



LE GOUVERNEMENT  
DU GRAND-DUCHÉ DE LUXEMBOURG  
Ministère de la Santé

Direction de la santé

**LARGE SCALE TESTING**

**WE  
ARE ALL  
PART OF THE  
SOLUTION**

**TESTING  
STRATEGY**

Version 1 - 05/10/2020

[www.covid19.lu](http://www.covid19.lu)



# TABLE OF CONTENT

---

<b>1. BACKGROUND</b> .....	<b>3</b>
<b>2. TESTING STRATEGY</b> .....	<b>5</b>
<b>2.1. Global Concept</b> .....	<b>5</b>
<b>2.2. Defining targeted populations under LST</b> .....	<b>5</b>
2.2.1. Highly Exposed Population – continuous tests .....	5
2.2.2. General Population - continuous tests .....	6
2.2.3. „Incoming“ Population – Random tests .....	6
2.2.4. Population “Clusters” (infection outbreaks) – Random tests .....	7
2.2.5. Serological tests .....	7



# 1. BACKGROUND

In order to control the spread of the COVID-19 virus and to ensure the safety of the population, the Luxembourg government has put in place a proactive pandemic mitigation strategy to accompany the deconfinement initiated on 11 May 2020. The main goal of this strategy is to screen both residents and cross-border workers to identify infected persons, particularly so-called asymptomatic people, and thus avoid a new wave of infections.

To do this, the Luxembourg government has set up a large-scale PCR (Polymerase Chain Reaction) testing system, the Large Scale Testing (LST), whose objectives are:

With a maximum theoretical capacity of **20,000** tests per day during Phase 1, a total of **1,520,445** invitations were sent, and **560,082** tests were carried out including **307,751** residents tested<sup>1</sup>.

In order to ensure the continuity of this screening system and pending a more sustainable solution to eradicate the virus (vaccine, medicine, etc.), the LST project has been extended for a second phase under the coordination of the Health Directorate for the period from 16 September 2020 to March 2021 with a maximum capacity of **53,000** tests per week. The second phase of LST is intended to be a more targeted and flexible tool with a flexible testing capability to react quickly to changing circumstances.



**Monitoring the evolution of the pandemic and adapting deconfinement measures accordingly;**

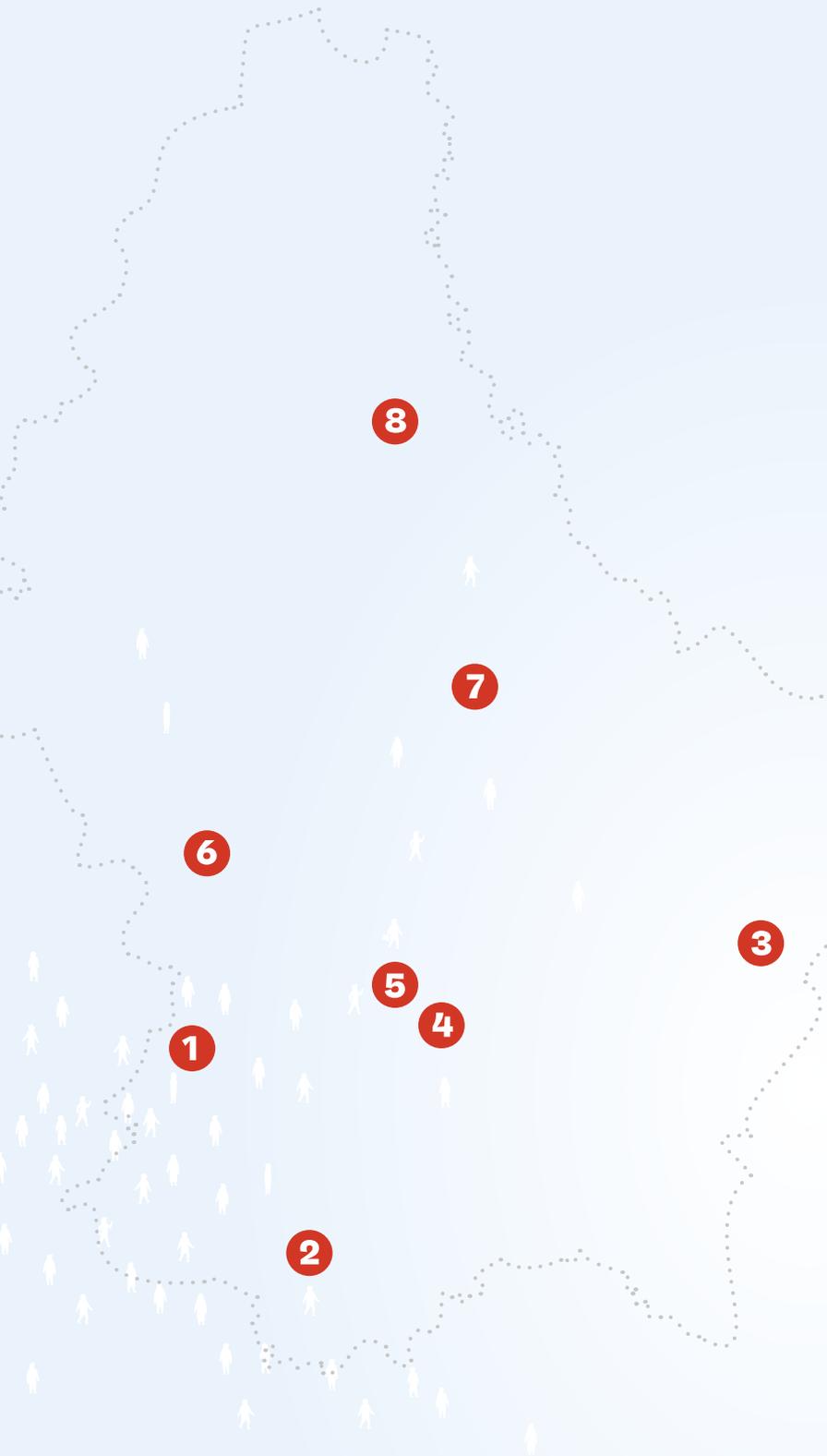


**The interruption of infection chains by the isolation of people who tested positive;**



**Improved understanding of the virus's functioning and transmission.**

<sup>1</sup> [https://gouvernement.lu/fr/actualites/toutes\\_actualites/communiqués/2020/09-septembre/14-large-scale-testing.html](https://gouvernement.lu/fr/actualites/toutes_actualites/communiqués/2020/09-septembre/14-large-scale-testing.html)



The weekly capacity of **53,000** tests is thus spread over

**EIGHT TEST CENTRES** accessible by appointment on MyGuichet:

- 1 BASCHARAGE**
- 2 ESCH-SUR-ALZETTE**  
(PARKING ROND-POINT RAEMERICH)
- 3 GREVENMACHER**
- 4 HOWALD**
- 5 LUXEMBOURG (P AND R BOUILLON)**
- 6 STEINFORT (P AND R)**
- 7 SCHIEREN – COLMAR**
- 8 PARC HOSINGEN**

**A TEST STATION AT LUX-AIRPORT** accessible for all travellers arriving in Luxembourg.

**A MOBILE TEAM** consisting of a bus and a van that will go directly to certain institutions (e.g., care homes, homes for international protection applicants, etc.) according to a defined program but which can also be deployed quickly and systematically to test a cluster that has been identified.

In order to support the implementation of the programme over a total of 27 weeks, a coordination team was set up, supported by a communications team, a dedicated hotline and a team specialising in data analysis.



## 2. TESTING STRATEGY

### 2.1. GLOBAL CONCEPT

Through both global and targeted screening, **LST 2** aims to detect asymptomatic cases and infection clusters in order to break the chains of transmission of the virus amongst the population. LST is not intended to evaluate individual prevalence or proceed to individual detection. As a result, although participation in the program is voluntary, only those with a personal invitation (via a letter or code) will be eligible for testing within LST.

The test strategy is thus more structured and relies on the segmentation of the population into different categories (cf. 2.2.).

The test strategy is validated by a steering committee and is updated on a regular basis as the pandemic progresses.

### 2.2. DEFINITION OF TARGETED POPULATIONS UNDER LST

The test strategy is based on the invitation to PCR testing for four types of population:

#### 2.2.1. Highly exposed population - continuous testing

- These tests target the population most exposed to the virus with a high risk of spread and acute consequences. This population will be tested on a regular basis during the 27 weeks of the program.
- A test frequency was defined for the type of population called “particularly exposed.” This can be reviewed as the situation evolves.
- This population includes doctors, care staff, care home clients, CGDIS, police, teachers, students, the Horesca sector, etc.



### 2.2.2. General population - continuous testing

- The so-called „general“ population includes Luxembourg residents as well as cross-border workers registered in the National Register of Physical Persons (RNPP).
- Different variables are used to select samples from the general population every week (e.g. age group, place of residence, economic sector, etc.).
- People who may also be in one of the so-called „particularly exposed“ population categories are systematically excluded from samples of the general population in order to avoid duplicates and multiple invitations over the same week.
- The objective of these tests is to continuously observe and monitor the prevalence and spread of the virus in the population. The selection of people to be tested is carried out via households which is an effective way to monitor a group of people continuously without testing each person individually. A person from a tested household thus represents the state of that household.
- By carrying out a large number of PCR tests per week in the general population, the aim is also to be able to identify asymptomatic people and possible clusters of infection (in a commune, an economic sector, a company, etc.).
- In the event that a „cluster“ is identified, a test capability will be heavily invested in testing the cluster in question.

### 2.2.3. “Incoming” population - Random tests

The “incoming” population in Luxembourg includes people returning from holidays or business trips abroad and seasonal workers.

- Testing incoming travellers allows the virus to be monitored and controlled on Luxembourg.
- Travellers arriving at the airport have the opportunity to be tested on site using flyers that are distributed at the airport. Travellers arriving at the airport with a CNS number will also have the option to make an appointment at another test station on the website **[www.covid19.lu](http://www.covid19.lu)**
- Travellers with a CNS number arriving in Luxembourg (by bus, car, train) have the opportunity to apply for an individual test and make an appointment on the website **[www.covid19.lu](http://www.covid19.lu)**
- The contact tracing (made by the Health Inspection Department of the Health Directorate) of this population is facilitated by flight information, seat information on planes, etc.



#### **2.2.4. „Clusters“ of population (infection outbreaks) - Random tests**

- The Health Directorate, which is responsible for contact tracing (identification and management of people who have been exposed to the virus), plays an important role in the detection of clusters. Thus, by combining tracing and testing Luxembourg can better identify clusters and be more reactive to limit the spread of the virus. In this context, the time it takes to pass on results plays a key role. Under LST, the average time to transmit test results is 24 hours, which allows for effective response and rapid break-up of infection chains.
- The outbreaks identified must be tested quickly (this may be communes/cantons, economic sectors, age groups, etc.).
- Preventive studies or campaigns can also be put in place, such as testing students before classes resume.
- Tests on the general population are also essential for identifying clusters.
- Mobile testing capabilities can be mobilised for this type of population in case of emergency.

#### **2.2.5. Serological tests**

In addition to the PCR tests, serological tests will also be carried out on a sample of the general population and by invitation. The purpose of serological tests is to answer the questions „Have I been in contact with the virus?“ or „Have I been infected with the virus in the past?“. Unlike PCR tests, these tests are not of direct use for the diagnosis of acute infection but indicate previous exposure to the virus with a specific immune response directed against SARS-CoV-2 virus (responsible for COVID-19). Based on current medical knowledge, a positive test does not indicate the presence of SARS-CoV-2 immunity. Studies underway at the global level are trying to find an answer to this question. Serological tests are currently done with a blood test.

The selection strategy for serological tests will be similar to that for the general population, i.e. the objective will be to invite representative samples of the population and monitor different households. The expected capacity is 1000 tests per week.

Samples for serological tests will be taken at sites other than those in use for PCR test samples. The test centres for serology will be communicated shortly.

