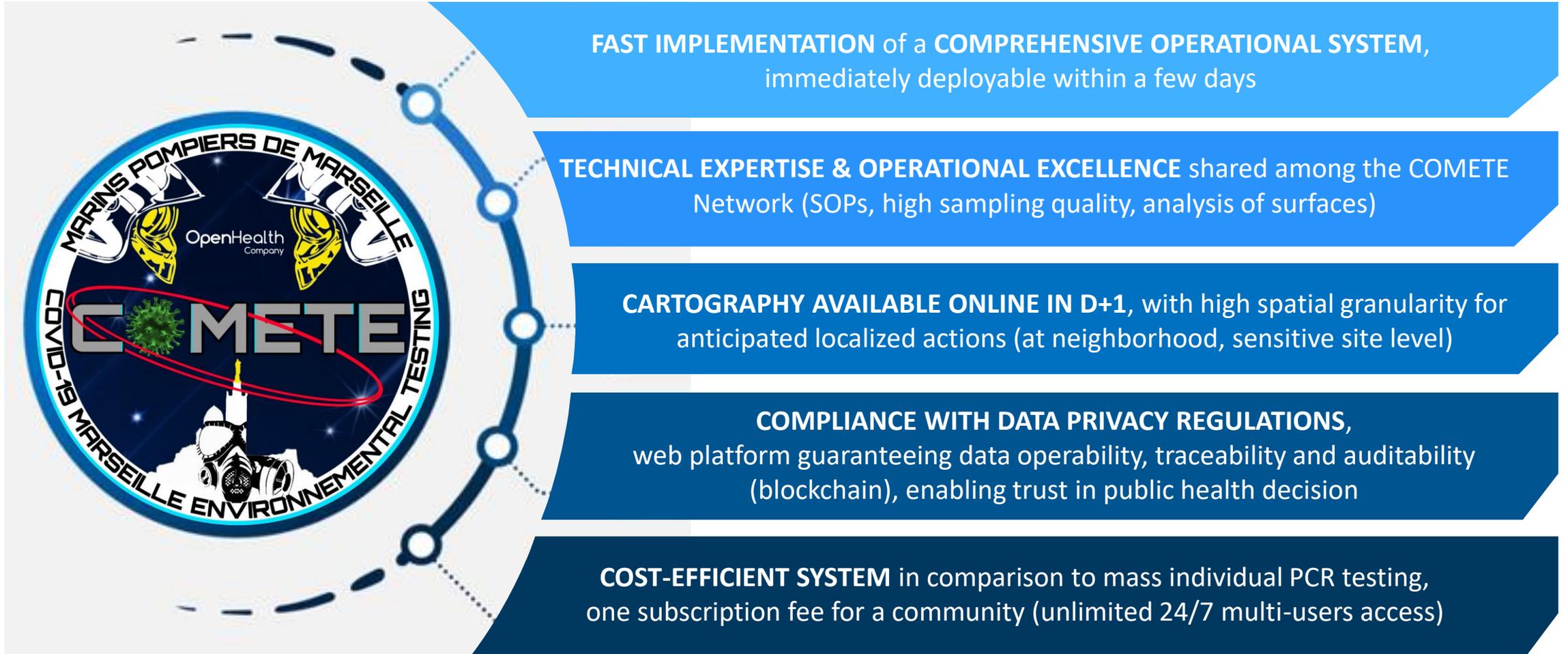
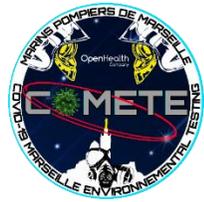


Activation of COMETE network's operational resources

- Training and continuous sharing of updated SOPs
- Qualification protocol of approved laboratories within the territory
- Guaranteed supply of variants screening kits on-demand.



Benefits of Joining the COMETE Network



Join us !



CONTACTS

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