

# COVID-19 INNOVATION REPORT

In Partnership with:



MOSCOW  
AGENCY OF  
INNOVATIONS

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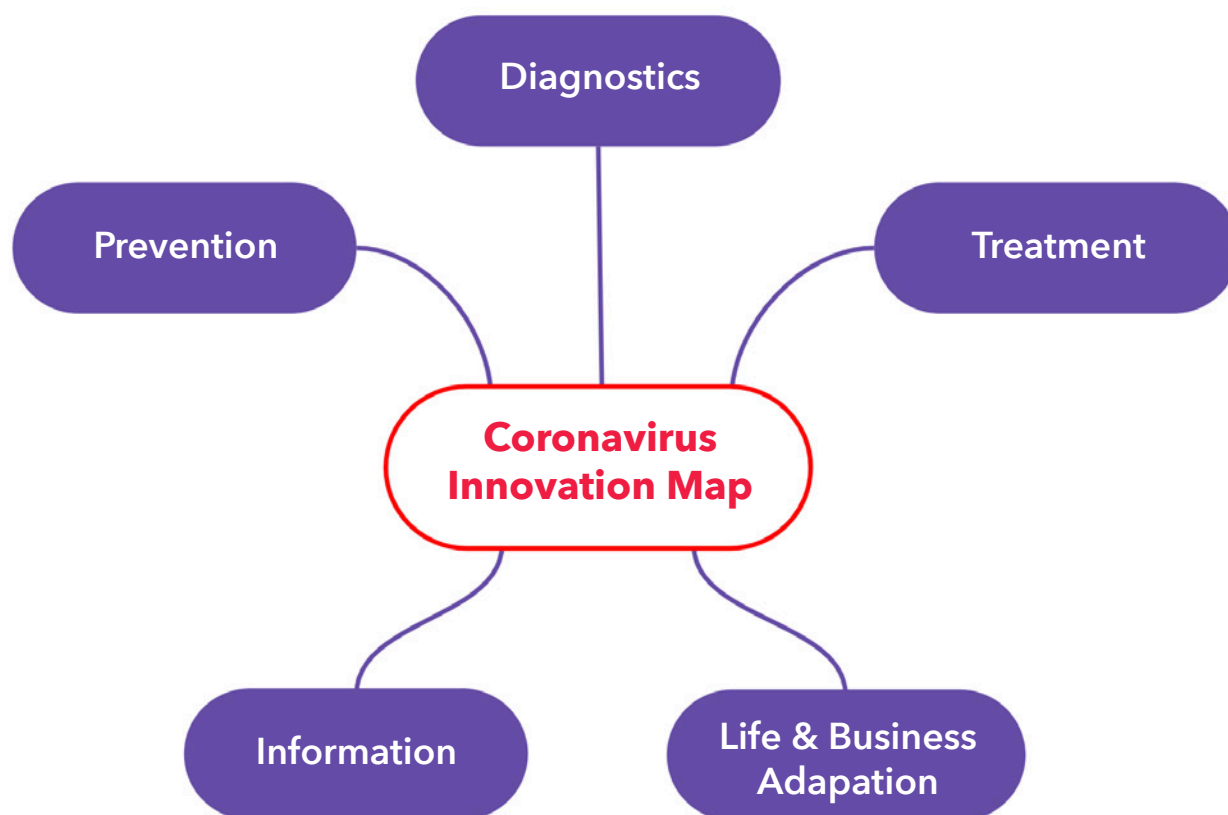
# Introducing the COVID–19 Innovation Report

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The insights shared in the Coronavirus Innovation Report are based on a joint effort which started in March 2020 to build a comprehensive [global map showcasing the solutions](#) created to face the COVID–19 challenge.

*The Coronavirus Innovation Map is a visual global directory of more than a thousand projects aimed at helping people cope and adapt to life during the crisis. The map was created with the intention of helping innovators to cooperate and build solutions faster.*

Projects are presented in different categories, such as potential vaccines, prevention innovations, diagnostics, treatments, grants, and lifestyle adaptation. A special section on the map features Champion projects that have made or are projected to make a massive impact during this crisis.



The data gathered on the map is crowdsourced, curated by the founding partners (HIEx by UNAIDS, StartupBlink and the Moscow Agency of Innovation), and enhanced by data provided by dozens of municipalities, governments, and economic development corporations around the world.

We believe that knowledge resources such as these would help the world to face similar challenges in the future more quickly and efficiently.

Based on the data gathered on the map, we created an algorithm which measures specific COVID-19 innovation across cities and countries globally. The following tables celebrate the countries and cities that have gone above and beyond during this crisis, producing inspiring projects to the benefit of their local community and contributing to solutions for this crisis around the world.



This report is structured as follows: Firstly, we will introduce the results for the rankings in the form of tables for the top 32 countries and 80 cities. We will then go over the key insights from the rankings, and offer case studies of the 32 countries that are ranked in our report.

Please note that the innovations presented in each country are not endorsed by the writers, and just like any other innovative solution or startup may or may not be successful.

The sources of the information for the country case studies are as follows:

- The population and GDP are from the [World Bank](#) (2018).
- The rankings, categories, and the innovations are sourced from the Coronavirus Innovation Map (2020).

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## Methodology

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Adapted from the [StartupBlink](#) annual [Global Startup Ecosystem Rankings](#), this report uses a simplified approach and a smaller sample to measure innovation specific to the COVID-19 pandemic. The ranking algorithm considers the number and type of innovations in each city and country with extra points given for selected outstanding initiatives, identified as the **Champions**.★ The projects which comprise the basis of this analysis were reviewed with strict criteria in mind, ensuring that only the most relevant and useful innovations are considered.

An initial version of the rankings based on 500 projects was published in the end of March, and the current version of the rankings shared here is based on an updated iteration taking into account more than **1,000** projects.

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# Foreword

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by Pradeep Kakkattil,  
Director, Office of Innovation



The UN Secretary General António Guterres, in his statement, called the COVID–19 pandemic one of the ‘most dangerous challenges’ the world has faced. This virus is unprecedented in our lifetime and requires an unprecedented response. We cannot resort to the usual tools in such unusual times - our response must match the unique nature of the crisis.

COVID–19 continues to challenge not only global health but threatens our collective progress towards sustainable development goals. We need to draw on human creativity, ingenuity, and innovation to defeat this virus and at the same time build resilient health systems for the future. Health sector innovators have risen to the challenge by finding new solutions or rapidly repurposing their existing solutions to respond to the challenges of COVID–19. Several of the innovations mapped by StartupBlink provide evidence of the commitment and resourcefulness of our innovators to not only beat the virus but to build enduring and equitable health systems.

The UNAIDS Health Innovation Exchange has partnered with StartupBlink to help identify innovations that can be transformative, and works to facilitate countries’ access to these technologies, innovations, and capacities to effectively respond to COVID–19. This will require identification of pain points faced by ministries of health in their COVID and broader health response, enabling a constructive dialogue between innovators and implementers. It will also require investments that are flexible and willing to tolerate risks as some of the new approaches may well fall short.

We have seen unprecedented investments for the COVID response - from vaccine research to addressing rights - from governments to foundations to the private sector and individuals. These investments will certainly help some of these solutions create impact on scale. However, we should not make the mistake of focusing our attention too narrowly on COVID–19 and ignore broader health challenges. Our gains over the last several decades on health are still fragile, and COVID–19 could easily undermine decades of progress. We need to use this time to focus our attention and resources on building resilient systems for health.

There is also an urgent need to invest in innovation ecosystems to carry them through this crisis. Startups across the globe are already feeling the pressure of the economic fallout of the COVID crisis, and the fledgling innovation ecosystems that have been established over several years will be impacted negatively as global investments for innovations, particularly in Africa and Asia, become significantly reduced.

*We believe that the world will emerge stronger and will use this crisis to leverage and build better and stronger systems for health - where we will bring the best of human ingenuity and innovation to work for all.*

But in the meantime, we cannot afford to take our eyes off the ball - lessons from public health have shown us that if we blink, the virus wins.

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## Key Insights from the Rankings

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- This updated ranking iteration confirms our observations that some cities that have been badly hit by the pandemic; New York, Milan, Brussels, and Barcelona have been over-performing in the charts. This is counterintuitive, since these cities faced a major crisis, but still managed to excel and innovate. Based on the results, we foresee a potential Renaissance of startup ecosystems in locations like Milan and Brussels.
- We also see strong positions held by locations that are relatively unscathed by the pandemic, like Taipei and Singapore, as they focus on innovative approaches and policies that could be adapted by other cities.
- The United States leads global coronavirus innovation efforts, while Israel and Canada, ranked 2nd and 3rd, both beat their own positions in the global startup ecosystem rankings.
- As for the top 10 countries ranking, we have been particularly impressed by the success of Belgium, Switzerland, Estonia, Italy, and Ireland, where local entrepreneurs mobilized in the face of the pandemic. Although the top twenty countries list is dominated by Europe and North America, some of the most promising coronavirus innovations are also emerging in Asia (Singapore, China, Taiwan, South Korea) and Australia, which appear in the second half of the top 20 rankings.
- Also worth mentioning is Kenya, the highest placed African country in the Coronavirus rankings, showing its true potential in the face of a crisis. Two other local innovation leaders in Africa, Nigeria and South Africa, are showing excellent responses to the crisis on the continent.
- In the city rankings, San Francisco has taken the top spot on the list of most innovative cities combating coronavirus, matching its position in our Global Ecosystem Report.
- San Francisco is joined by two other US cities on the podium: New York and Boston. New York, known mostly for its Fintech startups, managed to take the second spot. The city's response and adaptation to the effects of the Coronavirus crisis have been outstanding considering that it has been one of the worst-hit areas in the world; we believe this is exactly why they're excelling. Boston, on the other hand, is historically known for having great health-related startups. This tendency shows, as it closely follows New York to take third in the rankings.
- Toronto is featured in the fourth spot, which is a much higher score compared to where we see it in the general rankings (24th), revealing the true potential of this Canadian city. Toronto is followed by Tel Aviv at 5th, a slight increase over its position compared to the global rankings, where it placed 7th.
- Seattle takes 7th place, higher than its global ranking, perhaps for the severity of the crisis in this highly innovative city. San Diego, known for its healthcare startups, is 8th, closely followed by the neighboring Los Angeles featured at 9th.
- Closing the Top 10 we have Taipei City, which is an example of how well Taiwan is doing in dealing with this crisis. Taiwan is leading in public policy measures to effectively deal with the pandemic, and their innovators are also overperforming in this crisis.

# Coronavirus Innovation Countries Rankings



Rank	Country	Total Score
1	<a href="#">United States</a>	11.792
2	<a href="#">Israel</a>	4.460
3	<a href="#">Canada</a>	3.650
4	<a href="#">Belgium</a>	3.646
5	<a href="#">Switzerland</a>	2.797
6	<a href="#">United Kingdom</a>	2.117
7	<a href="#">Estonia</a>	2.049
8	<a href="#">Italy</a>	1.790
9	<a href="#">Ireland</a>	1.750
10	<a href="#">Spain</a>	1.647
11	<a href="#">Singapore</a>	1.602
12	<a href="#">Germany</a>	1.586
13	<a href="#">China</a>	1.431
14	<a href="#">Croatia</a>	1.380
15	<a href="#">Denmark</a>	1.314
16	<a href="#">France</a>	1.180
17	<a href="#">Taiwan</a>	1.120
18	<a href="#">Finland</a>	0.911
19	<a href="#">South Korea</a>	0.848
20	<a href="#">Australia</a>	0.815
21	<a href="#">Sweden</a>	0.789
22	<a href="#">Poland</a>	0.620
23	<a href="#">Kenya</a>	0.488
24	<a href="#">Netherlands</a>	0.452
25	<a href="#">Japan</a>	0.450
26	<a href="#">India</a>	0.376
27	<a href="#">Russia</a>	0.368
28	<a href="#">Portugal</a>	0.359
29	<a href="#">Philippines</a>	0.274
30	<a href="#">Brazil</a>	0.177
31	<a href="#">Nigeria</a>	0.170
32	<a href="#">South Africa</a>	0.145

# Coronavirus Innovation Cities Rankings



Rank	City	Total Score
1	San Francisco Bay, United States	11.817
2	New York, United States	4.983
3	Boston Area, United States	4.217
4	Toronto, Canada	3.077
5	Tel Aviv Area, Israel	2.849
6	London, United Kingdom	2.333
7	Seattle, United States	1.950
8	San Diego, United States	1.950
9	Los Angeles Area, United States	1.783
10	Taipei City, Taiwan	1.689
11	Washington DC Area, United States	1.683
12	Antwerp, Belgium	1.668
13	Milan, Italy	1.652
14	Paris, France	1.619
15	Zurich, Switzerland	1.435
16	Singapore City, Singapore	1.396
17	Moscow, Russia	1.324
18	Brussels, Belgium	1.246
19	Atlanta, United States	1.215
20	Barcelona, Spain	1.174
21	Munich, Germany	1.161
22	Nairobi, Kenya	1.133
23	Beijing, China	1.050
24	Austin, United States	1.035
25	Vancouver, Canada	1.030
26	Dublin, Ireland	1.005
27	Seoul, South Korea	0.962
28	Basel, Switzerland	0.958
29	Madrid, Spain	0.913
30	Ghent, Belgium	0.890



# Coronavirus Innovation Cities Rankings



Rank	City	Total Score
31	Berlin, Germany	0.849
32	Tallinn, Estonia	0.823
33	Denver, United States	0.765
34	Hangzhou, China	0.727
35	Portland, United States	0.720
36	Raleigh Durham, United States	0.720
37	Montreal, Canada	0.717
38	Helsinki, Finland	0.715
39	Haifa, Israel	0.702
40	Bangalore, India	0.677
41	Chicago, United States	0.675
42	Redmond, United States	0.675
43	Kitchener Waterloo, Canada	0.672
44	Shenzhen, China	0.646
45	Cincinnati, United States	0.630
46	Stanford, United States	0.585
47	Miami Area, United States	0.585
48	Lagos, Nigeria	0.560
49	Zagreb, Croatia	0.546
50	Burlington, United States	0.540
51	Leuven, Belgium	0.534
52	Vienna, Austria	0.528
53	Sydney, Australia	0.495
54	Sao Paulo, Brazil	0.490
55	New Delhi, India	0.478
56	Copenhagen, Denmark	0.460
57	Minneapolis, United States	0.450
58	Ottawa, Canada	0.448
59	Stockholm, Sweden	0.414
60	Oslo, Norway	0.407

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# Coronavirus Innovation Cities Rankings

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Rank	City	Total Score
61	Salt Lake City, United States	0.405
62	Philadelphia, United States	0.405
63	Tunis, Tunisia	0.399
64	Manila Area, Philippines	0.388
65	Piedmont, Italy	0.386
66	Tokyo, Japan	0.315
67	Geneva, Switzerland	0.274
68	Madison, United States	0.270
69	Canberra, Australia	0.270
70	Calgary, Canada	0.269
71	Budapest, Hungary	0.256
72	Lisbon, Portugal	0.255
73	Mexico City, Mexico	0.244
74	Hong Kong, China	0.242
75	Quito, Ecuador	0.232
76	Edinburgh, United Kingdom	0.178
77	Jerusalem, Israel	0.132
78	Trieste, Italy	0.129
79	Cape Town, South Africa	0.120
80	Kampala, Uganda	0.113

# 1 | USA

## General Information



**Population:**  
**326.7 million**



**GDP Per Capita:**  
**\$62,886**



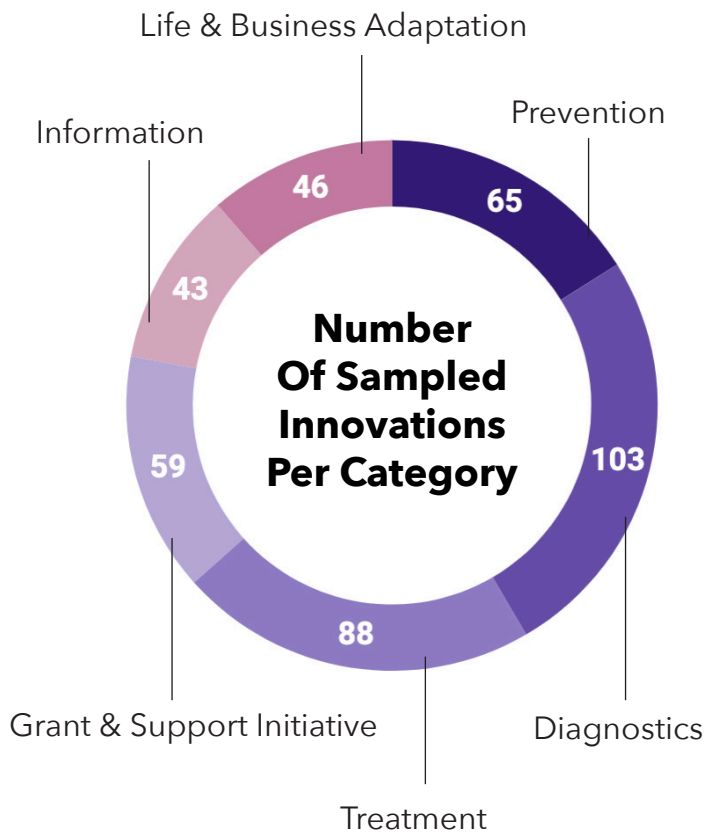
**Cities Rankings:**

San Francisco Bay: **1st**

New York: **2nd**

Boston: **3rd**

Seattle: **7th**



## Grants

- ➔ **The Gadfly Project:** The Gadfly Project is making available in-kind hosting grants for small-businesses and not-for-profits experiencing hardships and revenue losses due to the COVID-19 pandemic.
- ➔ **Guidewell:** Guidewell has developed the COVID-19 Health Innovation Collaborative, awarding up to \$125,000 in grants for innovative solutions to enable Home based self-testing, to reduce isolation during a time of social distancing measures, and to offer solutions for delivering food and urgently needed supplies to at-risk populations and households with COVID-19 exposure or symptoms.
- ➔ **Black and Veatch:** Black and Veatch has developed its ignite COVID-19 response accelerator to actively seek out companies with solutions that can in some way minimize the impact of the outbreak but need to be scaled and deployed rapidly. Committing a minimum of \$250,000 to each project, it has decided to partner in the form of grants and in-kind services.

# USA: Notable Innovations

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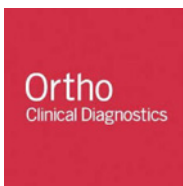
➔ [Room](#)

Startup

**City:** New York, New York, United States

Room has redesigned their flagship phone booth to become a testing booth to protect frontliners from testing potential COVID-19 patients.

**Category:** Life & Business Adaptation - Shopping



➔ [Ortho Clinical Diagnostics](#)

Corporation

**City:** Raritan, New Jersey, United States

Ortho Clinical Diagnostics has developed a kit that detects antibodies produced against bloodborne SARS-CoV-2 to help diagnose those who are previously or currently exposed to COVID-19.

**Category:** Diagnostics - Test Kits

**REGENERON**

➔ [Regeneron Pharmaceuticals](#) ★

Corporation

**City:** Tarrytown, New York, United States

Regeneron Pharmaceuticals has developed a drug that targets a pathway known as interleukin-6, or IL-6, which can affect inflammation. It's already approved for rheumatoid arthritis and could help very sick COVID-19 patients in respiratory distress.

**Category:** Treatment - Medication



➔ [Johns Hopkins University](#) ★

University

**City:** Baltimore, Maryland, United States

Johns Hopkins University's COVID-19 Tracker updates in real-time on the current global situation of the virus severity.

**Category:** Information - Databases



➔ [Presto](#)

Startup

**City:** Redwood City, California, United States

The Presto Contactless Dining Kit enables restaurants to provide an end-to-end contactless dining experience to guests. Guests can view the complete menu, place orders, and pay at the table without the need for any human contact.

**Category:** Life & Business Adaptation - Education

# 2 | Israel

## General Information



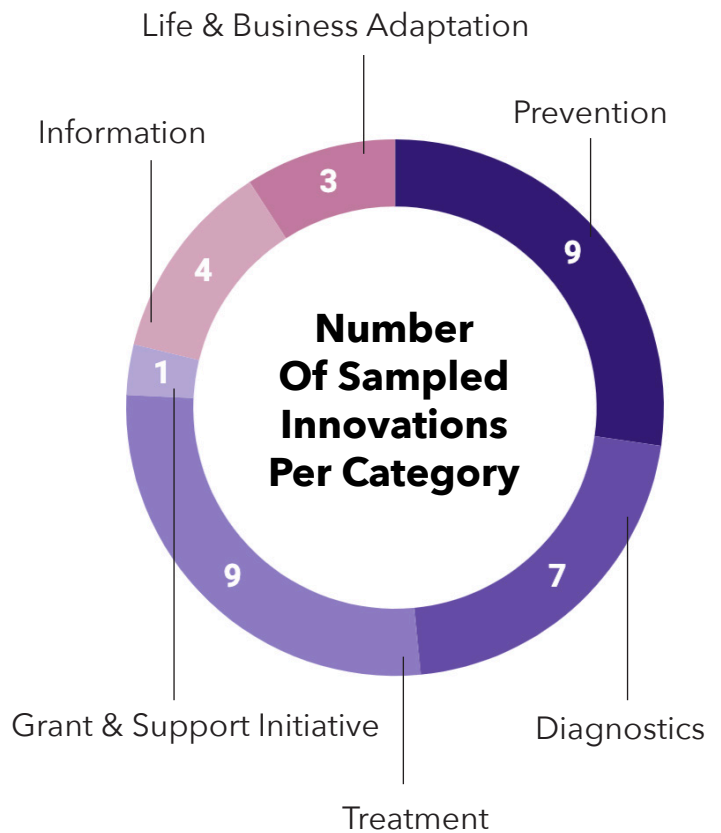
**Population:**  
8.9 million



**GDP Per Capita:**  
\$41,720



**Cities Rankings:**  
Tel Aviv Area **5th**  
Haifa **39th**  
Jerusalem **77th**



## Grants

- ➔ **Fighting Coronavirus Early Ideation Stages:** The Israel Innovation Authority is issuing a Call for Proposals to Israeli technology companies (excluding Israeli health organizations) to submit R&D plans for technological ideas and/or drafted implementations in the early (ideation) stages for dealing with the challenges posed by the COVID-19 (coronavirus) pandemic.
- ➔ **Fast grants channel for companies in crisis:** Israel Innovation Authority is offering grant R&D programs to innovative technology companies to overcome the economic crisis created by the Coronavirus epidemic.

# Israel: Notable Innovations



➔ [Temi Robots](#) ★

Startup

**Location:** Tel Aviv, Israel

Temi Robots have been deployed in hospitals in China, Japan, and the USA to enable COVID-19 patients to consult with their doctors and to automate the temperature taking process at a distance.

**Category:** Prevention - Automation



➔ [Resmetrix Medical](#)

Startup

**Location:** Haifa, Israel

Resmetrix has developed a novel wearable respiratory monitoring system that accurately monitors the respiratory pattern of respiratory disease patients (COVID-19, COPD, Asthma), sending alerts to the patient smartphone and the medical team when early signs of respiratory deterioration occur.

**Category:** Treatment - Telehealth Treatment



➔ [MDClone](#)

Startup

**Location:** Be'er Sheva, Israel

MDClone provides a quick-install platform to understand and manage COVID-19 efforts, dramatically increasing the ability to use data to improve quality and operations in a streamlined, efficient package.

**Category:** Diagnostics - Big Data and Profiling



➔ [Academix](#)

Startup

**Location:** Jerusalem, Israel

Academix is an AI-based, metrics-driven R&D collaboration platform, harnessing the power of a data-driven partner-matching process for scientists. It matches experts with unique technologies now fighting COVID-19.

**Category:** Information - Databases



➔ [Sonovia](#)

Startup

**Location:** Ramat Gan, Israel

Sonovia Tech has developed an antimicrobial textile shield to keep your clothes clean, especially in times of the coronavirus pandemic.

**Category:** Prevention - Protective and Sanitation

# 3 | Canada

## General Information



**Population:**  
**37.1 million**

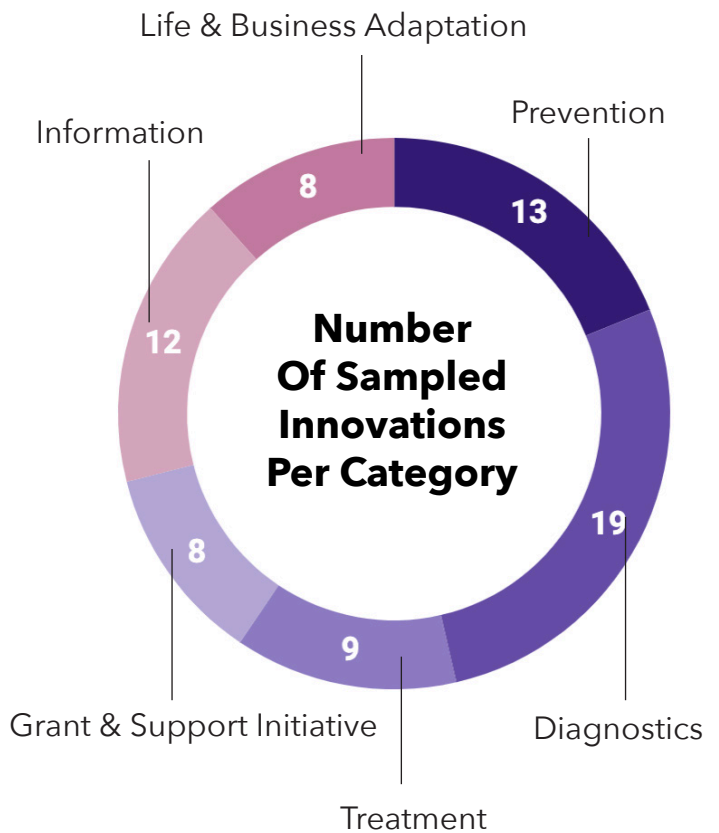


**GDP Per Capita:**  
**\$46,225**



**Cities Rankings:**

- Toronto: **4th**
- Vancouver: **25th**
- Montreal: **37th**
- Kitchener Waterloo: **43th**



## Grants

- ➔ **Challenge Stream COVID-19:** The Public Health Agency of Canada (PHAC) and National Research Council (NRC) are seeking a solution that will diagnose individuals affected by COVID-19 within 3 days of the start of their symptoms using a sample, other than a nasopharyngeal swab, with a rapid single-use home testing kit analogous to a home pregnancy test.
- ➔ **Innovative Solutions Canada: New COVID-19 R&D Challenges:** Canadian innovators can access grants and procurement contracts to research and develop solutions for government COVID-19 challenges. Browse ISC's current challenges.
- ➔ **NRC IRAP Funding Helps Businesses Provide PPE and Sanitizer:** The National Research Council Industrial Research Assistance Program (NRC IRAP) is using funding to help companies make PPE and sanitizing equipment.

# Canada: Notable Innovations



## → [Clēan Works](#)

Government and Corporation

**City:** Beamsville, Canada

The new device by Clēan Works, called the “Clēan Flow Healthcare Mini,” decontaminates personal protective equipment such as N95 respirators, masks, and medical gowns, so they can be safely reused by medical professionals.

**Category:** Prevention - Protective and Sanitation



## → [Social Distancer Technologies](#)

Government and Corporation

**City:** Châteauguay, Canada

Social Distancer Technologies have developed the Social Distancer – a wearable product designed to provide workers with a way to easily maintain a safe 2-metre distance between one another.

**Category:** Prevention - Protective and Sanitation



## → [Blue J Legal](#)

Startup

**City:** Toronto, Canada

Blue J Legal, a market leader in developing legal technology powered by machine learning, has developed the “COVID–19 Relief Programs and Credits Navigator,” a software tool that helps Canadian citizens to determine the relief programs and credits to which they are entitled.

**Category:** Information - Databases



## → [Thornhill Medical](#)

Startup

**City:** Toronto, Canada

Thornhill Medical is a medical device innovator that joined the Canadian response to COVID–19 by producing ground-breaking, life-saving mobile ventilator systems.

**Category:** Treatment - Ventilators and Medical Devices



## → [Spartan Bioscience](#)

Startup

**City:** Ottawa, Canada

Spartan Bioscience is a biotech firm that is currently investigating how its rapid, sample-to-result DNA testing platform can be used to detect the COVID–19 virus in under an hour. Working together with the federal government, the innovative team is repurposing its DNA analyzing device into a mobile, hand-held diagnostic kit.

**Category:** Diagnostics - Test Kits



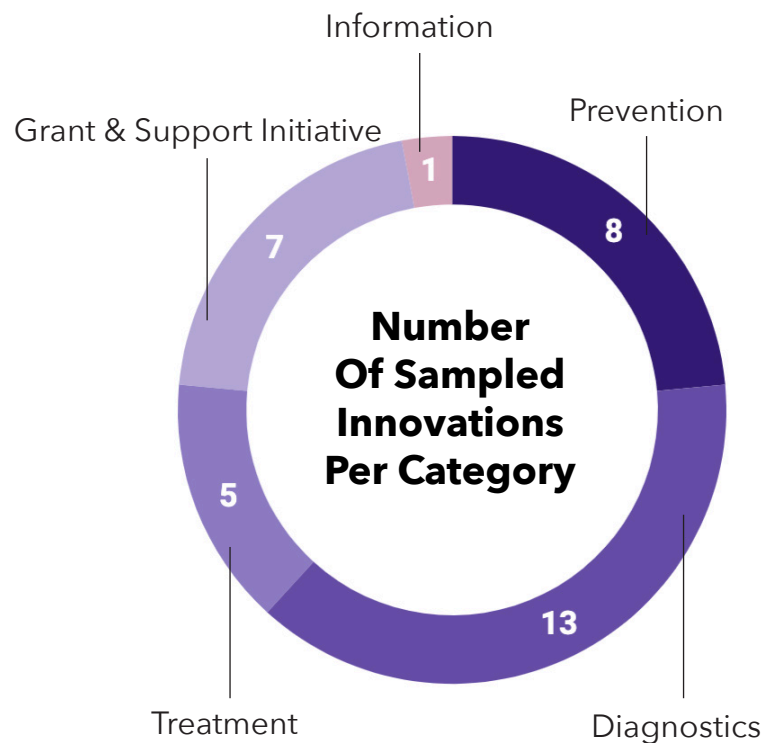
## 4 | Belgium

### General Information

 **Population:**  
**11.4 million**

 **GDP Per Capita:**  
**\$47,472**

 **Cities Rankings:**  
Antwerp: **12th**  
Brussels: **18th**  
Ghent: **30th**  
Leuven: **51st**



### Grants

- ➔ **Africalia:** In response to the global health crisis, Africalia wants to support artists in their creative dynamics by setting up "Creativity is life" grants.
- ➔ **European Commision:** The EU is offering grants for research focusing on the development of therapeutics and diagnostics combatting coronavirus infections
- ➔ **Eureka:** Multilateral call for solutions for COVID-19 Echo Period - Life without a vaccine. Participants are invited to submit research and innovation project proposals aiming to provide short to medium-term responses to COVID-specific needs.

# Belgium: Notable Innovations



## ➔ [Lasercut](#)

Corporation

**City:** Ghent, Belgium

Lasercut is manufacturing specially made protective screens and facial protection to fight against COVID-19.

**Category:** Prevention - Protective and Sanitation



## ➔ [Materialise](#)

Corporation

**City:** Leuven, Belgium

Materialise has released a hand-free handle to avoid contact while opening door, to lower chances of contracting the coronavirus.

**Category:** Prevention - Vaccine



## ➔ [Byteflies](#)

Corporation

**City:** Antwerp, Belgium

Byteflies has developed a coronapatch to monitor people at home, reduce hospitalisations, and reduce pressure on first-line caregivers.

**Category:** Diagnostics - Telehealth Diagnostics



## ➔ [Andaman7](#)

Startup

**City:** Brussels, Belgium

Andaman7 helps patients, healthcare professionals, call centers, hospitals, and authorities to manage the crisis with a free in-app Pandemic Module.

**Category:** Information - Crisis Communication



## ➔ [Ergotrics](#)

Corporation

**City:** Antwerp, Belgium

Ergotrics has developed Inflatable Prone Ventilation (IPV) pillows for use in intensive care units amid the Coronavirus crisis.

**Category:** Treatment - Ventilators and Medical Devices

# 5 | Switzerland

## General Information



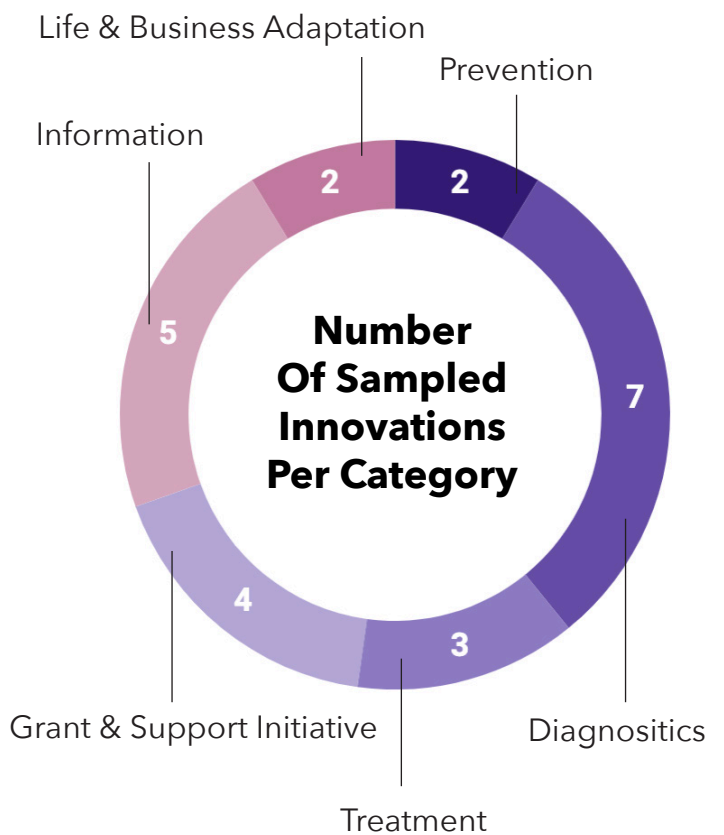
**Population:**  
**8.5 million**



**GDP Per Capita:**  
**\$82,828**



**Cities Rankings:**  
Zurich: **15th**  
Basel: **28th**  
Geneva: **67th**



## Grants

- ➔ **ETH Zurich:** has launched a special call to respond to COVID-19 outbreak on the African continent to receive funding
- ➔ **Impact Hub Switzerland:** #VersusVirus was a Swiss-wide virtual hackathon held on April 3-5 under the patronage of the FDHA and EAER, which used the collective intelligence of researchers, experts, technology specialists & fellow citizens to develop fresh ideas and solutions for dealing with & combating COVID-19.
- ➔ **Swiss National Science Foundation:** SNSF is supporting projects involving research into the coronavirus to tackle the current crisis and prepare for likely future epidemics.

# Switzerland: Notable Innovations



➔ [Novartis](#) ★

Corporation

**City:** Basel, Switzerland

Novartis has reached an agreement with the US Food and Drug Administration (FDA) to proceed with a Phase III clinical trial of hydroxychloroquine in hospitalized patients with COVID-19.

**Category:** Treatment - Medication



➔ [Ava Women](#)

Startup

**City:** Zurich, Switzerland

Ava Women creates the Ava Bracelets that track breathing rate, pulse rate, skin temperature, heart rate variability, and perfusion. They are offering scientists and researchers a significant discount on their bracelets so that they can research the potential detection and monitoring of COVID-19.

**Category:** Diagnostics - Telehealth Diagnostics



➔ [Memo Therapeutics](#)

Startup

**City:** Zurich

Memo Therapeutics has launched Hack Corona Initiative which is aimed at studying the antibody responses to SARS-CoV-2 (COVID-19) from selected donors.

**Category:** Treatment - Telehealth Treatment



➔ [Ancora.ai](#)

Startup

**City:** Zurich, Switzerland

Ancora.ai was designed to connect the surge of new COVID-19 clinical trials to participants.

**Category:** Treatment - Telehealth Treatment



➔ [Scandit](#)

Startup

**City:** Zurich, Switzerland

Scandit has developed a web app in direct response to COVID-19 which enables customers to continue to sign and confirm receipt of grocery goods and parcels by using their own devices, creating a safe and contactless proof of delivery.

**Category:** Life & Business Adaptation - Shopping

# 6 | United Kingdom

## General Information



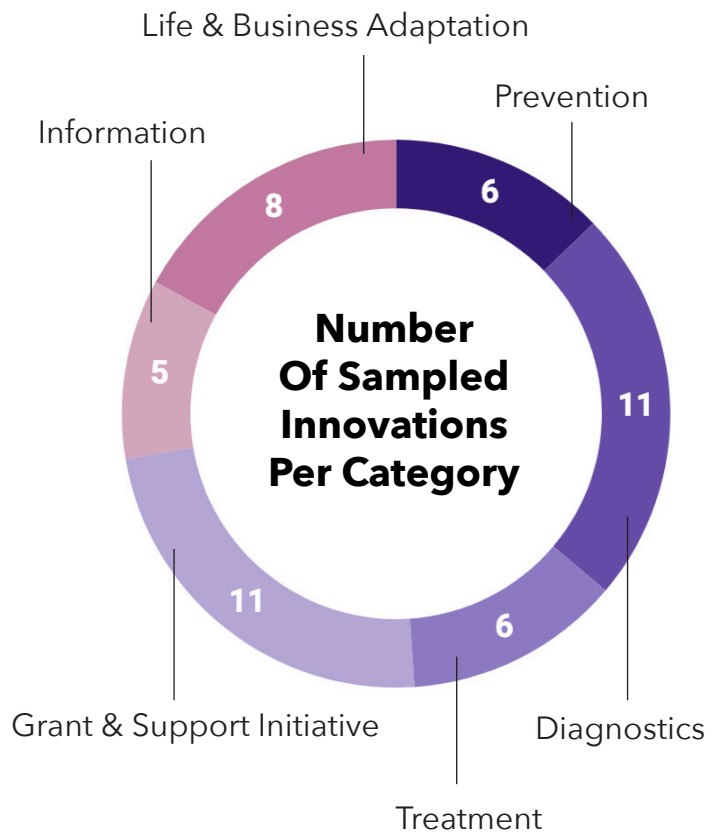
**Population:**  
66.5 million



**GDP Per Capita:**  
\$42,958



**Cities Rankings:**  
London: 6th  
Edinburgh: 76th



## Grants

- ➔ **NorthRow:** has joined FinTech leaders from the lending sector to form a taskforce to support funding for SMEs during the coronavirus (COVID-19) crisis, and has launched a special call to respond to COVID-19 outbreaks on the African continent that need funding
- ➔ **PEDL:** invites applications to this special Exploratory Research Grant call for projects addressing the economic impacts of coronavirus that relate to the PEDL and CDC Group initiative
- ➔ **Elton John AIDS Foundation COVID-19 Emergency Fund:** is accepting applications for solutions that have strong potential to address specific challenges that have arisen for people already living with or at severe risk of HIV/AIDS and who are now at heightened risk as a result of the COVID-19 pandemic

# United Kingdom: Notable Innovations



➔ [GlaxoSmithKline](#) ★

Corporation

**City:** Brentford, United Kingdom

GlaxoSmithKline, in partnership with Clover Biopharmaceuticals, is working on a vaccine using technology already employed in one of its flu vaccines, which could speed development and production.

**Category:** Prevention - Vaccine



➔ [University of Oxford](#)

University

**City:** Oxford, United Kingdom

Scientists from University of Oxford have developed a rapid testing technology for COVID-19. The test is stated to be faster than traditional methods and does not need complicated instruments.

**Category:** Diagnostics - Test Kits



➔ [Proximie Ltd](#)

Startup

**City:** London, United Kingdom

Proximie is a surgical collaboration tool that enables clinicians to connect in real-time to share expertise.

**Category:** Treatment - Telehealth Treatment



➔ [Reactec](#)

Startup

**City:** Edinburgh, United Kingdom

Reactec have developed SAFE-DISTANCE on a proven system of personal health risk monitors with automatic safe and resilient data transfer to an intuitive on-line GDPR compliant data analytics.

**Category:** Life & Business Adaptation - Work



➔ [DeepMind](#) ★

Corporation

**City:** London, United Kingdom

DeepMind is the AI division of Google. It uses its AI algorithm to crack the protein structure that might make up COVID-19 which can help look for treatment.

**Category:** Diagnostics - Big Data and Profiling

# 7 | Estonia

## General Information



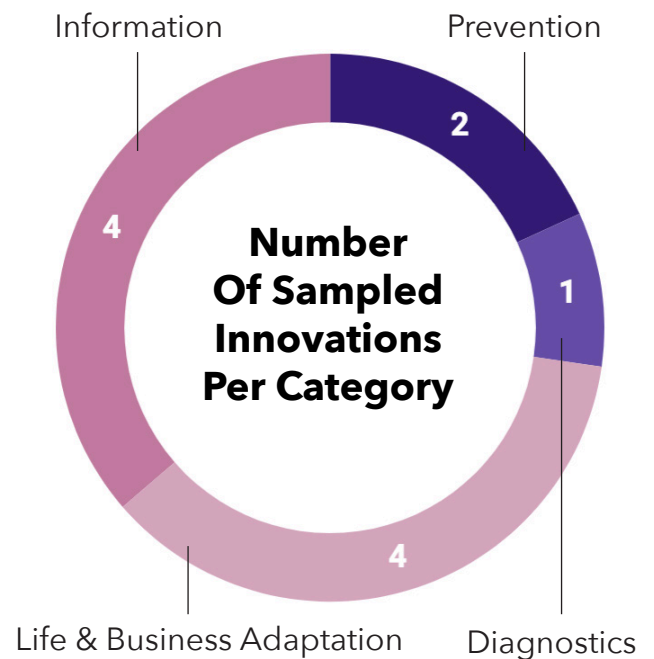
**Population:**  
**1.3 million**



**GDP Per Capita:**  
**\$23,247**



**Cities Rankings:**  
Tallinn: **32nd**



## Grants

- ➔ **ERDF-funded support programme:** As the COVID-19 crisis continues, an ERDF-funded support programme in Estonia hopes to offer a lifeline for enterprises to finance new solutions to help tackle the pandemic. In particular, the programme welcomes developments of new health technologies, creative ICT solutions, and innovations for resource efficiency.
- ➔ **Enterprise Estonia Small Business Grant:** Small businesses, including e-resident companies and self-employed persons who have suffered because of the coronavirus crisis, are entitled to apply for a one-time non-refundable grant. The amount of the grant depends on the turnover of your Estonian company.
- ➔ **KredEx COVID-19 Loan:** The state-owned financial institution KredEx has announced that it will be providing loan support. A loan guarantee is beneficial if a company wishes to utilise a bank loan, lease, or bank guarantee but lacks sufficient collateral or operating history.

# Estonia: Notable Innovations



➔ [VAAB](#)

Startup

**City:** Tallinn, Estonia

Vanemuine or VAAB helps the health care system to increase its capacity to provide assistance by bringing together people with medical training and education and those in need. It cooperates with Estonian health care institutions.

**Category:** Treatment - Telehealth Treatment



➔ [Velmio](#)

University

**City:** Tallinn, Estonia

Velmio has developed the corona-tracker for Estonian and Australian users to analyze their symptoms and to estimate a COVID-19 risk level.

**Category:** Diagnostics - Telehealth Diagnostics



➔ [Koroonakaart](#)

Startup

**City:** Tallinn, Estonia

Koroonakaart shows the coronavirus cases in all counties based on the data collected from the governmental organizations including the Health Board and Estonia Statistics.

**Category:** Information - Databases



➔ [Share Force One](#)

Public Sector

**City:** Tallinn, Estonia

Share Force One is a workforce sharing platform that connects B2B for temporary workforce exchange in light of the coronavirus crisis.

**Category:** Life & Business Adaptation - Work



➔ [Triumf Health](#)

Startup

**City:** Tallinn, Estonia

Triumf Health has created a support app for kids during this crisis in form of a game.

**Category:** Life & Business Adaptation - Education



# 8 | Italy

## General Information



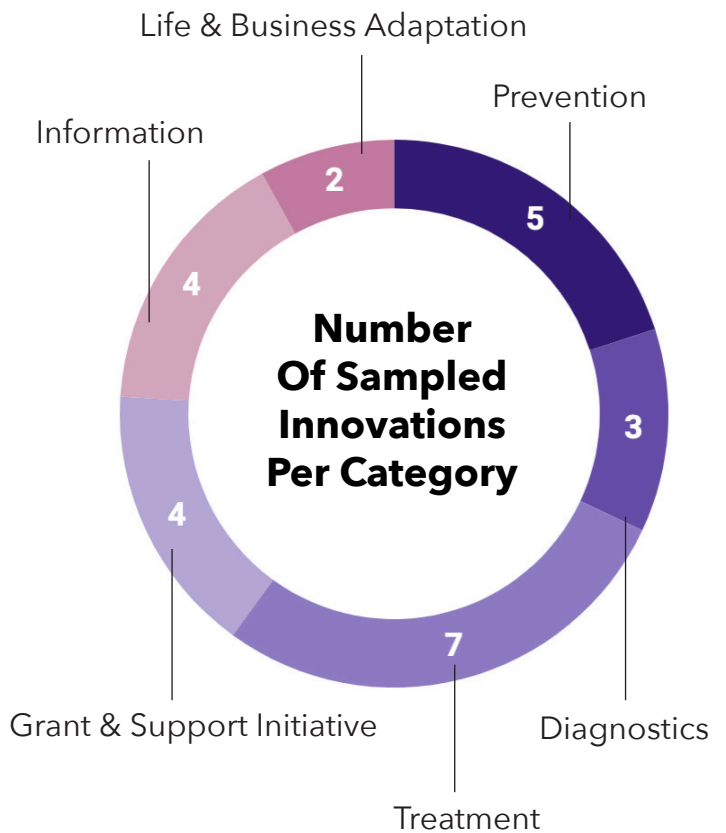
**Population:**  
**60.4 million**



**GDP Per Capita:**  
**\$33,491**



**Cities Rankings:**  
Milan: **13th**  
Piedmont: **65th**  
Trieste: **78th**



## Grants

- ➔ [Ministry of University and Research: Call of Research on COVID-19:](#) The Ministry of University and Research intends to acquire and select research project proposals of particular strategic importance, aimed at addressing the new needs and issues raised by the spread of the SARS Cov 2 virus and the COVID-19 infection.
- ➔ [FAST-TRACK COVID-19 call for research and innovation projects to combat coronavirus:](#) The call will make available the latest generation Genomics Platform of Area Science Park, consisting of a high-throughput sequencer and the "Orfeo" Data Center, capable of providing advanced calculation and analysis services for data associated with genomics and other sectors.
- ➔ [COVID-19: Innovative tenders for mobility, health and cultural heritage:](#) COVID-19: The Ministry of Economic Development (MISE), the Ministry of University and Research (MUR), and the Ministry for Technological Innovation and Digitization (MID) promote innovative contracts on mobility, health, and cultural heritage.

# Italy: Notable Innovations



➔ [Isinnova](#) ★

Startup

**City:** Brescia, Italy

Isinnova is a startup which creates valves for respiratory equipment using 3-D printing.

**Category:** Treatment - Ventilators and Medical Devices



➔ [WeArt](#) ★

Startup

**City:** Milan, Italy

WeArt develops wearable devices able to digitize the sense of touch. In the current scenario of COVID-19, Weart can fill the gap of the physical distance between people. It also enables tactile augmented training sessions for medical personnel on manual operations needed in these cases.

**Category:** Treatment - Telehealth Treatment



➔ [paginemediche](#) ★

Startup

**City:** Salerno, Italy

paginemediche has launched a chatbot to help citizens of Italy with correct information and screening on the coronavirus.

**Category:** Diagnostics - Telehealth Diagnostics



➔ [CURA pods](#)

Nonprofit

**City:** Torino, Italy

(Connected Units for Respiratory Ailments) is an open-source design for emergency COVID-19 hospitals using repurposed shipping containers to create plug-in Intensive-Care Units (ICU) with biocontainment through negative pressure.

**Category:** Prevention - Protective and Sanitation



➔ [Krupps](#)

Corporation

**City:** Padua, Italy

Krupps, a company specializing in the production of professional restaurant washing equipment, has redesigned its product KLEAN LAB in order to augment COVID-19 sanitation needs with an innovative washing system which washes and sanitizes professional footwear in the medical and food supply industries.

**Category:** Prevention - Protective and Sanitation

## 9 | Ireland

### General Information



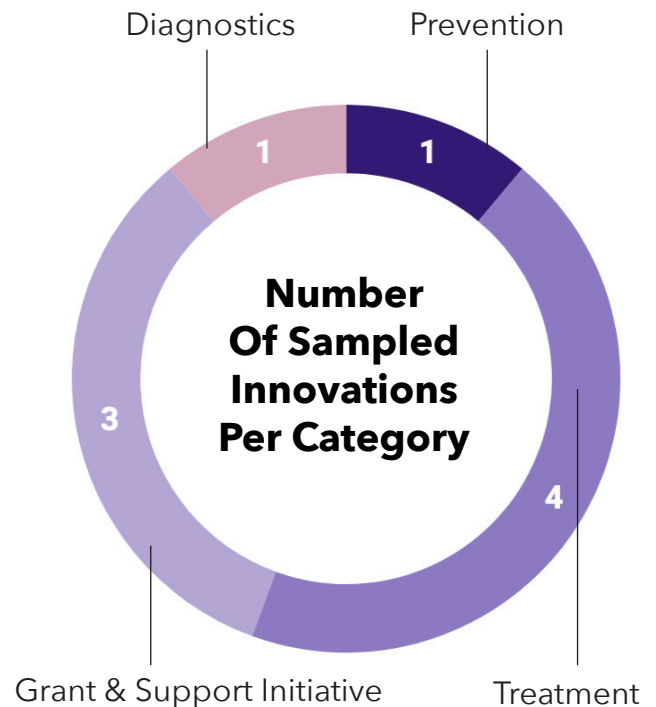
**Population:**  
**4.9 million**



**GDP Per Capita:**  
**\$78,583**



**Cities Rankings:**  
Dublin: **26th**



### Grants

- ➔ **Business Financial Planning Grant:** The COVID–19 Business Financial Planning grant will provide a strategic intervention for companies to work with third party consultants to prepare a detailed financial and business plan with forecasts and assumptions.
- ➔ **Sustaining Enterprise Fund:** Enterprise Ireland’s liquidity and medium-term financial supports are being delivered under the Sustaining Enterprise fund, launched in April. Support of up to €800,000 can be provided to companies targeted at different stages of development and growth, ranging from established companies to small enterprises and start-ups.
- ➔ **Sustaining Enterprise Fund - Small Enterprise:** This fund will provide a short term working capital injection to eligible smaller companies to support business continuity and strengthen their ability to return to growth and be trading strongly in 3 years time.

# Ireland: Notable Innovations



➔ [Combilift](#) ★

Corporation

**City:** Monaghan, Ireland

Combilift has developed Combi-Ventilate, a splitter device that turns one ventilator into multiple ventilation stations.

**Category:** Treatment - Ventilators and Medical Devices



➔ [Galway VentShare](#)

University

**City:** Galway, Ireland

An open-source system that allows one ventilator to deliver independent tidal volumes to two patients.

**Category:** Treatment - Ventilators and Medical Devices



➔ [PMD Solutions](#)

Corporation

**City:** Cork, Ireland

PMD Solutions has developed "RespiraSense: a remote respiratory monitoring device that provides real-time objective respiratory rate data which shows on a Central Station dashboard at the nurses' station, and features a graphic and audible alarm when the respiratory rate is outside the specified range for a patient.

**Category:** Treatment - Ventilators and Medical Devices



➔ [Aquila Bioscience](#)

Startup

**City:** Galway, Ireland

Aquila was founded in 2012 at the National University of Ireland. The scientific team has developed revolutionary decontamination technology, in collaboration with the Czech University of Defence and Defence Forces Ireland, that protects against harmful pathogens and other viral infections like coronavirus.

**Category:** Prevention - Protective & Sanitation



➔ [Kastus](#)

Startup

**City:** Dublin, Ireland

Kastus has developed an antimicrobial coating that can be applied to glass and ceramic surfaces. The coating is scientifically proven to be effective against coronavirus and bacteria on coated surfaces.

**Category:** Prevention - Protective & Sanitation

# 10 | Spain

## General Information



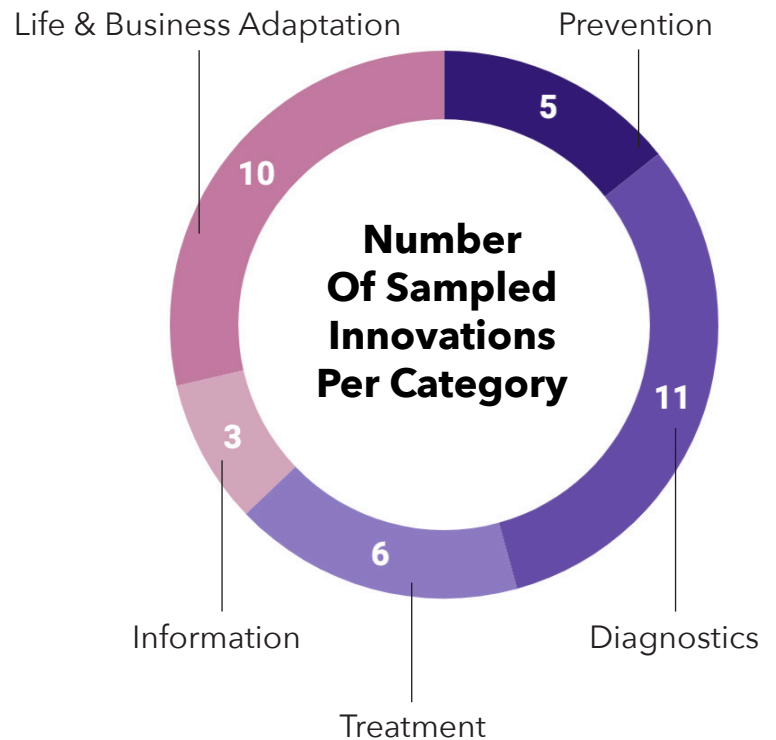
**Population:**  
**47.8 million**



**GDP Per Capita:**  
**\$30,323**



**Cities Rankings:**  
Barcelona: **20th**  
Madrid: **29th**



## Grants

- ➔ **Carlos III Health Institute:** The Carlos III Institute of Health (Spanish acronym: ISCIII), which is managed under the Ministry of Science and Innovation, has created a €24 million COVID-19 Fund to finance research projects on the SARS-CoV-2 virus and the disease it causes, COVID-19.
- ➔ **CNB-CSIC:** The Spanish Government assigned €4.5m to the National Biotechnology Center (CNB) to research COVID-19 and work on vaccine development.
- ➔ **EIT Climate-KIC:** EIT Climate-KIC will provide immediate support (between €300k and €500k) to selected startups, scaleups, and SMEs that were affected by COVID-19.

# Spain: Notable Innovations

## GRIFOLS

➔ [Grifols](#) ★

Corporation

**City:** Barcelona, Spain

Grifols developed a molecular test to detect the SARS-CoV-2 virus and distributes two immunological tests that identify antibodies to support a COVID-19 diagnosis.

**Category:** Diagnostics - Test Kits



➔ [Mocaplaform](#)

Corporation

**City:** Barcelona, Spain

Mocaplaform has created an app and digital platform to respond to the needs of public administrations and citizens in the post-confinement phases.

**Category:** Information - Crisis Communication



➔ [PAL Robotics](#)

Corporation

**City:** Barcelona, Spain

PAL Robotics developed a robot that integrates UV-C ultraviolet light devices for disinfection through autonomous navigation, disinfecting surfaces in its path.

**Category:** Prevention - Protective and Sanitation



➔ [CoworkBees](#)

Startup

**City:** Madrid, Spain

CoworkBees is a community of freelancers, entrepreneurs, and employees helping each other, collaborating, and creating business opportunities; due to coronavirus, CoworkBees released their web app for free to encourage companies to stay at home.

**Category:** Life & Business Adaptation - Work



➔ [Frena La Curva](#) ★

Public Sector

**City:** Zaragoza, Spain

Frena la Curva (FLC) is a citizen platform where volunteers, entrepreneurs, activists, social organizations, and laboratories cooperate to channel and organize social energy and civic resilience in the face of the COVID-19 pandemic.

**Category:** Life & Business Adaptation - Community & Mental Health

# 11 | Singapore

## General Information



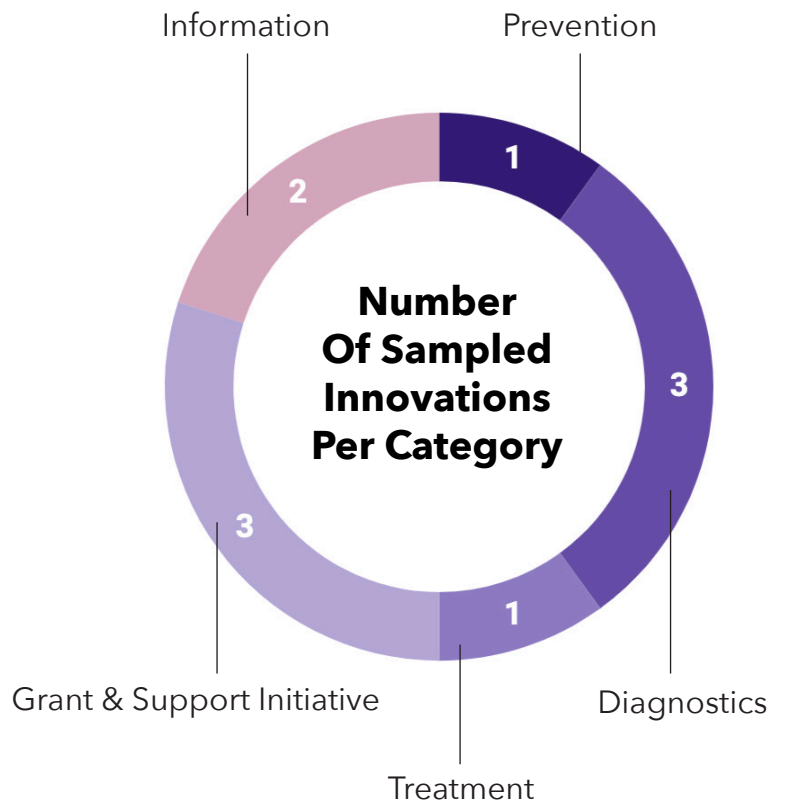
**Population:**  
**5.6 million**



**GDP Per Capita:**  
**\$64,582**



**Cities Rankings:**  
Singapore City: **16th**



## Grants

- ➔ **COVID-19 Research Fund:** The COVID-19 Research Fund is provided to support COVID-19-related research. The Call funds 3 categories: Investigator Initiated Research, Clinical Trials, and Gap Funding.
- ➔ **Special Situation Fund for Startups (SSFS):** EDBI, the corporate investment arm of Economic Development Board, and SEEDS Capital, the investment arm of Enterprise Singapore, will administer the S\$285 million Special Situation Fund to support promising startups from diverse sectors, via convertible note, which have developed innovations and technologies that can contribute to Singapore’s national priorities amid the ongoing COVID-19 crisis.
- ➔ **Singapore Budget 2020 - Opportunities for Startups:** Amid the challenging landscape due to COVID-19 that affects the region coupled with economic slow-down, Budget 2020 provides businesses with the confidence to retain its staff and to take this opportunity to invest in transformation for preparedness to ride the next upturn.

# Singapore: Notable Innovations



➔ [TraceTogether](#) ★

Public Sector

**City:** Singapore

TraceTogether is an app by the Singapore Government aiming to stop the spread of COVID-19 through community-driven contact tracing.

**Category:** Information - Databases



➔ [SQREEM](#)

Startup

**City:** Singapore

SQREEM utilises AI technology to track behaviour in the digital advertising world for multinational companies. The team has joined the global fight against COVID-19 by developing Channel SQREEM, a real-time contact tracing and communication solution already available for government agencies aiming to identify citizens who are potentially at risk of having contracted COVID-19.

**Category:** Prevention - Automation



➔ [MiRXES](#)

Startup

**City:** Singapore

MiRXES is a Biotech startup that harnesses world-leading microRNA technology and discoveries to deliver revolutionary biotech applications across the medical, pharmaceutical, and agricultural industries. MiRXES responded to Singapore's high need of COVID-19 testing kits by switching their manufacturing lines promptly by developing the Fortitude Kit, which detects the SARS-CoV-2 virus with high accuracy using a 1-step real time RT-PCR process.

**Category:** Diagnostics - Test Kits



➔ [Veredus Labs](#)

Corporation

**City:** Singapore

Veredus Laboratories is a global biotechnology company that markets, develops, and customizes innovative solutions for detection of pathogens. In response to the coronavirus crisis, the firm has developed solutions that meet the demands for clinical testing.

**Category:** Diagnostics - Test Kits



# 12 | Germany

## General Information



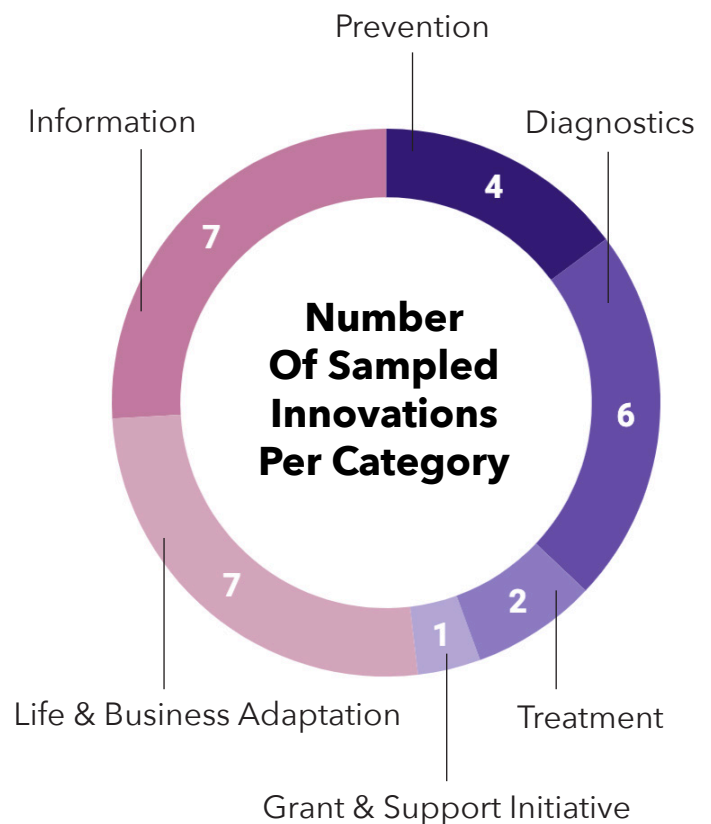
**Population:**  
82.9 million



**GDP Per Capita:**  
\$47,620



**Cities Rankings:**  
Munich: 21st  
Berlin: 31st



## Grants

- ➔ **Rapid Response Funding:** German Federal Ministry of Education and Research is opening Module 3 (Rapid Response) of the funding announcement for research on COVID-19 in the wake of the Sars-CoV-2 outbreak.
- ➔ **Germany Grants and Loans:** Germany has announced €100 million worth of grants and additional loan support for students in the country suffering due to financial difficulties as a result of the coronavirus pandemic.
- ➔ **Emergency grants for German freelance cultural workers and artists:** In an effort to counterbalance what it calls “liquidity bottlenecks,” the government has launched bridge loan applications for the cultural sector.

# Germany: Notable Innovations



➔ [GISAID](#) ★

Other

**City:** Munich, Germany

GISAID developed the Next hCov-19 App which allows Laboratories around the world to share genome sequences of the newly emerging coronavirus (hCoV-19) and make them freely available.

**Category:** Diagnostics - Big Data and Profiling



➔ [CureVac](#)

Corporation

**City:** Tübingen, Germany

CureVac has proposed several vaccine candidates for the coronavirus pandemic, and will soon test subjects.

Organization Type: Corporation

**Category:** Prevention - Vaccine



➔ [Corona4Kids](#)

Corporation

**City:** Frankfurt, Germany

Corona4Kids is a website that explains the Coronavirus for kids. The site is multinational and the language stock is still expanding. We are also looking for marketing and sponsoring support.

**Category:** Life & Business Adaptation - Education



➔ [BioNTech](#) ★

Corporation

**City:** Mainz, Germany

BioNTech is preparing a mRNA-based vaccine for COVID- 19 in partnership with Pfizer.

**Category:** Prevention - Vaccine



➔ [Plastique Fantastique](#)

Startup

**City:** Berlin, Germany

Developed by Plastique Fantastique the Mobile PPS is a pneumatic area where doctors can treat patients in transparent protective space. It has constant overpressure, which means air flows only toward the outside of the space, not letting the virus inside. The clean air supply is guaranteed by a ventilator located outside or in an adjacent decontaminated space.

**Category:** Prevention - Protective and Sanitation

# 13 | China

## General Information



**Population:**  
**1,393 million**



**GDP Per Capita:**  
**\$9,769**



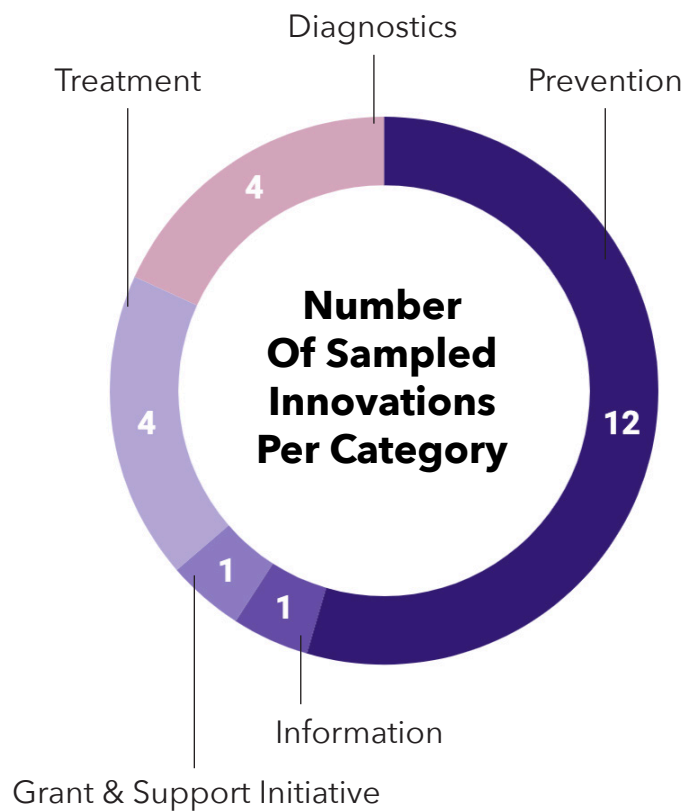
**Cities Rankings:**

Beijing: **23rd**

Hangzhou: **34th**

Shenzhen: **44th**

Hong Kong: **74th**



## Grants

- ➔ **Cash Aid for all Citizens** - Hong Kong, in its 2020 Annual Budget, announced a one time cash handout of \$1,200 for each adult citizen in order to boost spending and help ease financial burdens.
- ➔ **Emergency Loan for COVID-19 Relief** - The Asian Infrastructure Investment Bank (AIIB) approved its first emergency assistance loan related to countering the effects of the novel coronavirus disease (COVID-19) pandemic. The AIIB noted that its first loan would amount to 2.485 billion yuan (approximately \$352 million) and would go to a project in China – the bank’s largest shareholder and progenitor.
- ➔ **Government Cash Grant** - Government cash grant is provided by the government to qualified enterprises or individuals in order to encourage scientific and technological innovation and promote scientific and technological progress.

# China: Notable Innovations



➔ [JD.com](#) ★

Corporation

**City:** Beijing, China

JD launched an automated delivery robot to enable deliveries in China with no human contact.

**Category:** Prevention - Automation



➔ [XAG](#) ★

Corporation

**City:** Guangzhou, China

XAG has deployed robots and drones to continue efforts in disinfecting Chinese cities.

**Category:** Prevention - Protective and Sanitation



➔ [Alibaba Cloud](#) ★

Corporation

**City:** Hangzhou, China

Alibaba Cloud is an international platform for Medical Expert Communication and resource sharing. The AI platform and other services help global scientific research institutions accelerate the development of COVID-19 drugs and vaccines; support global medical institutions to improve CT imaging diagnosis and virus screening and diagnosis; and provide reference for policy makers in pandemic prediction.

**Category:** Diagnostics - Big Data and Profiling



➔ [Autobio Diagnostics](#)

Corporation

**City:** Zhengzhou, China

Autobio Diagnostics has developed a simple-to-use test that detects IgM and IgG antibodies to SARS-CoV-2 in human plasma or serum with a turnaround time of only 15 minutes.

**Category:** Diagnostics - Test Kits



➔ [I-Mab Biopharma](#)

Corporation

**City:** Shanghai, China

I-Mab Biopharma has developed TJM2, a neutralising antibody, as a treatment for patients suffering severe cases of the coronavirus infection.

**Category:** Treatment - Medication

# 14 | Croatia

## General Information



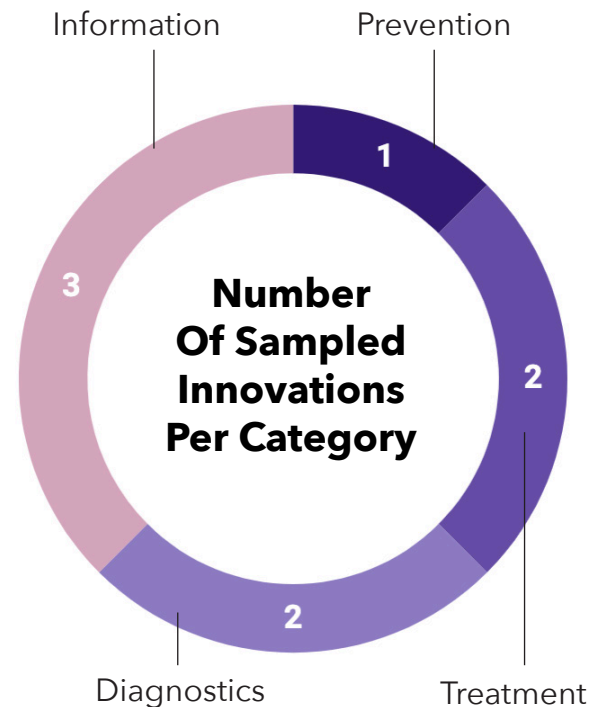
**Population:**  
**4.1 million**



**GDP Per Capita:**  
**\$14,915**



**Cities Rankings:**  
Zagreb: **49th**



## Grants

- ➔ **European Structural and Investment Funds (ESIF) micro loans:** The Croatian Government extended a loan program for Micro-Entrepreneurs affected by COVID-19, with support from the European Investment Fund and the European Union.
- ➔ **ESIF COVID-19 working capital loans:** The requirements for ESIF working capital loans for SMEs have been significantly reduced to reach a broader range of businesses affected by COVID-19.

# Croatia: Notable Innovations



## ➤ [MVT Solutions](#)

Startup

**City:** Zagreb, Croatia

MVT Solutions is developing respirator prototypes with their software and 3Dprinters.

**Category:** Treatment - Ventilators & Devices



## ➤ [Andrija](#)

Public Sector

**City:** Zagreb, Croatia

Andrija is a WhatsApp application that assists in the self-diagnosis of COVID-19. This tool was donated from the companies of the Croatian Association for Artificial Intelligence, CroAi, to Croatia's Ministry of Health.

**Category:** Diagnostics - Telehealth Diagnostics



## ➤ [Include](#)

Startup

**City:** Solin, Croatia

Include is using smart furniture to raise awareness and educate people about Coronavirus

**Category:** Information - Crisis Communication



## ➤ [Tehnix](#)

Startup

**City:** Donji Kraljevec, Croatia

Tehnix developed and designed a mobile cabin for virus infections.

**Category:** Prevention - Protective and Sanitation

# 15 | Denmark

## General Information



**Population:**  
**5.8 million**



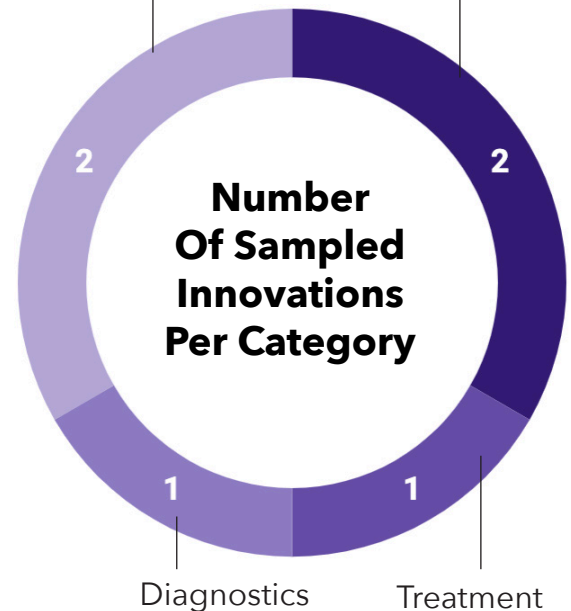
**GDP Per Capita:**  
**\$61,391**



**Cities Rankings:**  
Copenhagen: **56th**

Grant & Support Initiative

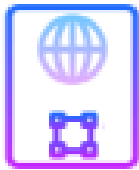
Prevention



## Grants

- ➔ [Novo Nordisk Foundation](#): is inviting proposals for projects that seek to mitigate the health consequences of the coronavirus epidemic in Denmark.
- ➔ [Hack The Crisis](#): is a 48h non-profit online hackathon to fight the COVID-19 crisis and was organized by Greater Copenhagen, a political platform for promoting regional collaboration and economic growth led by the mayors and regional chairpersons of Eastern Denmark and Southern Sweden.

# Denmark: Notable Innovations



## ➔ [Xainport](#)

Startup

**City:** Copenhagen, Denmark

Xainport is a digital passport that offers governments the opportunity to certificate the immunity of their citizens without losing their sovereignty.

**Category:** Information - Crisis Communication



## ➔ [Blue Ocean Robotics](#) ★

Startup

**City:** Odense, Denmark

Blue Ocean Robotics has deployed its disinfection robots to cities around the world hit hard by the coronavirus. This disinfectant robot uses UV rays to promote contactless cleaning to help prevent the spread of the virus.

**Category:** Prevention - Protective and Sanitation



## ➔ [Covidmeter](#)

Corporation

**City:** Copenhagen, Denmark

COVIDmeter is a weekly questionnaire that monitors the levels of C19 and assists the authorities.

**Category:** Diagnostics - Big Data and Profiling



## ➔ [CoRESCUE](#)

University

**City:** Aalborg, Denmark

CoRESCUE delivers open source AAU Pandemic Ventilator reference implementation and design specifications. Used to alleviate ventilator shortage during the COVID-19 pandemic.

**Category:** Treatment - Ventilators and Medical Devices



## ➔ [Smittestop](#)

Startup

**City:** Copenhagen, Denmark

Smittestop app notifies users if they came within a metre of contact for more than 15 minutes with someone who tested positive for COVID-19.

**Category:** Diagnostics - Big Data and Profiling



# 16 | France

## General Information



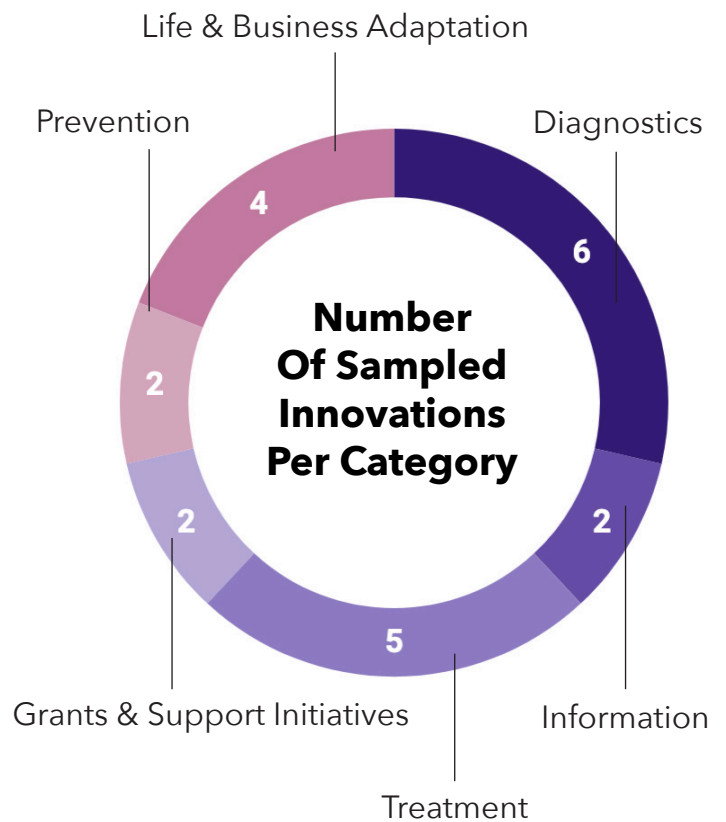
**Population:**  
67.0 million



**GDP Per Capita:**  
\$41,477



**Cities Rankings:**  
Paris: 14th



## Grants

- ➔ **European Youth Foundation:** The European Youth Foundation (EYF) is launching a special call for local or national youth organisations seeking funding for activities which respond to local needs arising from the COVID-19 crisis.
- ➔ **AXA:** The AXA Research Fund will earmark €5 million of its project funding budget to further develop responses to infectious diseases and COVID-19, including post-crisis solution building.

# France: Notable Innovations



➔ [M.U.R. Project](#)

Startup

**City:** Paris, France

M.U.R. Project has designed a Low Cost - Low Tech respirator that can be self-built using widely available components.

**Category:** Treatment - Ventilators and Medical Devices



➔ [Sanofi](#) ★

Corporation

**City:** Paris, France

Sanofi has partnered with several pharmaceutical companies worldwide to develop COVID-19 vaccine treatments. These include Hydroxychloroquine, Testing of Flu Vaccines, and Kevzara.

**Category:** Prevention - Vaccines



➔ [Novacyt](#)

Corporation

**City:** Vélizy-Villacoublay, France

Novacyt is mass producing COVID-19 test kits that take only two hours to show results.

**Category:** Diagnostics - Test Kits



➔ [Doctolib](#)

Startup

**City:** Levallois-Perret, France

Doctolib for COVID-19 is a free medical video consultation platform for use by patients and physicians.

**Category:** Diagnostics - Telehealth Diagnostics



➔ [Ventum Biotech](#)

Startup

**City:** Montpellier, France

Ventum Biotech offers One Touch, a medical grade air and surface disinfection system for hospitals, research labs, hotels, transportation, and private use.

**Category:** Prevention - Protective and Sanitation

# 17 | Taiwan

## General Information



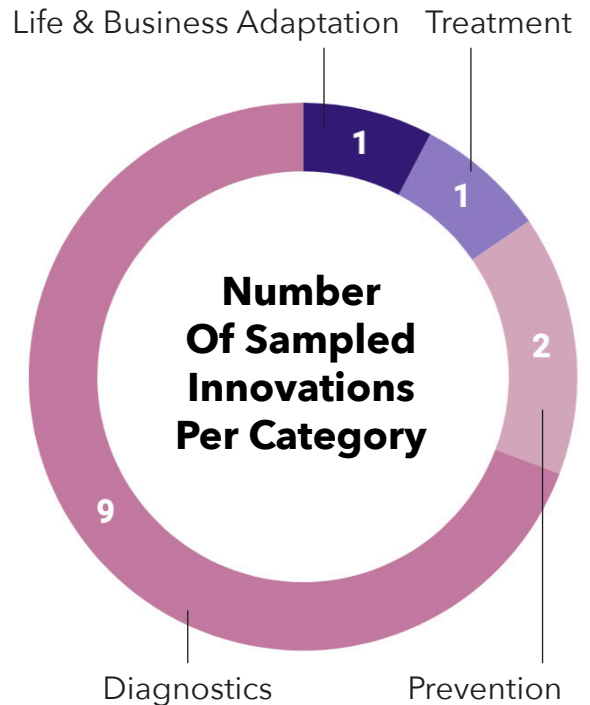
**Population:**  
**23.8 million**



**GDP Per Capita:**  
**\$24,828**



**Cities Rankings:**  
Taipei City: **10th**



## Grants

- ➔ [COVID-19 Coronavirus Pandemic Response: Taiwan](#) - Give2Asia is partnering with trusted nonprofit organizations to support frontline health workers and institutions responding to the coronavirus pandemic.
- ➔ [Taiwan: Special COVID-19 Law](#): Taiwan’s Legislative Yuan passed an amendment to the Special Act for Prevention, Relief and Revitalization Measures for Severe Pneumonia with Novel Pathogens (Special Act) to increase the relief budget from 60 billion new Taiwan dollars (NT\$, about US\$2 billion) to NT\$210 billion (about US\$7 billion) [Art. 11]

# Taiwan: Notable Innovations

## AIPHAS

➔ [AIPHAS](#)

Startup

**City:** Taipei City, Taiwan

AIPHAS's AIoT healthcare solution includes system design, smart ward solution, and process optimizing, enhancing the safety of ward staff and patients.

**Category:** Prevention - Automation



➔ [Huijia](#)

Startup

**City:** Taipei City, Taiwan

Huijia's non-invasive monitoring system-Smart Care System is based on nFOPT core technology that can accurately and instantaneously track various first symptoms of the virus, including respiratory rate and changes in heart rate, persistent coughs, sleep quality, and more.

**Category:** Treatment - Telehealth Treatment



➔ [Winnoz](#)

Startup

**City:** Taipei City, Taiwan

Winnoz offers a total solution for this unmet need by bundling Haiim, the vacuum assisted fingertip blood collection system developed by Winnoz Technology Inc, with various testing kits to identify COVID-19 infections.

**Category:** Diagnostics - Test Kits



➔ [Heroic-Faith Medical Science](#)

Startup

**City:** Taipei City, Taiwan

Heroic-Faith Medical Science's solution for COVID-19 is Remote Lung Sound Monitoring. Breaking the limits of traditional stethoscopes, this continuous, remote, and smart lung sound monitor helps aid remote monitoring of COVID-19 patients.

**Category:** Diagnostics - Telehealth Diagnostics



➔ [Blusense Diagnostics](#)

Startup

**City:** Taipei City, Taiwan

Blusense Diagnostics is currently developing lab-grade COVID-19 diagnostics in minutes.

**Category:** Diagnostics - Test Kits

# 18 | Finland

## General Information



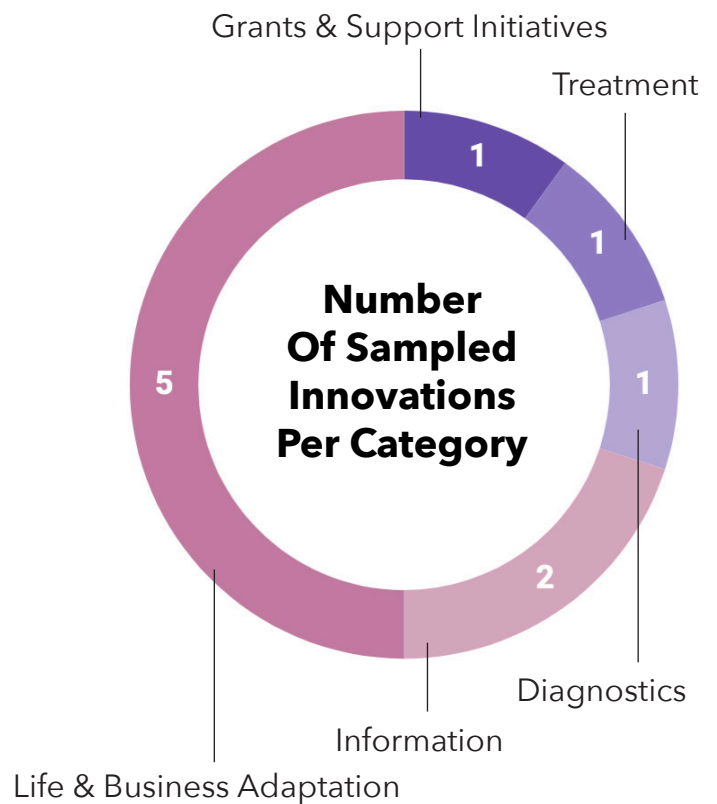
**Population:**  
**5.5 million**



**GDP Per Capita:**  
**\$50,175**



**Cities Rankings:**  
Helsinki: **38th**



## Grants

- ➔ **Finnvera:** Finnvera takes a flexible approach towards all reorganisation needs of financing caused by the coronavirus, using significantly increased SME corporate financing capabilities to help enterprises with long term profit potential through the crisis.
- ➔ **Ministry of Employment and the Economy:** Sole proprietors can apply for support from municipalities in the event of a coronavirus outbreak. The search is made from the location of the company, the amount of support is 2000 euros, and the aid is granted to cover the costs of operating a sole proprietorship.
- ➔ **The Finnish Film Foundation:** The €1 million special grant is available for small to medium-sized cinemas that were forced to close down in mid-March due to the outbreak of COVID-19, and for film festivals supported by the Finnish Film Foundation that have had to cancel or postpone their event between March 13 and May 31, 2020.

# Finland: Notable Innovations



## ➔ **FeverMap**

Startup

**City:** Helsinki, Finland

Helps society as a whole in the fight against the coronavirus pandemic by providing a map of the situation. The Fevermap works by having ordinary people self-report their temperature.

**Category:** Diagnostics - Big Data and Profiling



## ➔ **Finnovatec**

Startup

**City:** Helsinki, Finland

Free COVID-19 Risk Assessment tool for workplaces makes it easy for your staff to raise health and safety issues, or to make suggestions. Involve them in identifying and controlling health and safety risks at work. Ensure that the risk assessments for your business address the new risks from COVID-19.

**Category:** Life & Business Adaptation - Work



## ➔ **Smarp**

Startup

**City:** Helsinki, Finland

Smarp has opened demos for its crisis communication platform to enable businesses to keep their teams informed on the virus, as well as keeping their team well connected at all times, and to observe proper social distancing due to the coronavirus.

**Category:** Life & Business Adaptation - Work

Quarantined Customer

## ➔ **Quarantined Customer**

Startup

**City:** Helsinki, Finland

QuarantinedCustomer.com encourages quarantined customers to remember their favourite local businesses and reach out to them to hear how they can remain customers or support them throughout the quarantine.

**Category:** Life & Business Adaptation - Shopping

# 19 | South Korea

## General Information



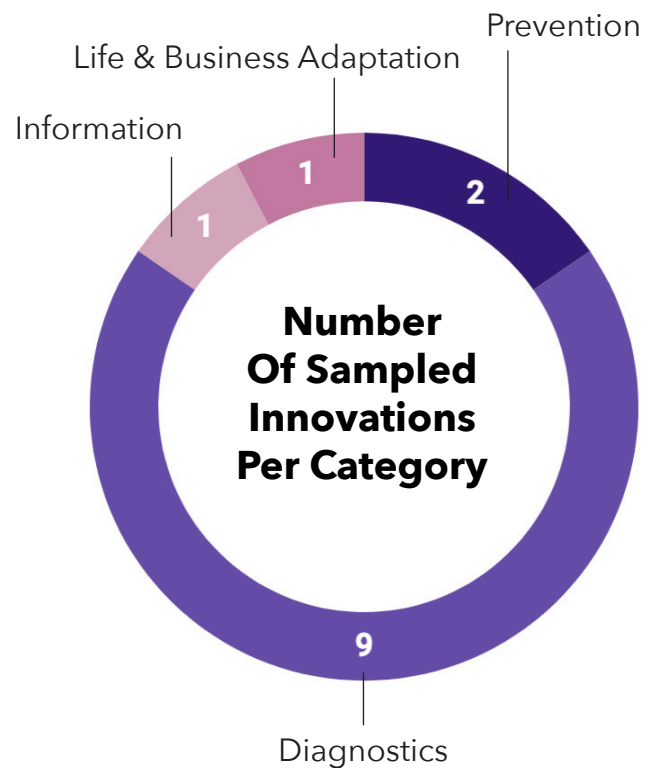
**Population:**  
**51.6 million**



**GDP Per Capita:**  
**\$31,372**



**Cities Rankings:**  
Seoul: **27th**



## Grants

- ➔ **Ministry of Economy and Finance:** South Korea's Ministry of Economy and Finance assigned Won 2.4t (almost \$2b) to help Small Merchants and SMEs that have been affected by COVID-19.
- ➔ **VAT Break:** South Korea's Government will provide a VAT break to businesses earning Won 60m (almost \$50k) or less a year.

# South Korea: Notable Innovations

## CLASSUM

➔ [Classum](#)

Startup

**City:** Seoul, South Korea

Classum is now offering its premium services for free to enable educators to teach online.

**Category:** Life & Business Adaptation - Education

## CoronaBoard

➔ [CoronaBoard](#)

Other

**City:** Seoul, South Korea

CoronaBoard allows users to stay up to date on information about COVID-19 spread with infected anonymized information, along with the ability to chat with other users.

**Category:** Information - Crisis Communication

## GCH GENCURIX

➔ [Gencurix, Inc.](#)

Corporation

**City:** Seoul, South Korea

Gencurix Inc. has developed a detection test for COVID-19 based on WHO guidelines.

**Category:** Diagnostics - Test Kits

## 1drop

➔ [1drop](#)

Corporation

**City:** Gyeonggi-do, South Korea

1drop COVID-19 qPCR Multi Kit allows qualitative detection of genes (E gene and RdRp gene) of COVID-19 with real-time qPCR (including reverse-transcription reaction) via RNA extracted from a specimen (Nasopharyngeal swab, Oropharyngeal swab) of suspected respiratory infectious disease patient.

**Category:** Diagnostics - Test Kits



➔ [Huvet Bio Inc.](#)

Startup

**City:** Daejeon, South Korea

Huvet Bio Inc. is developing a COVID-19 vaccine using a sub-unit method with a high safety profile that uses proteins instead of viruses or bacteria.

**Category:** Prevention - Vaccine



# 20 | Australia

## General Information



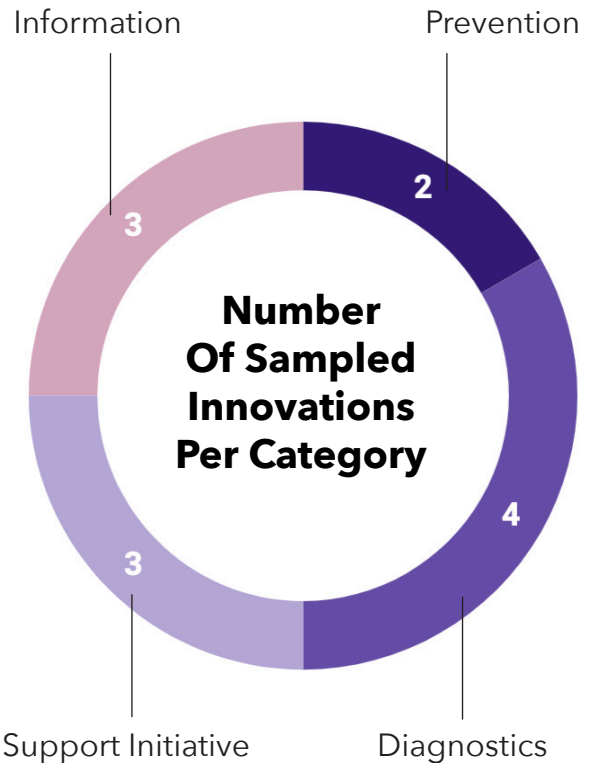
**Population:**  
**25.0 million**



**GDP Per Capita:**  
**\$57,400**



**Cities Rankings:**  
Sydney: **53rd**  
Canberra: **69th**



## Grants

- ➔ **NHMRC Antiviral Development Grant:** NHMRC Australia’s 2020 Antiviral Development for COVID–19 Grant Opportunity will identify antiviral candidates targeting SARS-CoV-2 (new and repurposed) and accelerate promising effective treatments that can be made available to treat Australians infected with SARS-CoV-2.
- ➔ **Fast Track Treatment Funding:** The Australian Government will provide \$13 million to fast-track research into treatments for the novel coronavirus (COVID–19) through the Ministers Department of Health.
- ➔ **COVID–19 Innovation Challenge Funding Round:** NERA will be providing \$20,000 to up to ten Australian-based energy resources businesses (for a total of up to \$200,000 in funding) who can offer solutions, services, or knowledge that can help manage and mitigate the challenges faced as a result of the COVID–19 outbreak.

# Australia: Notable Innovations



## ➔ [HealthMatch COVID-19 Clinical Trials Tracker](#)

Startup

**City:** Sydney, Australia

HealthMatch created Clinical Trials Tracker with visualisations that are dynamically updated from global clinical trial registries, provided as a free resource both for research institutions and the general public.

**Category:** Information - Databases



## ➔ [DetectED-X](#)

Startup

**City:** Sydney, Australia

DetectED-X developed CovED is a virtual clinical environment that helps clinicians to become better at recognizing the CT signs of COVID-19. Now available to all clinicians, free of charge.

**Category:** Diagnostics - Telehealth Diagnostics



## ➔ [BetterConsult](#)

Corporation

**City:** Sydney, Australia

BetterConsult can pre-screen patients for COVID-19 using a digital questionnaire.

**Category:** Diagnostics - Telehealth Diagnostics



## ➔ [Unleash Live](#)

Startup

**City:** Sydney, Australia

Unleash Live connects city street cameras, mobile cameras, and drones to crowd density AI algorithms on live video streams to produce real-time analytics (dashboards or alerts) of where crowds are forming or where social distancing is not being maintained.

**Category:** Prevention - Automation



## ➔ [Snewpit](#)

Startup

**City:** Sydney, Australia

Snewpit is a map-based crowd-sourced news platform with added coronavirus specific functionality, allowing users to add info about the location of confirmed Coronavirus cases, thereby raising awareness and helping to stop spread.

**Category:** Information - Databases

# 21 | Sweden

## General Information



**Population:**  
**10.2 million**



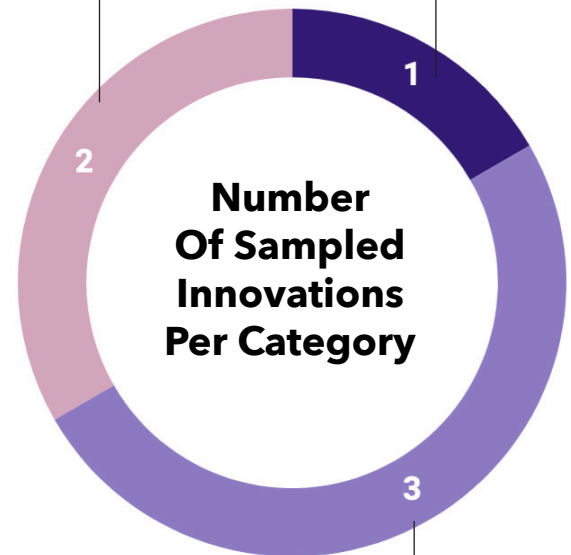
**GDP Per Capita:**  
**\$54,651**



**Cities Rankings:**  
Stockholm: **59th**

Life & Business Adaptation

Prevention



Diagnostics

## Grants

- ➔ **Formas/Swedish Contingencies Agency:** The joint call by Formas and the Swedish Contingencies Agency aims to help increase understanding of the impacts of COVID-19 and the opportunities for transformation and recovery in the face of crises by funding one-year projects with between SEK 500k to SEK 1m (\$53k to \$106k).
- ➔ **Swedish Research Council:** The Swedish Research Council will provide a grant to Swedish researchers with the purpose of addressing COVID-19 related issues in collaboration with South Korean researchers, and with the aim of exploring direct measures that can be implemented within a short time frame, such as new methods and products like vaccines, medical hardware, drugs, and diagnostic tools, as well as developing best practices for caring for COVID-19 infected individuals.
- ➔ **AFA Insurance:** Within the framework of AFA Insurance's research areas in work environment and health, the company is welcoming R&D projects that want to investigate how the ongoing spread of infection of COVID-19 affects working life, work environment, health, and the conditions for leadership.

# Sweden: Notable Innovations



➔ [Kry](#)

Startup

**City:** Stockholm, Sweden

Kry has expanded their COVID-19 at-home monitoring services across Europe and has launched Care Connect, a free platform that enables any European healthcare professional to see their patient via video. They have also developed a new symptom checker.

**Category:** Diagnostics - Telehealth Diagnostics



➔ [Peltarion](#)

Startup

**City:** Stockholm, Sweden

Peltarion provides a platform to deploy cutting edge deep learning AI applications. To fight against COVID-19, Peltarion is helping virologists, epidemiologists, medical researchers, and people working on COVID-19 related projects by giving free access to the platform.

**Category:** Diagnostics - Big Data and Profiling



➔ [European Centre for Disease Prevention and Disease \(ECDC\)](#)

**City:** Solna, Sweden

Public Sector

The European Centre for Disease Prevention and Disease (ECDC) publishes daily datasets on the geographic distribution of COVID-19 cases worldwide.

**Category:** Diagnostics - Big Data and Profiling



➔ [Panion](#)

Startup

**City:** Malmö, Sweden

Panion is the only keyword-searchable social app that helps make genuine connections between people with similar interests, now with added functions for the COVID-19 pandemic.

**Category:** Life & Business Adaptation - Community & Mental Health



➔ [Karma](#)

Startup

**City:** Stockholm, Sweden

Karma is a platform allowing its users to rescue food for half price. Under the current situation they offer several new options, including home delivery of fruit and veggie boxes, and meal subscriptions to dine at home supporting restaurants, food stores, and producers.

**Category:** Life & Business Adaptation - Shopping

# 22 | Poland

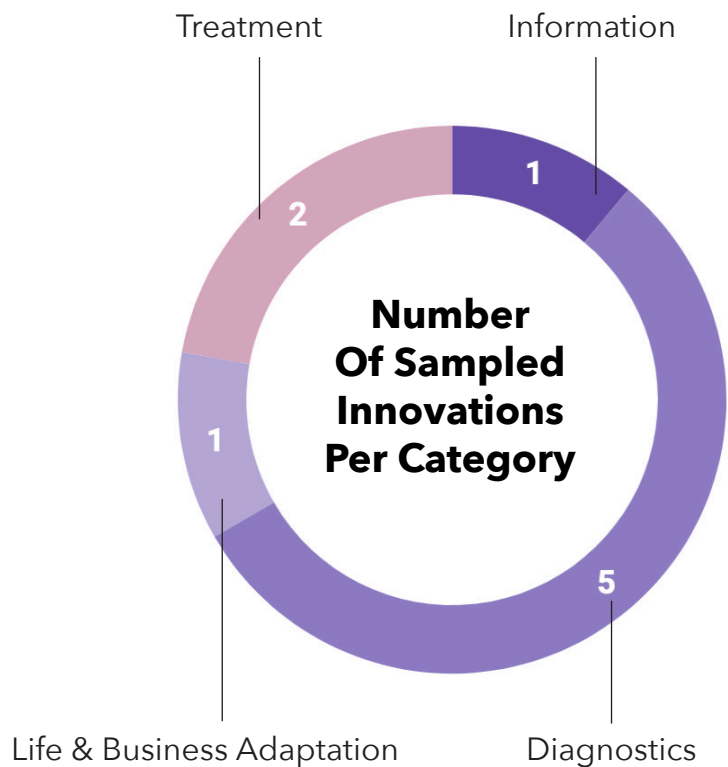
## General Information



**Population:**  
**37.9 million**



**GDP Per Capita:**  
**\$15,422**



## Grants

- ➔ **National Science Center:** In late March, Poland's National Science Center announced an Express call to fund research on COVID-19, with the objective of selecting projects that would enhance understanding of the mechanisms of the SARS-CoV-2 coronavirus, as well as improving diagnostic tests, finding new drugs, and mitigating the social and economic effects of the pandemic.
- ➔ **Polish Government:** The Polish Government has approved the Financial Shield, a program that has the goal of protecting the labor market and providing companies with financial liquidity during the crisis, which will provide a PLN 100b (\$25 billion) support package to micro-enterprises, SMEs, and large enterprises.

# Poland: Notable Innovations



➔ [Biomaxima](#)

Corporation

**City:** Lublin, Poland

Biomaxima has developed COVID-19 Rapid IgG/IgM combined Antibody assay Pre screening test Kit which diagnoses potential COVID-19 patients in just 10 minutes.

**Category:** Diagnostics - Test Kits



➔ [StethoMe](#)

Startup

**City:** Poznan, Poland

StethoMe offers telemedicine companies and hospitals a ready solution intended for monitoring the condition of lungs and heart and a dedicated solution for doctors exposed to contact with infected patients.

**Category:** Diagnostics - Telehealth Diagnostics



➔ [DataWalk](#)

Startup

**City:** Wrocław, Poland

DataWalk is a next-generation analytical platform for revealing patterns, relationships, and anomalies for large-scale, multi-source intelligence operations and data analysis. Their tools can identify people at risk of coronavirus.

**Category:** Diagnostics - Big Data and Profiling



➔ [Kwarantanna Domowa](#)

Public Sector

**City:** Warsaw, Poland

Kwarantanna Domowa (Home quarantine) is an application that facilitates compulsory quarantine at home for Polish citizens.

**Category:** Information - Crisis Communication



➔ [IHelpYou.app](#)

Startup

**City:** Katowice, Poland

IHelpYou is designed to connect people volunteering to help others with everyday tasks, such as walking the dog or doing the shopping. Everyone who cannot leave the house due to the epidemiological threat can get the help of a volunteer.

**Category:** Life & Business Adaptation - Community & Mental Health

# 23 | Kenya

## General Information



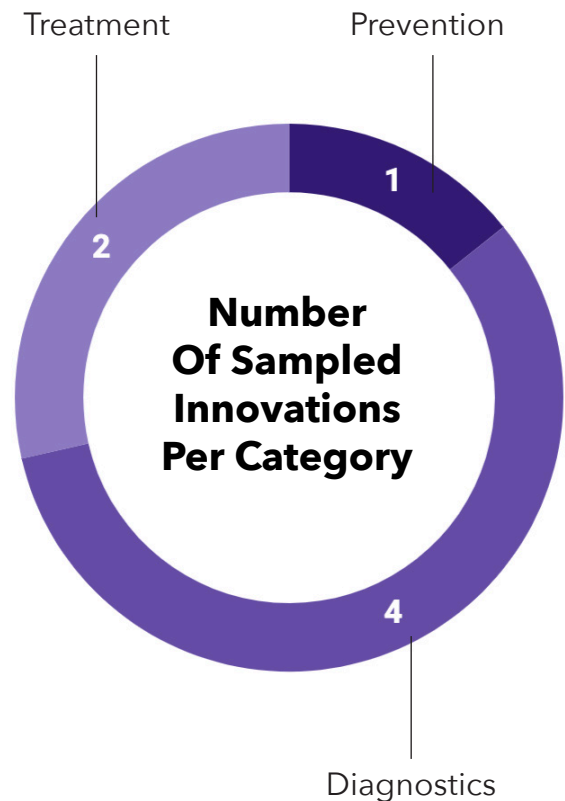
**Population:**  
**51.4 million**



**GDP Per Capita:**  
**\$1,711**



**Cities Rankings:**  
Nairobi: **22nd**



## Grants

- ➔ **National Research Fund:** Kenya's National Research Fund (NRF) launched a strategic call for research proposals to support interventions to combat the disease in the Country. The aim of the Call is to fund the scientific community to contribute to generating rapid and novel interventions to contain the COVID-19 outbreak. The funding is expected to go into developing innovative solutions to address the pandemic, including areas of detection, prevention, management, and health systems, among others.

# Kenya: Notable Innovations



## ➔ [Afya Rekod](#)

Startup

**City:** Nairobi, Kenya

Afya Rekod's COVID-19 app allows users to run a COVID-19 assessment test, track symptoms, consult doctors, and read current information on the virus.

**Category:** Diagnostics - Telehealth Diagnostics



## ➔ [Baobab Circle](#)

Startup

**City:** Nairobi, Kenya

Baobab Circle is originally designed to provide personalized health management for diabetes across Africa. To combat COVID-19, they are offering live consultations with local physicians to residents in Africa for free on their platform.

**Category:** Diagnostics - Telehealth Diagnostics



## ➔ [Penda Health](#)

Startup

**City:** Nairobi, Kenya

Penda Health operates a citywide network of medical centers that deliver affordable, high quality healthcare. All centers are located in low-income, densely populated areas that are expected to be hardest hit by COVID-19. Penda also operates a telemedicine hotline that enables medical providers to give free consultations to patients over the phone.

**Category:** Diagnostics - Telehealth Diagnostics



## ➔ [Kenyatta University](#)

University

**City:** Nairobi, Kenya

Kenyatta University has developed the country's first homegrown ventilator to help treat patients severely affected by the coronavirus.

**Category:** Treatment - Ventilators and Medical Devices



## ➔ [SaniTap](#)

Corporation

**City:** Nairobi, Kenya

SaniTap is designed to supply the daily handwashing requirements of a household, making it an ideal tool for social distancing and avoiding crowding at water access points.

**Category:** Prevention - Protective and Sanitation



# 24 | Netherlands

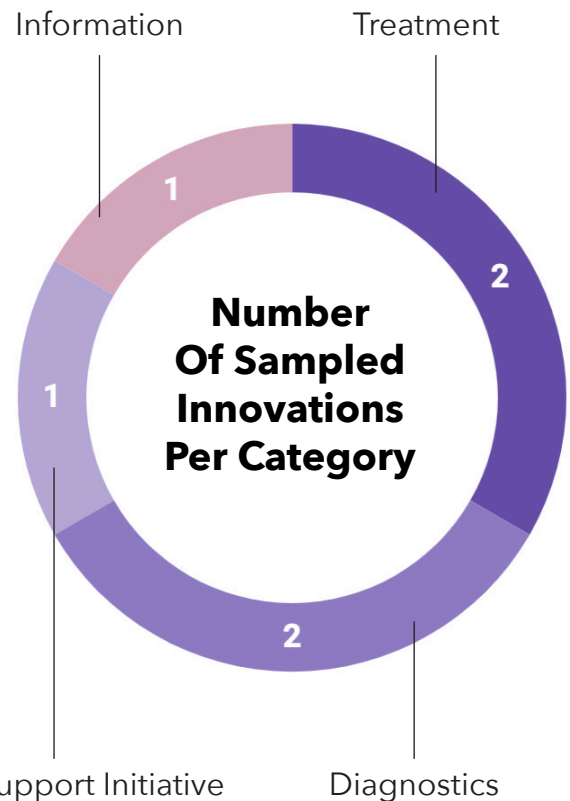
## General Information



**Population:**  
**17.2 million**



**GDP Per Capita:**  
**\$53,022**



## Grants

- ➔ **Corona bridging loan (COL):** Start-ups, scale-ups, and innovative SMEs that need financing as a result of the corona crisis can apply for the Corona bridging loan (COL). This measure is meant for businesses that are dependent on investors. SMEs that have financed their growth with their own resources can apply for COL under certain conditions.
- ➔ **Growth Facility Scheme:** If you have an SME in the Netherlands, you may be eligible for the Growth Facility Scheme, which makes it easier for SMEs to raise capital. Under the scheme, financiers who provide venture capital to SMEs receive a guarantee.

# Netherlands: Notable Innovations



## ➔ [Delft Imaging](#)

Startup

**City:** 's-Hertogenbosch, The Netherlands

Delft Imaging focuses on providing affordable, innovative diagnostic imaging techniques and solutions, and has developed a tool to help triage COVID-19 cases and indicate the affected lung tissue. The firm is specialised in tuberculosis (TB) screening, and with its proven CAD4TB has screened over 6 million people in 40 countries. The solution has been optimized to triage COVID-19 suspects and is being launched free-of-charge.

**Category:** Diagnostics



## ➔ [Luscii telemonitoring](#)

Startup

**City:** Amsterdam, The Netherlands

Luscii telemonitoring is a digital startup revolutionizing healthcare through ehealth, telemonitoring, remote monitoring, videocare, and other digital technologies. The team has developed OLVG corona check, an app intended for people who have health problems that may be caused by the coronavirus.

**Category:** Diagnostics - Telehealth Diagnostics



## ➔ [BeSure Healthcare](#)

Startup

**City:** The Hague, The Netherlands

BeSure Online is a digital health management platform for stroke prevention and rehabilitation. Using wearable devices, IoT, and medical equipment, the platform gathers information about patient conditions. The team has also developed Precise COVID-19, a remote patient monitoring and clinical decision support system for healthcare providers with COVID-19 patients.

**Category:** Treatment - Telehealth Treatment



## ➔ [Demcon](#)

Startup

**City:** Best, The Netherlands

Demcon's expertise relating to ventilation modules and system engineering resulted in the Dutch government placing an order in March for five hundred modules for a complete ventilation system. In response, Demcon launched an accelerated development program for the system so that it could contribute to the battle against coronavirus.

**Category:** Treatment - Ventilators and Medical Devices

# 25 | Japan

## General Information



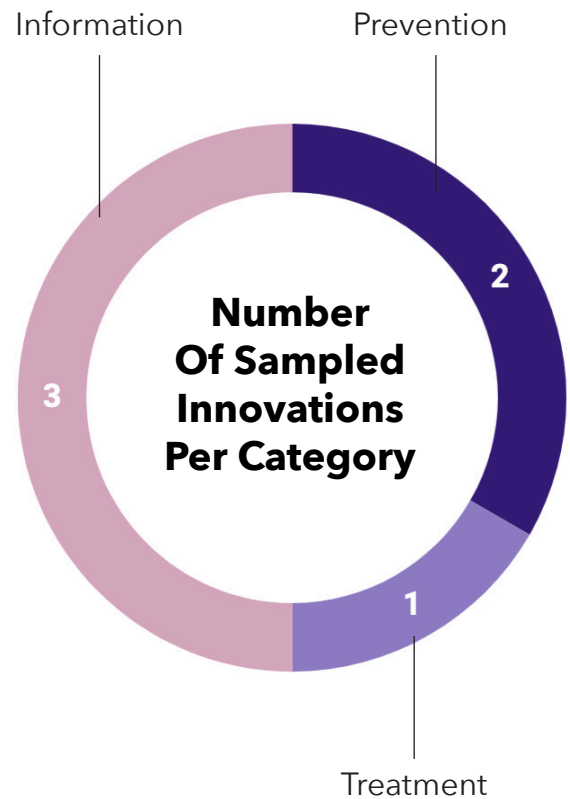
**Population:**  
126.5 million



**GDP Per Capita:**  
\$39,287



**Cities Rankings:**  
Tokyo: 66th



## Grants

- ➔ [Emergency Economic Measures for Response to COVID-19](#) to protect the lives and lifestyles of the public and move toward economic recovery: At approximately 1.1 trillion USD, over 20% of Japan’s GDP, this grant includes: measures in support of business; real interest-free unsecured loans; improved loan conditions and allowance of recurring debts to be refinanced as interest free loans; and deferment of the payments of national taxes and social security premiums without collateral and penalties.
- ➔ [Second Supplementary Budget \(Overview\) June 12, 2020](#): 31,911.4 billion Yen. This grant aims to: enhance the Employment Adjustment Subsidy and financial support; establish a rent support grant for SMEs; and support medical treatment providers
- ➔ [Moonshot Research & Development Program](#): 350 billion Yen in 3 years. The Moonshot Research and Development Program sets ambitious goals to attract people, and promotes challenging R&D projects with the aim of resolving difficult societal issues while bringing together the wisdom of researchers from all over the world.

# Japan: Notable Innovations



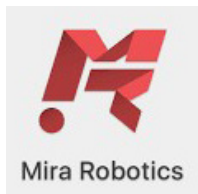
## ➔ [Hmcomm](#)

Startup

**City:** Tokyo, Japan

Hmcomm is a research and development venture company. Responding to the COVID-19, the innovative team has offered its AI auto-response system, Terry, to local authorities for free, in order to implement a “Corona Consultation Automatic Response Robot” solution.

**Category:** Information - Crisis Communication



## ➔ [Mira Robotics](#)

Startup

**City:** Kawasaki, Japan

Mira Robotics offers Services linking partner robots and robot intelligence to the cloud. In response to the COVID-19 emergency situation, Mira Robotics launched its Ugo robot which was originally designated to support Japan’s aging workforce. The robot has been remodeled with a hand attachment that uses ultraviolet light to kill viruses on door handles.

**Category:** Prevention - Protective and Sanitation



## ➔ [Takeda](#) ★

Corporation

**City:** Osaka, Japan

Takeda is a global research and development-driven pharmaceutical company. Takeda responded to the COVID-19 challenge promptly by initiating the Development of a Plasma-Derived Therapy for COVID-19. The company is working under the [“The Fight Is In Us”](#) campaign, seeking to mobilize people in the United States who have recovered from COVID-19 to donate their blood plasma, which contains vital antibodies.

**Category:** Prevention - Vaccine



## ➔ [Safecast](#)

Non-Profit

**City:** Tokyo, Japan

Safecast is an international volunteer driven non-profit organization whose goal is to create useful, accessible, and granular environmental data. Safecast has developed a web map, tracking people’s experiences around access to COVID-19 testing globally from original crowdsourced data.

**Category:** Information - Databases

# 26 | India

## General Information



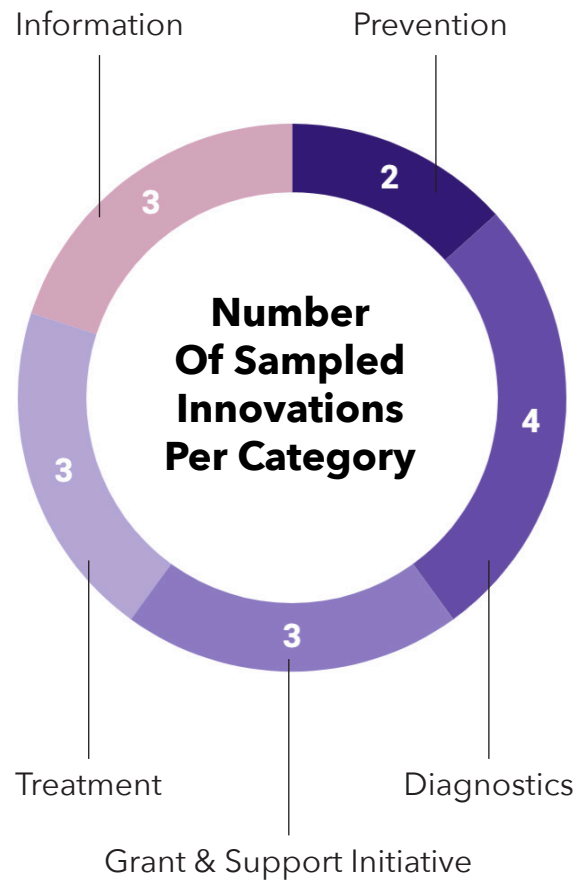
**Population:**  
1,353 million



**GDP Per Capita:**  
\$2,010



**Cities Rankings:**  
Bangalore: 40th  
New Delhi: 55th



## Grants

- ➔ **Technology Development Board and BPI France:** The Technology Development Board of India, in collaboration with Public Investment Bank of France (BPI), have initiated a call for proposals from Indian companies and enterprises to address protection and home-based respiratory intervention for COVID-19 patients.
- ➔ **COVID-19 Solution Challenge:** The Government of India has issued an invitation with rewards for sharing Innovative Solutions to the citizens and startups of India who have developed technologies, bioinformatics, datasets, or apps for diagnosis that can be leveraged in the fight against Corona.

# India: Notable Innovations



## ➔ [CareMother](#)

Startup

**City:** Mumbai, India

CareMother offers Personalised Pregnancy & Baby Care solutions for Mothers, Doctors & Hospitals. In response to the COVID-19 crisis, the team has developed an app, Ada's COVID-19 assessment and screener, that checks symptoms and suggests the tests that can be undergone by pregnant women.

**Category:** Diagnostics - Telehealth Diagnostics



## ➔ [Biodesign Innovation Labs](#)

Startup

**City:** Bangalore, India

Biodesign Innovation Labs is an international team of designers, engineers, doctors, and industry experts working on building affordable life-support systems. Biodesign is offering to license its portable mechanical ventilators to any company that wants to produce them on a mass scale.

**Category:** Treatment - Ventilators and Medical Devices



## ➔ [G1 Health](#)

Startup

**City:** Hyderabad, India

G1.health is a Health Tech Company which aims to save lives in emergency care and drive behavioral changes in chronic patients. The team has developed G1, an integrated healthcare platform and can help the government manage the COVID-19 pandemic through its unique collaborative solutions: Telehealth Screening and Alerting First Responders.

**Category:** Diagnostics - Telehealth Diagnostics



## ➔ [Mylab Discovery Solutions](#) ★

Corporation

**City:** Pune, India

Mylab Discovery Solutions specializes in molecular diagnostic detection kits. The team has developed the first made-in-India COVID-19 test kit that has received commercial approval from the government. Mylab COVID-19 test kits use advanced protocols which can reduce testing time by 65%, and cost nearly one-fourth of the currently procured kits.

**Category:** Diagnostics - Test Kits

# 27 | Russia

## General Information



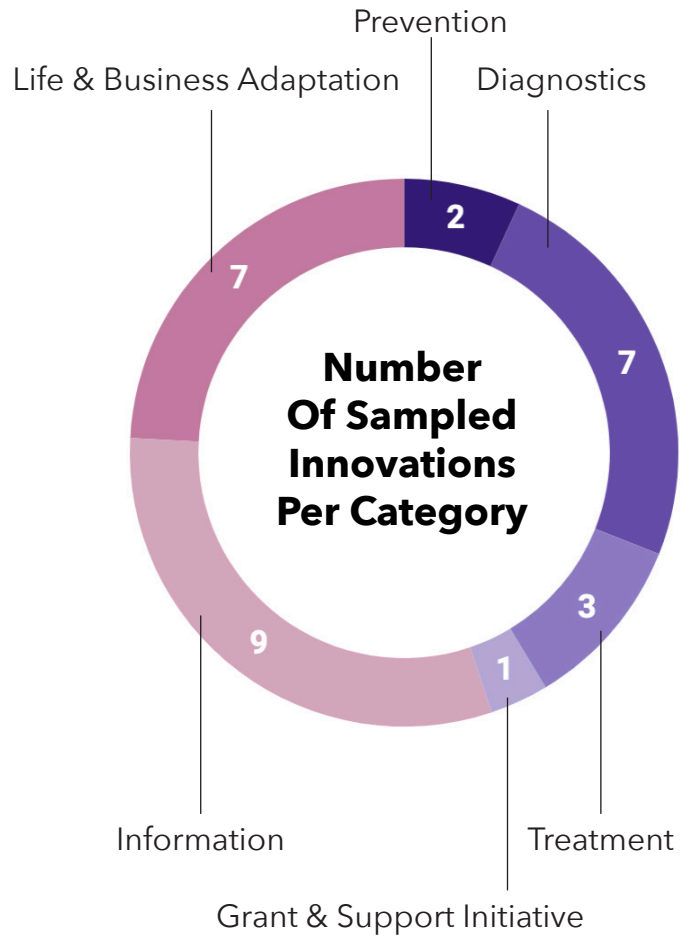
**Population:**  
144.5 million



**GDP Per Capita:**  
\$11,476



**Cities Rankings:**  
Moscow: 17th



## Grants

- ➔ **Russian Airline Subsidy:** Russia’s government is allocating Rb23.4 billion (\$317 million) to the country’s carriers to provide financial support as the coronavirus crisis begins to affect their operations substantially.
- ➔ **The Moscow City Mandatory Health Insurance Fund:** The Moscow City Mandatory Health Insurance Fund is introducing three new tariffs for paying for the medical services needed to treat coronavirus infections in children and adults in city hospitals. This was reported by the deputy mayor of the capital on social development Anastasia Rakova.

# Russia: Notable Innovations



## ➔ [Care Mentor AI](#)

Startup

**City:** Moscow, Russia

Care Mentor AI is developing its artificial intelligence system to accelerate the analysis of chest x-ray and CT scans for patients with suspected viral pneumonia, which is now mostly caused by coronavirus.

**Category:** Diagnostics – Big Data and Profiling



## ➔ [Yandex](#)

Corporation

**City:** Moscow, Russia

Yandex has launched a beta version of the coronavirus test delivery service. When fully launched, anyone will have the ability to order a test at home.

**Category:** Diagnostics – Test Kits



## ➔ [Department of Information Technology](#)

Public Sector

**City:** Moscow, Russia

For rides during quarantine, citizens can obtain digital codes at the Mayor's website, by SMS, or by phone call. Efficient control is carried out by a smart system that combines cell data, travel cards, and city databases, as well as license plate and facial recognition

**Category:** Information – Crisis Communication



## ➔ [DocDoc](#)

Startup

**City:** Moscow, Russia

DocDoc has more than 250 doctors who provide free consultations on coronavirus through DocDoc's online consultation service.

**Category:** Diagnostics – Telehealth Diagnostics



## ➔ [Botkin AI](#)

Startup

**City:** Moscow, Russia

Botkin AI has developed a platform for the analysis and processing of medical information using artificial intelligence, with the aim of reducing the risk of missing signs of coronavirus pneumonia.

**Category:** Prevention – Big Data and Profiling



# 28 | Portugal

## General Information



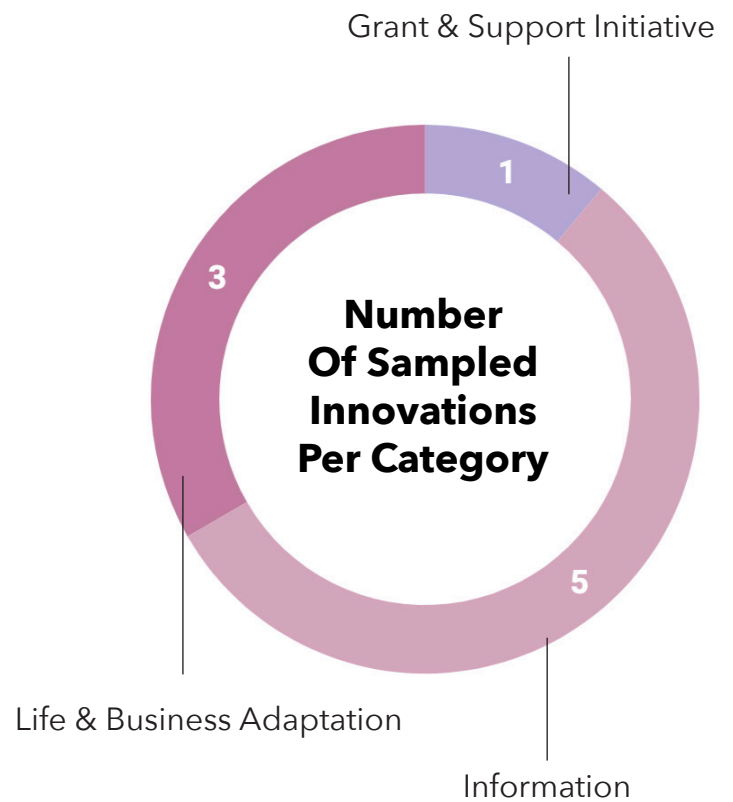
**Population:**  
**10.3 million**



**GDP Per Capita:**  
**\$23,403**



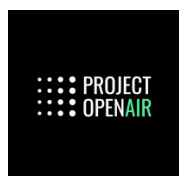
**Cities Rankings:**  
Lisbon: **72nd**



## Grants

- ➔ **Portuguese State aid schemes:** The €13 billion for Portuguese State aid schemes will enable Portugal to provide direct grants and public guarantees on loans to help SMEs and large companies cover investment and working capital needs, and to continue their activities in these difficult times.
- ➔ **SME Grants:** Businesses hit by the economic impact of coronavirus have access to a moratorium on outstanding loans, several credit lines with advantageous conditions, grants, and other financial incentives, provided by banks, sovereign guarantees, and the Portugal 2020 Programme.

# Portugal: Notable Innovations



## ➔ [Project Open Air](#)

Startup

**City:** Lisbon, Portugal

Project Open Air is a community of builders who are working on medical devices that offer fast and easy solutions that can be reproduced and assembled locally worldwide.

**Category:** Treatment - Ventilators and Medical Devices



## ➔ [MobiQueue](#)

Startup

**City:** Braga, Portugal

MobiQueue offers remote queue and remote service (video call) for avoiding people agglomerations and unnecessary displacements to fight coronavirus propagation. This service is now free to help people during the crisis.

**Category:** Life & Business Adaptation - Shopping

## #stayathome

## ➔ [Stay at Home](#)

Startup

**City:** Lisbon, Portugal

Stay at Home World is an online live map that shows how many people are staying at home by allowing the users to indicate their locations.

**Category:** Information - Databases



## ➔ [TraceCOVID-19](#)

Startup

**City:** Porto, Portugal

TraceCOVID-19 is software as a medical device in the form of an app to identify, isolate, and monitor COVID-19 cases and contacts.

**Category:** Diagnostics - Big Data and Profiling



## ➔ [Tech4COVID-19](#)

Startup

**City:** Lisbon, Portugal

Tech4COVID-19 is a platform for people around the world to collaborate, raise funds, and contribute to solving various problems caused by COVID-19.

**Category:** Life & Business Adaptation - Community and Mental Health

# 29 | Philippines

## General Information



**Population:**  
106.7 million



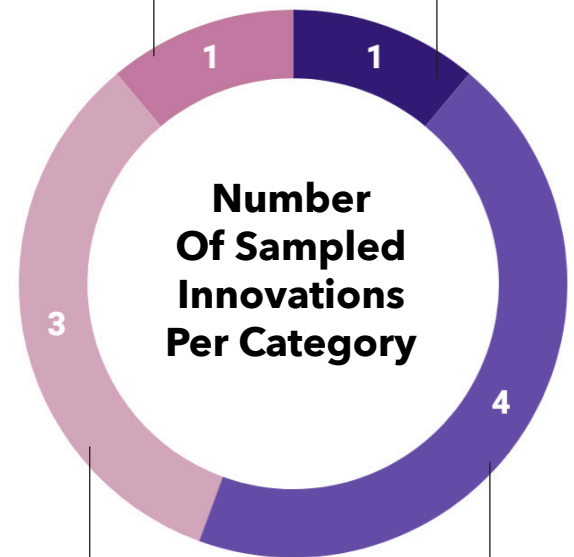
**GDP Per Capita:**  
\$3,103



**Cities Rankings:**  
Manila Area: 64th

Life & Business Adaptation

Prevention



Information

Diagnostics

## Grants

- ➔ **Emergency Subsidy Program (ESP):** A social amelioration program to provide cash or non-cash subsidy to 18 million household beneficiaries, in the amount of at least Php 5,000.00 to a maximum of Php 8,000.00 per month for 2 months, for basic food, medicine, and toiletries.
- ➔ **COVID-19 Assistance to Restart Enterprises (CARES) Program:** A One Billion Peso special financing program under the Pondo sa Pagbabago at Pag-aseño (P3) to support micro and small businesses affected by the economic impact of COVID-19 in the country
- ➔ **COVID-19 Adjustment Measures Program (CAMP):** A safety net program for affected workers in the formal sector to mitigate the adverse economic impacts of reduction of income brought about the COVID-19 pandemic. It includes a one-time financial assistance of Php 5,000.00 and employment facilitation.

# Philippines: Notable Innovations



## ➔ [ThingsPH](#)

Startup

**City:** Pasig, Philippines

ThingsPH has developed Project Greengrass, a free online community map of real-time street activity monitoring using CCTV networks and AI video analytics.

**Category:** Prevention - Automation



## ➔ [Zennya Health](#)

Startup

**City:** Taguig, Philippines

Zennya Health provides end-to-end essential solutions designed to help businesses reopen the workplace and manage the health and safety of employees, customers, partners, and communities during the COVID-19 crisis.

**Category:** Diagnostics - Telehealth Diagnostics



## ➔ [Sakay](#)

Startup

**City:** Quezon City, Philippines

Sakay provides free directions for informal-transit based areas like the Philippines. In light of COVID and the ensuing suspension of mobility, Sakay tools help governments plan and visualize crisis-response transport routes.

**Category:** Information - Crisis Communication



## ➔ [StaySafe.ph](#)

Corporation

**City:** Paranaque, Philippines

Developed by Multisys, StaySafe.ph is a community-driven contact tracing, health condition reporting, and social distancing system to help aid Filipinos against the Coronavirus

**Category:** Diagnostics - Big Data and Profiling



## ➔ [FightCOVID.app](#)

Startup

**City:** Quezon City, Philippines

Launched by White Widget, FightCOVID.app is an application made to assess risks for the COVID-19 virus for Filipino residents.

**Category:** Diagnostics - Telehealth Diagnostics

# 30 | Brazil

## General Information



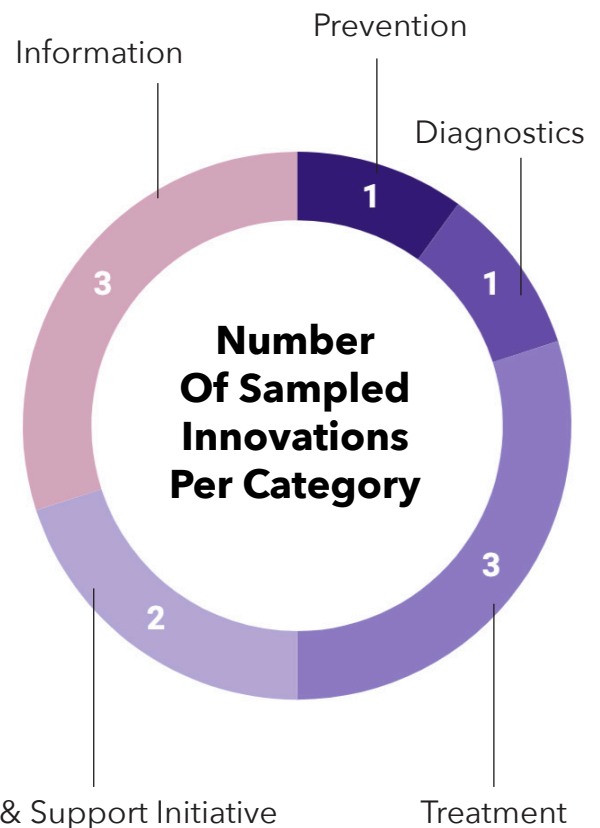
**Population:**  
209.5 million



**GDP Per Capita:**  
\$8,999



**Cities Rankings:**  
São Paulo: 54th



## Grants

- ➔ **Learning Support Fund:** The Learning Support Fund during COVID–19 was created out of an alliance between the Lemann Foundation and Imaginable Futures in response to the challenges that education faces in times of a pandemic. The Fund will support projects that offer immediate support and short-term results to promote learning and well-being for students, educators, and communities (the project must address at least one of these audiences).
- ➔ **MCTIC:** The Ministry of Science, Technology, Innovations, and Telecommunications has made two calls to face the COVID–19 pandemic, one of R 50m for projects in the areas of diagnostics, vaccines, clinical tests with patients, pathogenesis of the virus, and other topics related to combating COVID–19, and one of R 50m for projects on 7 technological orders (sequencing of the virus genetic code, two clinical trial protocols with a patient using drugs to combat COVID–19, a study using Artificial Intelligence to select molecules that can inhibit viral replication, innovative research for diagnostic tests, development vaccines, and social projects).
- ➔ **Sao Paulo Research Foundation (FAPESP):** FAPESP offers a special financing line in the amount of R\$ 20 million, under PIPE-Phase III and in partnership with Finep, to support micro and small companies and startups willing to apply or scale innovative processes or products related to the disease.

# Brazil: Notable Innovations



## [W3.CARE](#)

Startup

**City:** São Paulo, Brazil

W3.CARE developed Telecovid, a free and anonymous platform where users easily input their symptoms, previous diseases, and medications. The high risk patients are directly approached through telemedicine by 60 volunteer MDs, based on WHO risk classification.

**Category:** Treatment - Telehealth Treatment



## [Magnamed](#)

Startup

**City:** São Paulo, Brazil

Magnamed helps medical facilities during the crisis by recommending the right ventilator they need based on their situation with the coronavirus.

**Category:** Treatment - Ventilators and Medical Devices



## [Mascara para Todos](#)

Other

**City:** São Paulo, Brazil

Mascara para Todos created a Public and Interactive Map where anyone can view and register points of sale for Masks, Alcohol Gel, Gloves, and Online Psychological Help anywhere in Brazil.

**Category:** Information - Databases



## [Colab](#)

Startup

**City:** São Paulo, Brazil

Colab got together with top tier infectologists and launched a tracking application within its app where people can provide valuable intel for government officials to better formulate their crisis response.

**Category:** Information - Crisis Communication



## [Trion 3D](#)

Startup

**City:** São Paulo, Brazil

Trion 3D developed a design of an easy-to-use clip to transform protection glasses into a face shield mask. The design file can be accessed for free on the webpage.

**Category:** Prevention - Protective and Sanitation

# 31 | Nigeria

## General Information



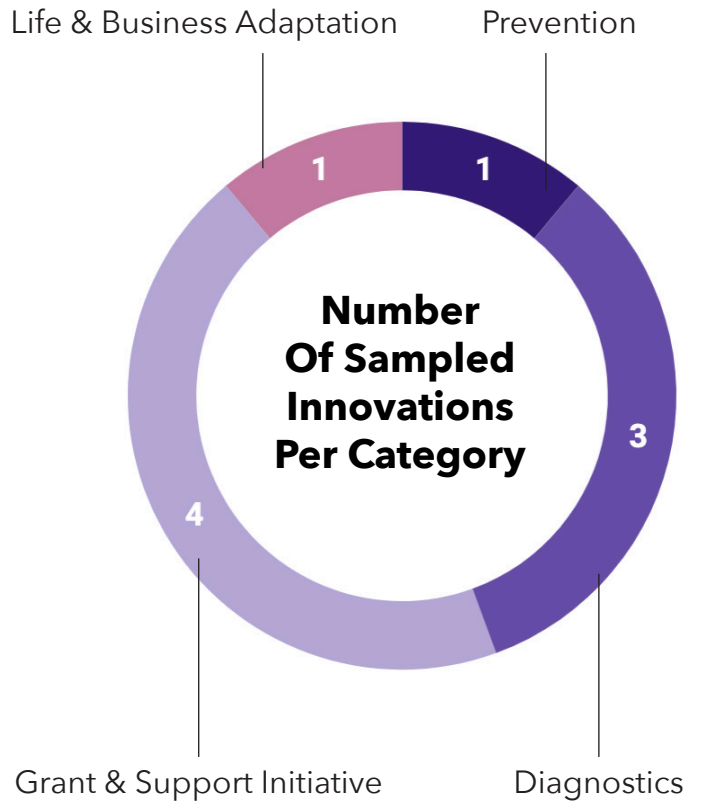
**Population:**  
195.9 million



**GDP Per Capita:**  
\$2,028



**Cities Rankings:**  
Lagos: 48th



## Grants

- ➔ **Healthcare Research and Development Grant:** The Central Bank of Nigeria introduced a grant to help strengthen the public healthcare system with innovative financing of R&D in new and improved drugs, vaccines, and diagnostics of infectious diseases in Nigeria, specifically COVID-19

# Nigeria: Notable Innovations



➔ [Wellvis Health](#)

Startup

**City:** Lagos, Nigeria

Wellvis Health developed an app that determines COVID-19 risk factors and determines if there is a need to call the Disease Control Hotline.

**Category:** Diagnostics - Telehealth Diagnostics



➔ [MDaaS](#)

Startup

**City:** Lagos, Nigeria

MDaaS is a tech startup building Africa's largest network of diagnostic and primary care facilities. To combat the coronavirus, the startup is helping health organizations and African governments create mass testing centers. The mass testing centers include drive-through testing and booth testing sites to attend to a high volume of patients so that they do not strain the healthcare system in Nigeria.

**Category:** Diagnostics - Test Kits



➔ [Arone](#)

Startup

**City:** Enugu, Nigeria

Arone is building autonomous drones for fast delivery of medical supplies to and from clinics, hospitals, labs, and health facilities in Africa, which could be of great help with the coronavirus crisis.

**Category:** Prevention - Automation



[VirCare](#)

Startup

**City:** Jos, Nigeria

VirCare is a one stop shop community-based solution that addresses issues related to COVID-19 by helping users to track and report transmissions, find nearby testing sites, and help users get updates and information from reliable health institutions. There is also online testing. Within the community, users can also learn online, report likely outbreaks in their communities, and more.

**Category:** Information - Crisis Communication



# 32 | South Africa

## General Information



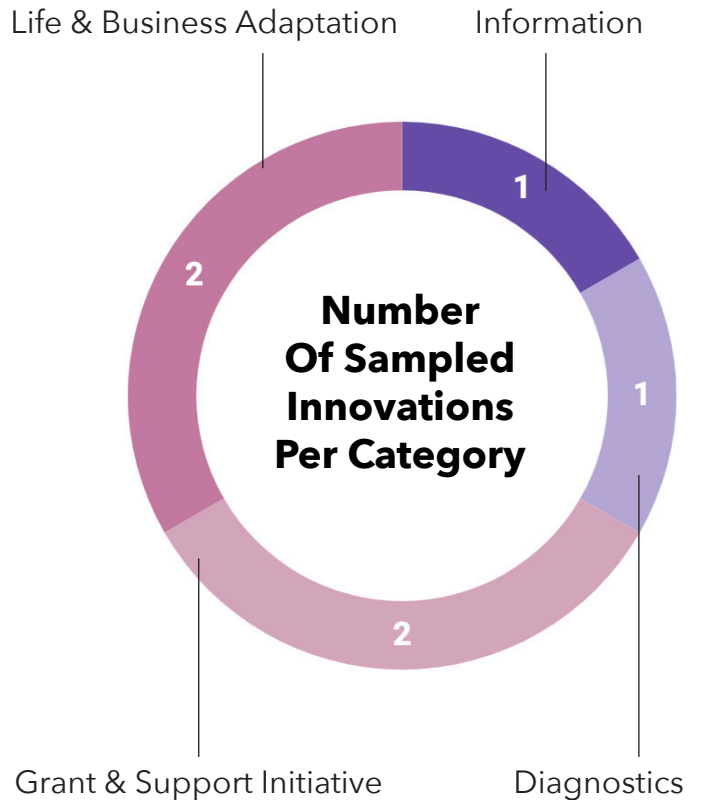
**Population:**  
57.8 million



**GDP Per Capita:**  
\$6,374



**Cities Rankings:**  
Cape Town: 79th



## Grants

- ➔ **COVID-19 Africa Rapid Grant Fund:** South Africa’s National Research Foundation, in partnership with other institutions, announced the Africa Rapid Grant Fund, which seeks to contribute to the African regional and continental response to the COVID-19 response. This call covers three strands: research, science engagement: call to science and health journalists and communicators, and science engagement: call to science advisers, and is open for projects from 16 countries from Sub-Saharan Africa.
- ➔ **Debt Relief Financing Scheme for SMMEs:** South Africa’s Government created a Financing Scheme for Small, Medium and Macro Enterprises which was initially allocated an amount of R200 million and later increased to R500 million, after the department changed its approach to the Business Growth and Resilience Facility. The aim of the fund is to assist SMMEs with working capital as economic activities have been negatively affected by COVID-19.

# South Africa: Notable Innovations



## ➔ [Ecorbit](#)

Startup

**City:** Pretoria, South Africa

Ecorbit designed the COVID-19 workplace management program (CWMP) with the aim of ensuring businesses/employers implement control measures to prevent the workplace transmission of COVID-19 that may result in occupational injury and ill-health, and to provide safe and healthy workplaces.

**Category:** Life & Business Adaptation - Work



## ➔ [GreenFingers Mobile](#)

Startup

**City:** Cape Town, South Africa

GreenFingers Mobile is matching aggregate food supply to a quantifiable, growing demand in communities affected by COVID-19 through the re-purposing of the GFM platform to impact these issues.

**Category:** Life & Business Adaptation - Shopping



## ➔ [Signapps](#)

Startup

**City:** Cape Town, South Africa

Signapps is a mobile app used by healthcare practitioners to communicate about patient care. Messaging between members of the health-care team, many of them remotely, enables a large number of experts to be involved in the patient care without necessarily being on site. This is critical in today's healthcare space where resources and manpower are already stretched.

**Category:** Information - Crisis Communication



## ➔ [Envisionit Deep AI](#)

Startup

**City:** Johannesburg, South Africa

Envisionit Deep AI developed RADIFY to enable radiologists to diagnose more images, more consistently, and in less time, whilst prioritizing care for people who need it most. In response to the COVID-19 outbreak, they are offering RADIFY to any public and private organization using X-rays in the identification and treatment of COVID-19 pneumonia.

**Category:** Diagnostics - Big Data and Profiling



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