

The materiality of Covid-19: selling and buying pandemic objects online



MEDIATORI ALGORITMICI
Final Synthesis Design Studio
Sect. C3 — LM in Communication
Design, A.A. 2021/2022

D E N -
S I T Y
G N +



POLITECNICO
MILANO 1863

SCHOOL OF DESIGN

The materiality of Covid-19. *selling and buying pandemic objects online*

“Covid object” is a label fit to any product in close relation with the pandemic. This research’s goal is to find out what these objects are, what was the price fluctuation and how the open-source community reacted when the production chain failed to deliver the needed goods.

Protocol 01

Which are the covid-related products sold worldwide on the Amazon marketplaces?

Protocol 02

Which were the most sold products in Italy during the pandemic and how did their price fluctuate through time?

Protocol 03

How did the open source communities react to the sudden need of medical supplies in the context of Covid-19?

The goal of the research is to objectively depict the global approach to “covid objects” to better understand the materiality of covid in this post-pandemic future.

AUTHORS

Daniele Dell’Orto
Martina Francella
Octavian Husoschi
Martina Melillo
Matteo Pini
Alessandro Quets
Shan Huang

FACULTY

Michele Mauri
Ángeles Briones
Gabriele Colombo
Simone Vantini
Salvatore Zingale

TEACHING ASSISTANTS

Elena Aversa
Andrea Benedetti
Tommaso Elli
Beatrice Gobbo
Anna Riboldi



Which are the covid-related products sold worldwide on the Amazon marketplaces?

Lockdowns and quarantines made it so that buying online has become the preferred method over getting out of your home and to a supermarket. The drift towards online marketplaces has been sudden and not without repercussions. One of those direct consequences has been the growth in sales of existing products (masks, tests-kits, gels, etc.), and the creation of new products specifically thought to solve pandemic problems (door opener keychain), all things that we've slowly started to call "covid objects"

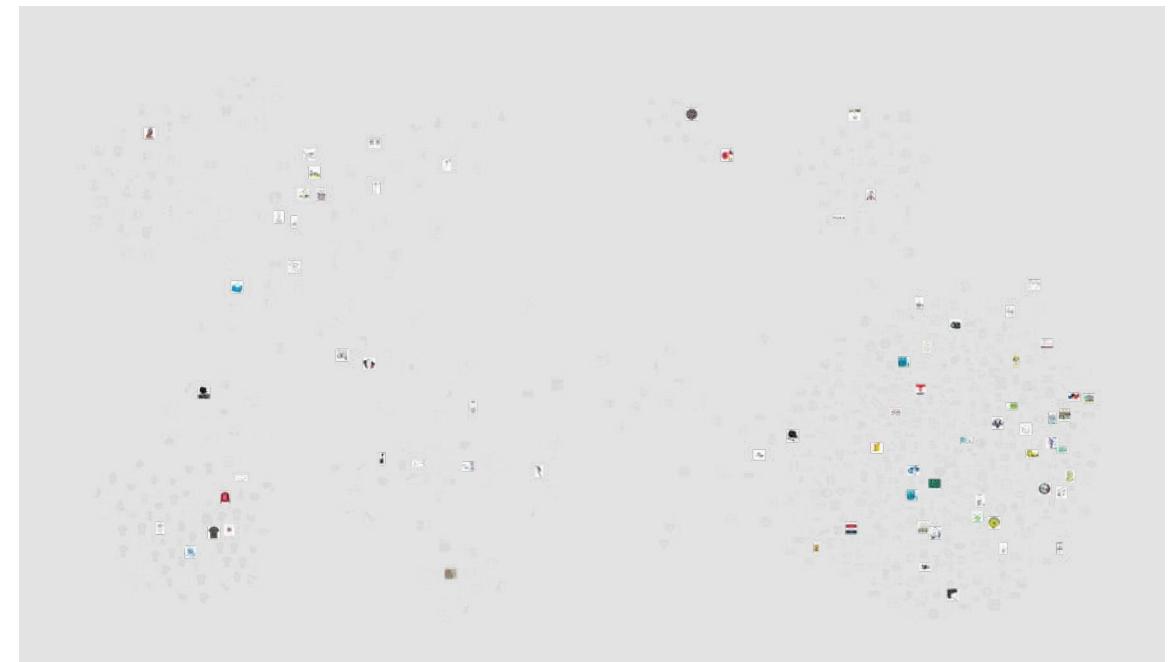
PRODUCTS SOLD ON
COUNTRY-SPECIFIC AMAZON
MARKETPLACES

Amazon.com.tr (Turkey), Amazon.pl (Poland) and Amazon.cn (China) have not been considered due to their low relevance

 **Amazon.com** 88 products

Relevant queries used to search for products

Q "covid", "covid stuff"



CA Amazon.ca 33 products

Q "covid-19", "coronavirus", "virus"



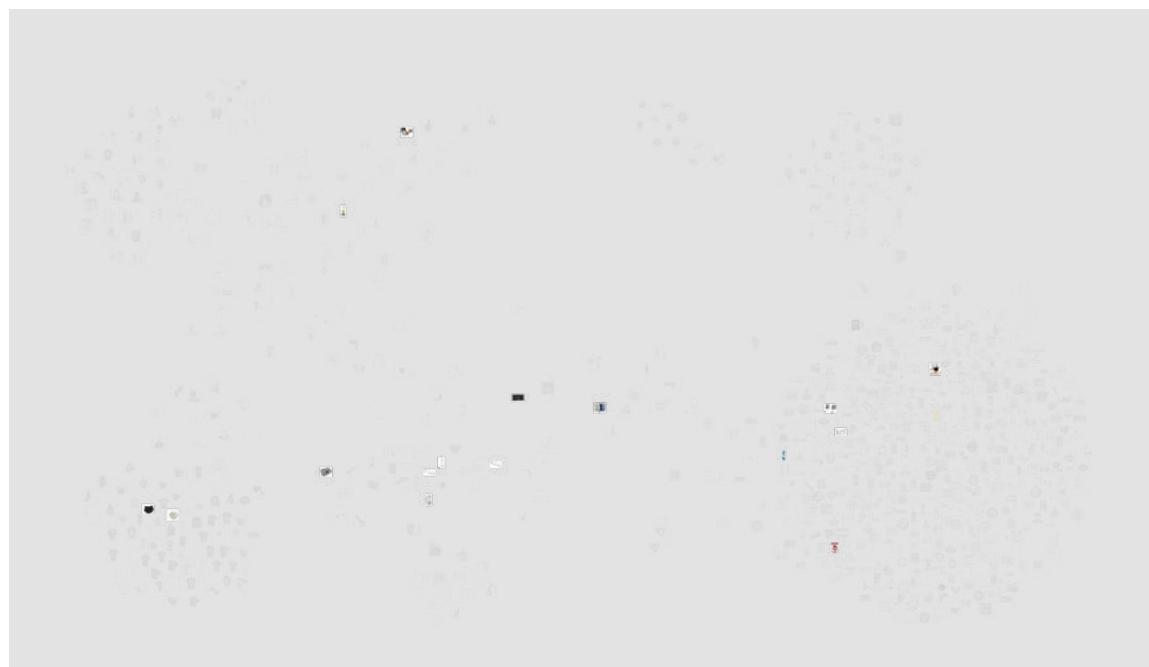
MX Amazon.com.mx 78 products

Q "covid-19", "coronavirus", "virus"



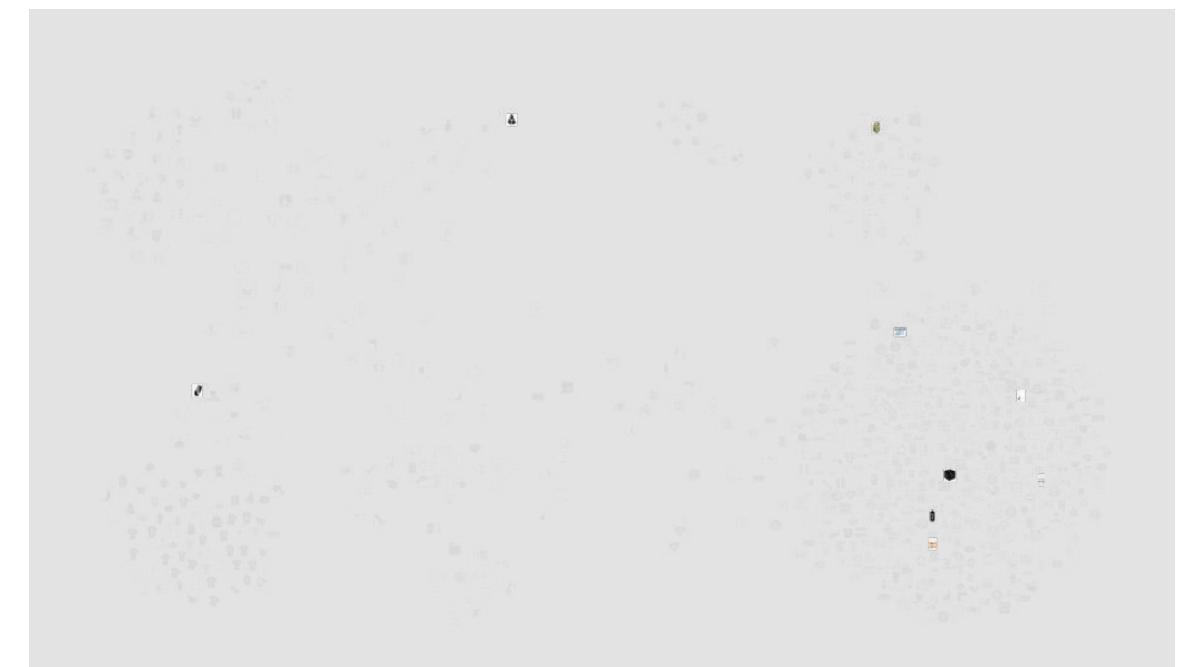
BR Amazon.com.br 20 products

"objetos covid"
Q "covid-19", "coronavirus", "virus"



AU Amazon.com.au 9 products

Q "covid-19", "coronavirus", "virus"



France Amazon.fr 67 products



"covid objets"
Q "covid", "coronavirus", "virus"

In some countries
only few queries have
relevant products

Italy Amazon.it 20 products



Q "covid-19"

Some country have very
few relevant products

Germany Amazon.de 7 products



Q "covid-19", "coronavirus"

Netherlands Amazon.nl 34 products



Q "covid-19", "coronavirus", "virus"

SE Amazon.se 49 products

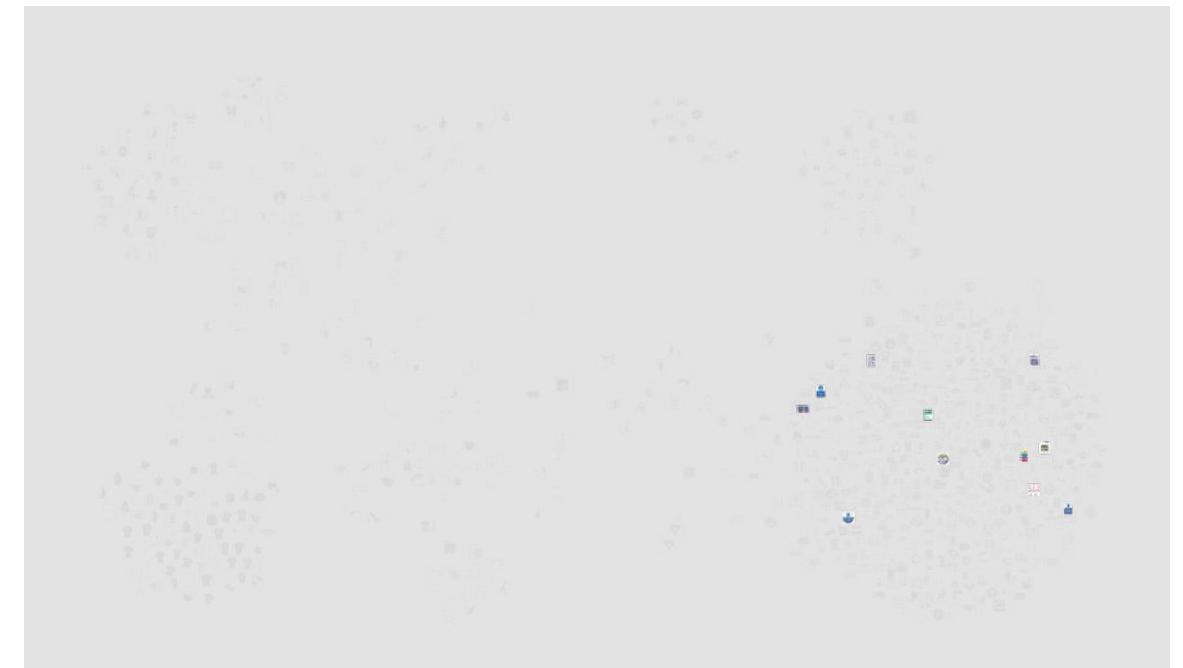


ES Amazon.es 50 products



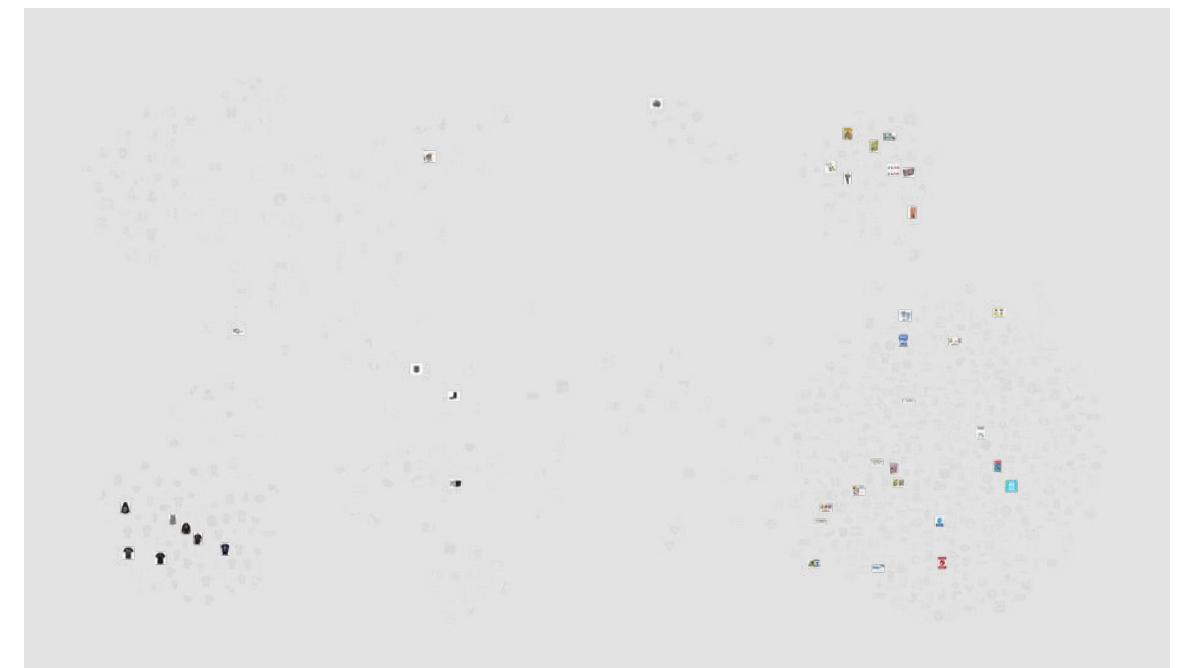
Q "covid-19", "covid", "coronavirus"

UK Amazon.co.uk 13 products



Q "coronavirus", "virus", "covid-stuff"

IN Amazon.in 116 products



"covid stuff", "covid"

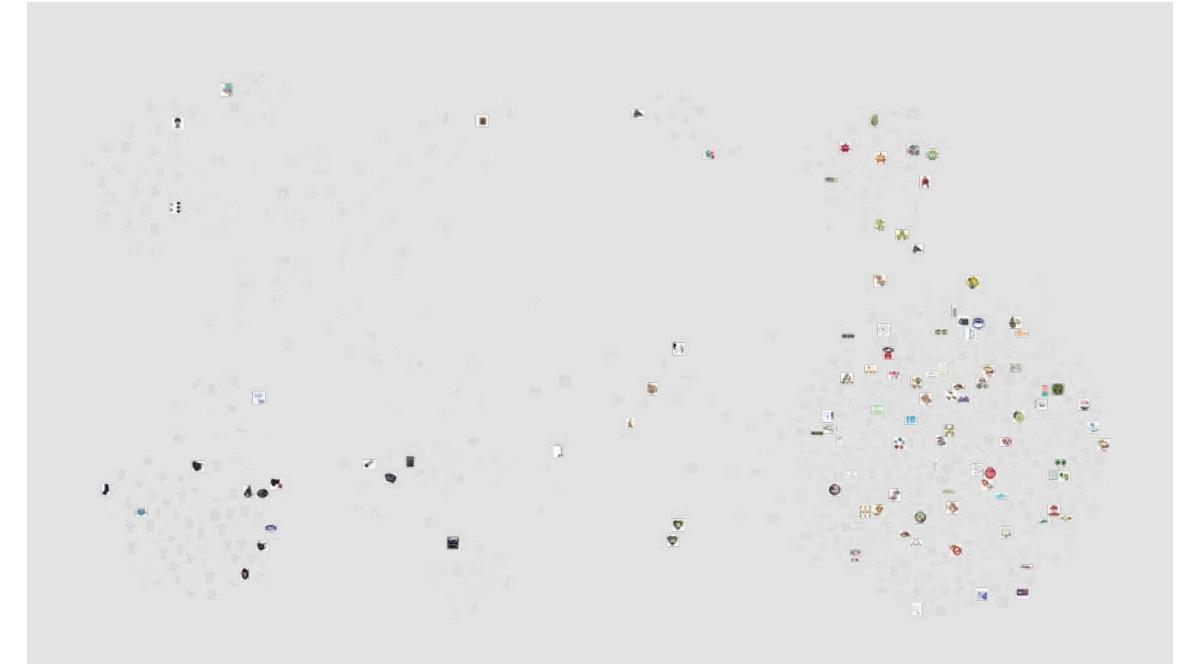
Q "covid-19", "coronavirus", "virus"

 Amazon.ae 144 products

” covid تانیاک“ (covid objects)
Q “covid-19”, “coronavirus”, “virus”

 Amazon.sa 119 products

” دیفوك -19“ (covid-19)
Q “انوروك سوريف“ (coronavirus), “سوريف“ (virus)

 Amazon.sg 68 products

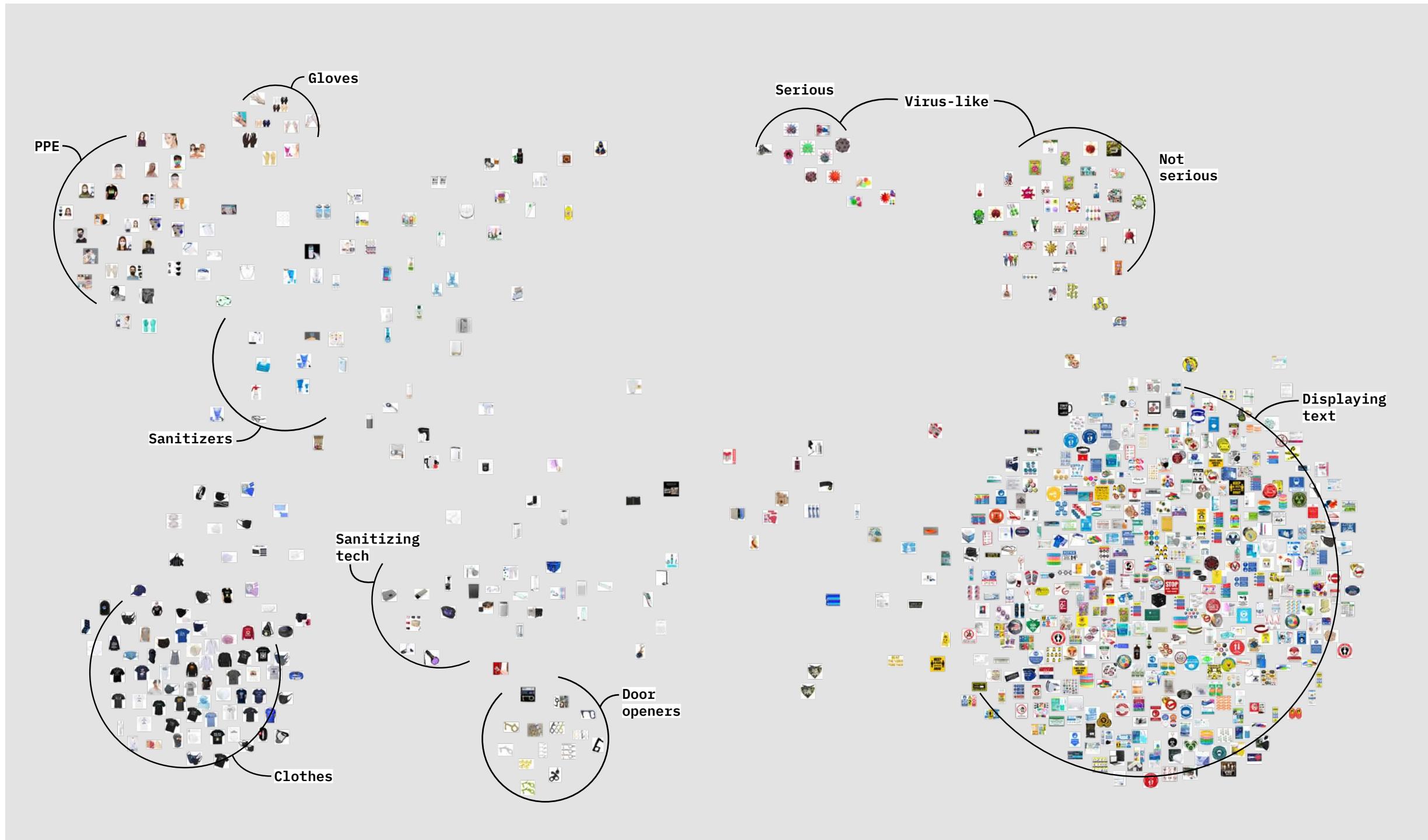
Q “covid-19”, “coronavirus”, “stuff for covid”

 Amazon.co.jp 18 products

Country-specific queries
”コロナウイルス“ (coronavirus)
Q “covid-19”, “covidオブジェクト“ (covid objects)

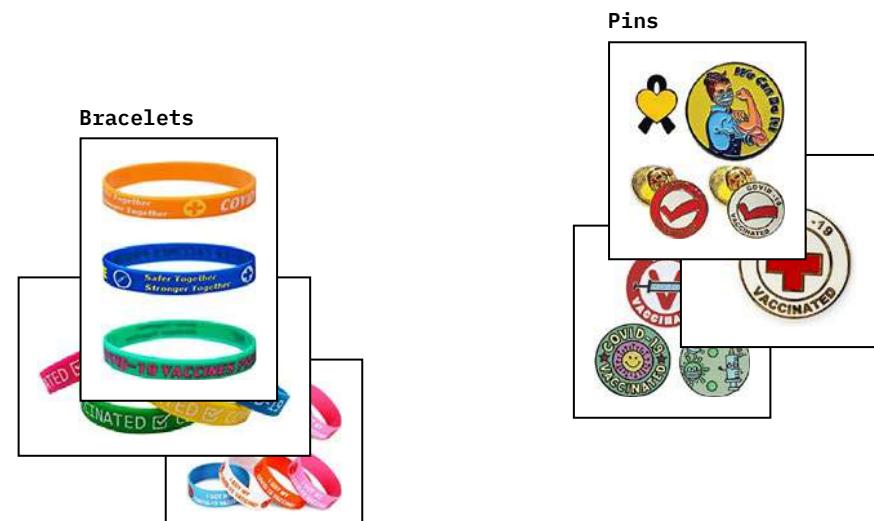


IMAGE SIMILARITY CLUSTERING OF PRODUCTS SOLD WORLDWIDE ON AMAZON MARKETPLACES

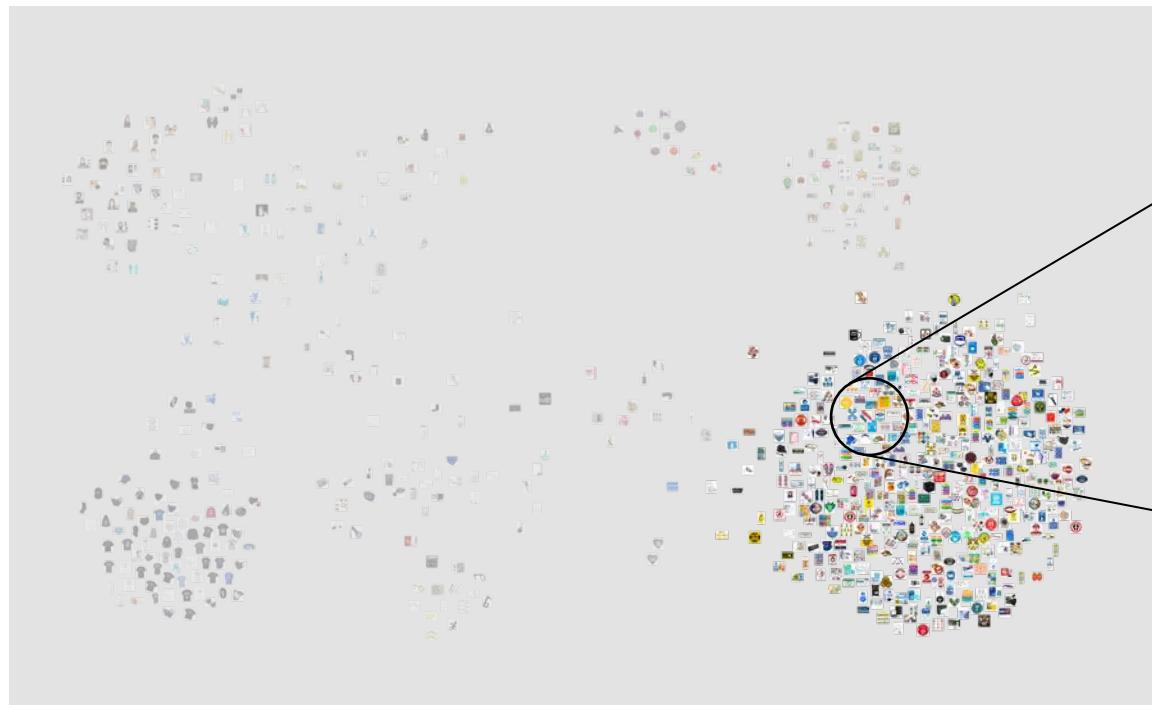


Most products display text to convey a message

Most products sold worldwide on the Amazon marketplaces analyzed convey a message through text. Those products are mainly stickers and signs for social distancing and safety norms, or bracelets and pins about vaccination.



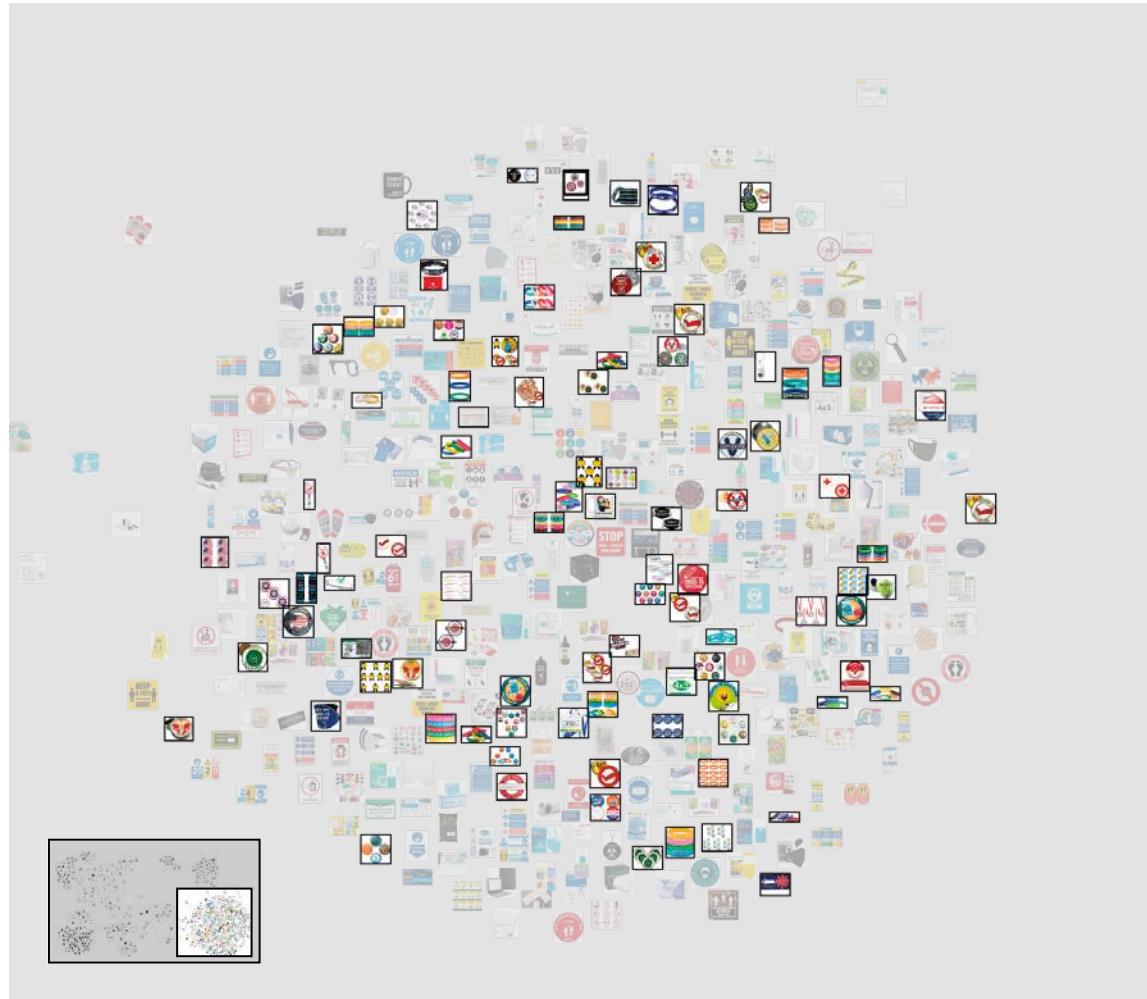
HIGHLIGHT OF PRODUCTS DISPLAYING TEXT



Most products about vaccination are pro-vax

The messages conveyed with pins and bracelets are mainly a positive and personal stance declaration about vaccines, such as "I got my vaccine done". the majority of this kind of products is on Amazon.ae and only one product in the pool contains an anti-vax message.

HIGHLIGHT OF PRODUCTS ABOUT VACCINATION



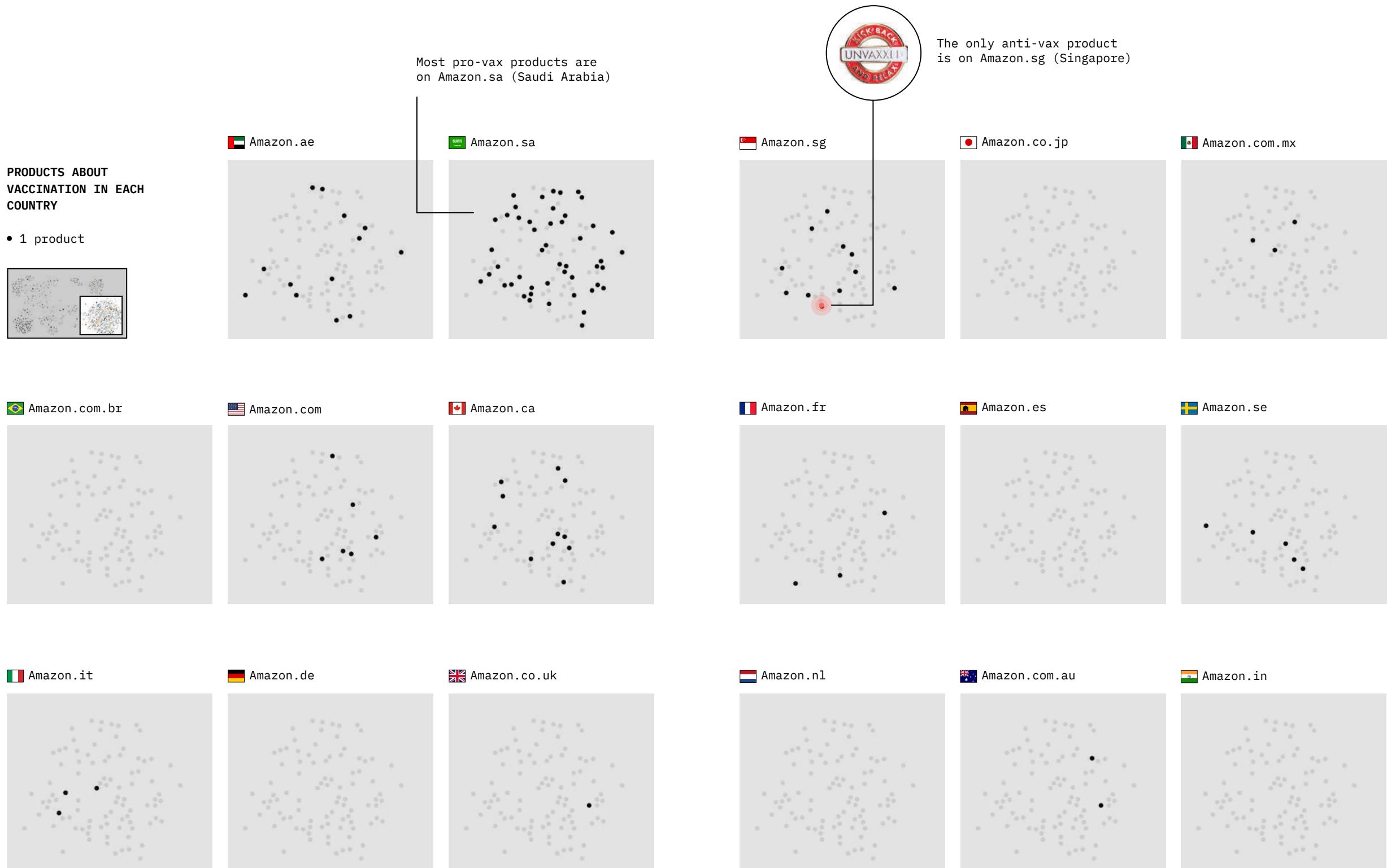
Pro-vax products 93



Anti-vax products 1



Even socks are used as a way to convey a message



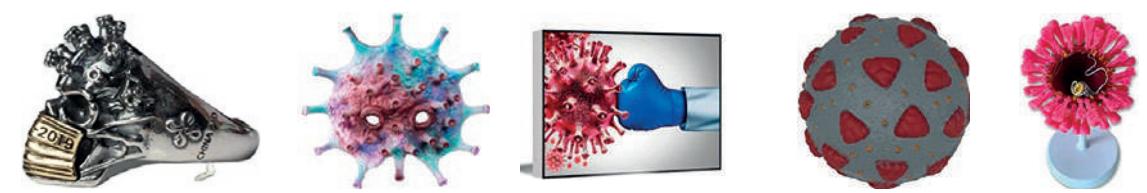
The virus is mainly represented in a non-serious way

Some products leverage a representation of the virus to their potential buyers. In these products, the virus is visualized in a colorful and non-serious way rather than in a serious one.

PRODUCTS REPRESENTING THE VIRUS



Examples of serious representations

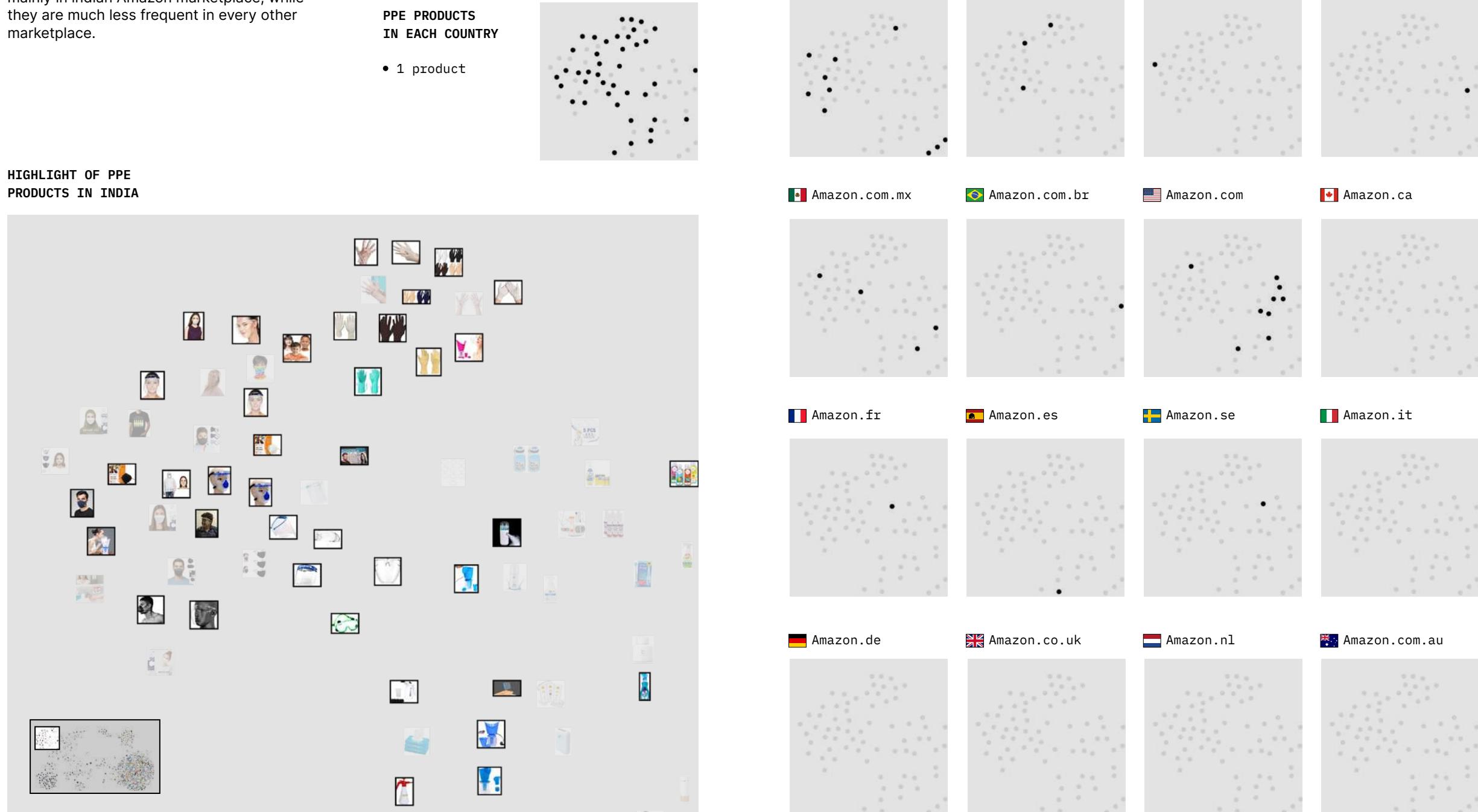


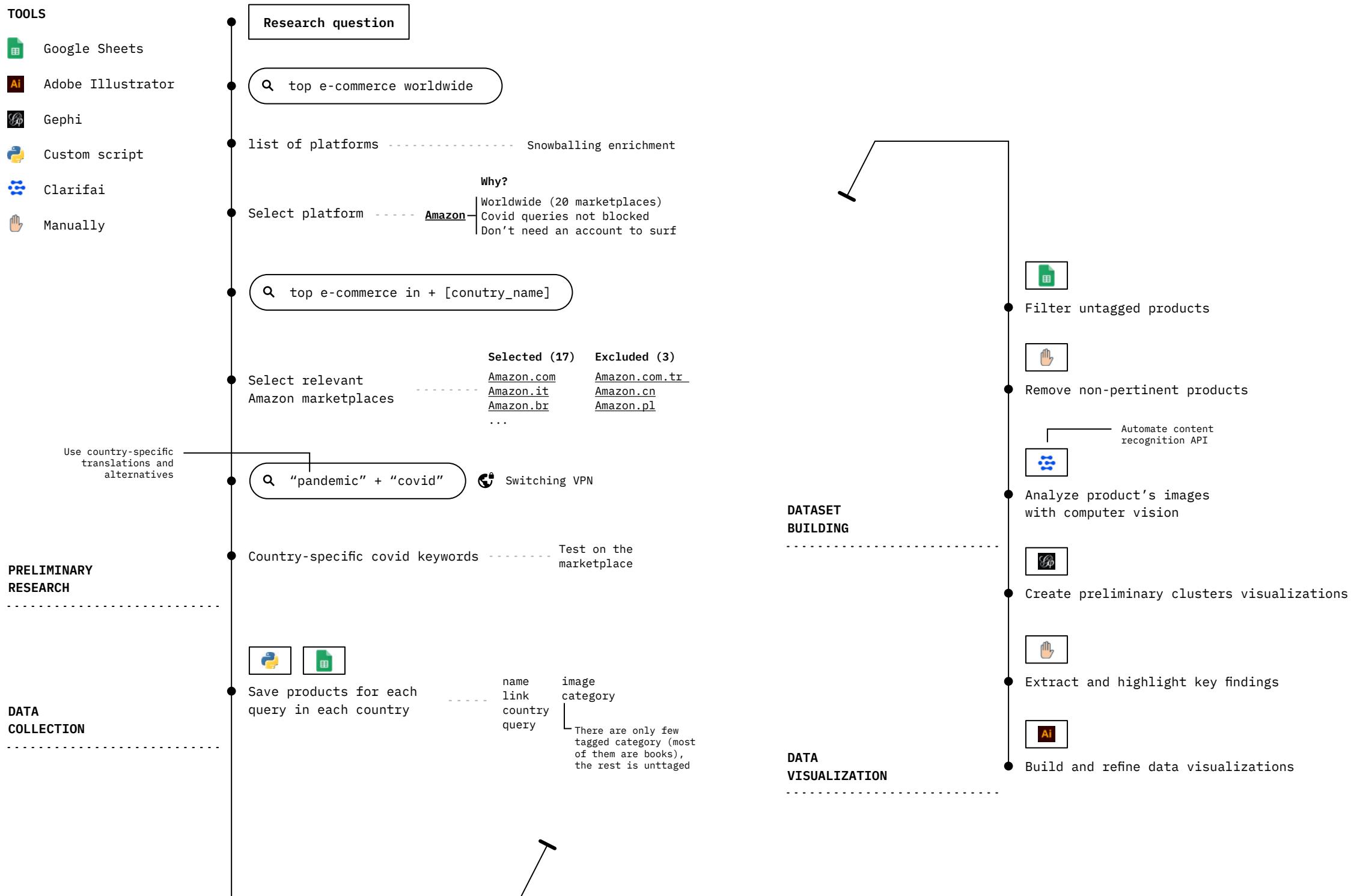
Examples of **Non-serious** representations

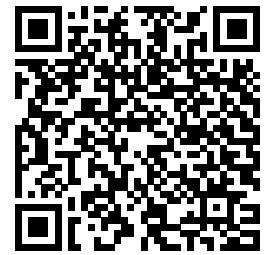


The majority of PPE products are from Amazon India

Personal protective equipment (PPE) are sold mainly in Indian Amazon marketplace, while they are much less frequent in every other marketplace.







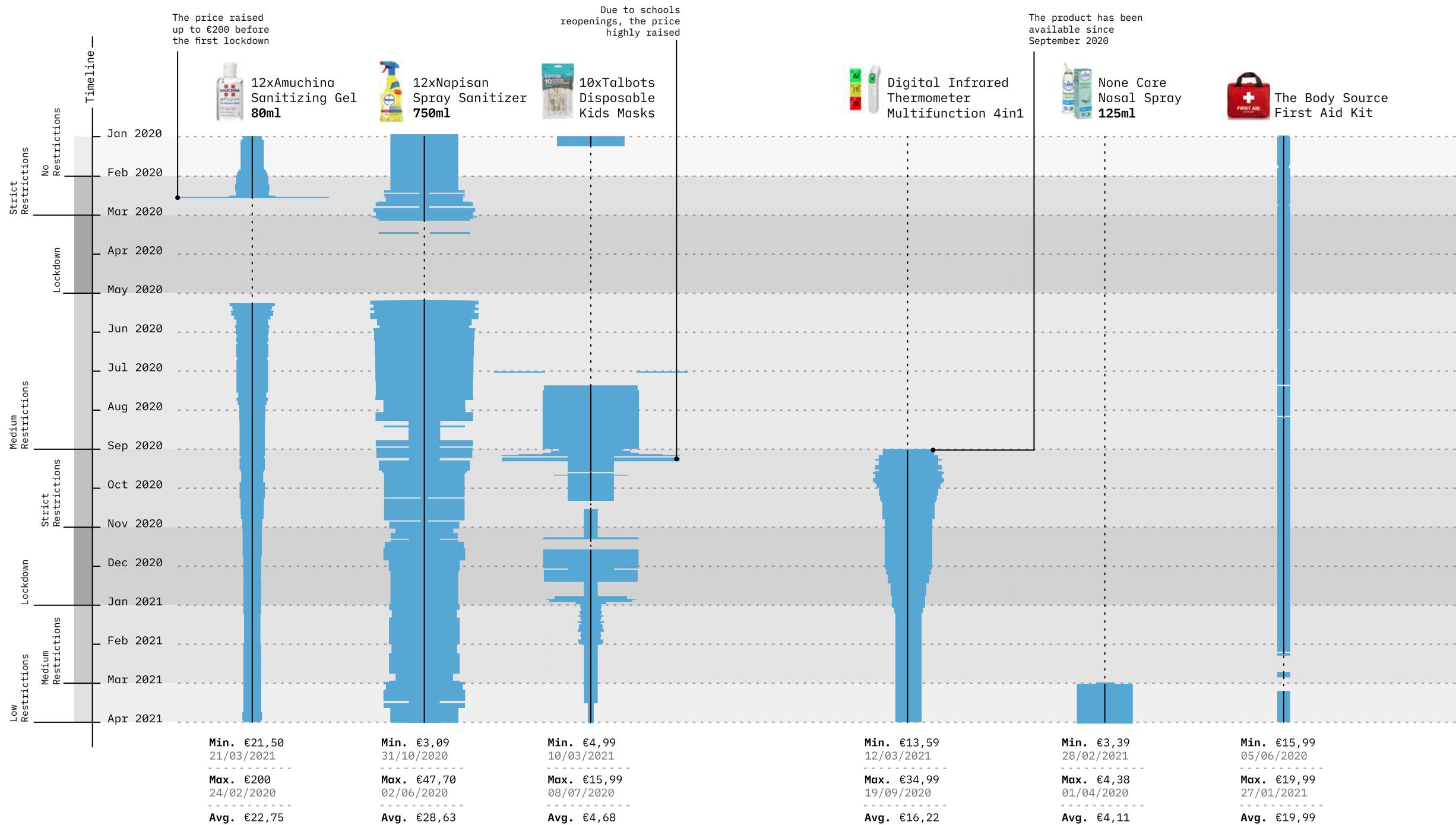
RESOURCES

Which were the most sold products in Italy during the pandemic and how did their price fluctuate through time?

One of the shopping trends that have characterized the critical moments of the COVID 19 Pandemic has been **Panic Buying**. People have started to buy huge stocks of certain products, both online and offline, believing to be preparing themselves to face the pandemic and the lockdown. As a consequence **prices** have been affected by these demand's shocks in interesting ways.



Sanitary Products have experienced higher fluctuations



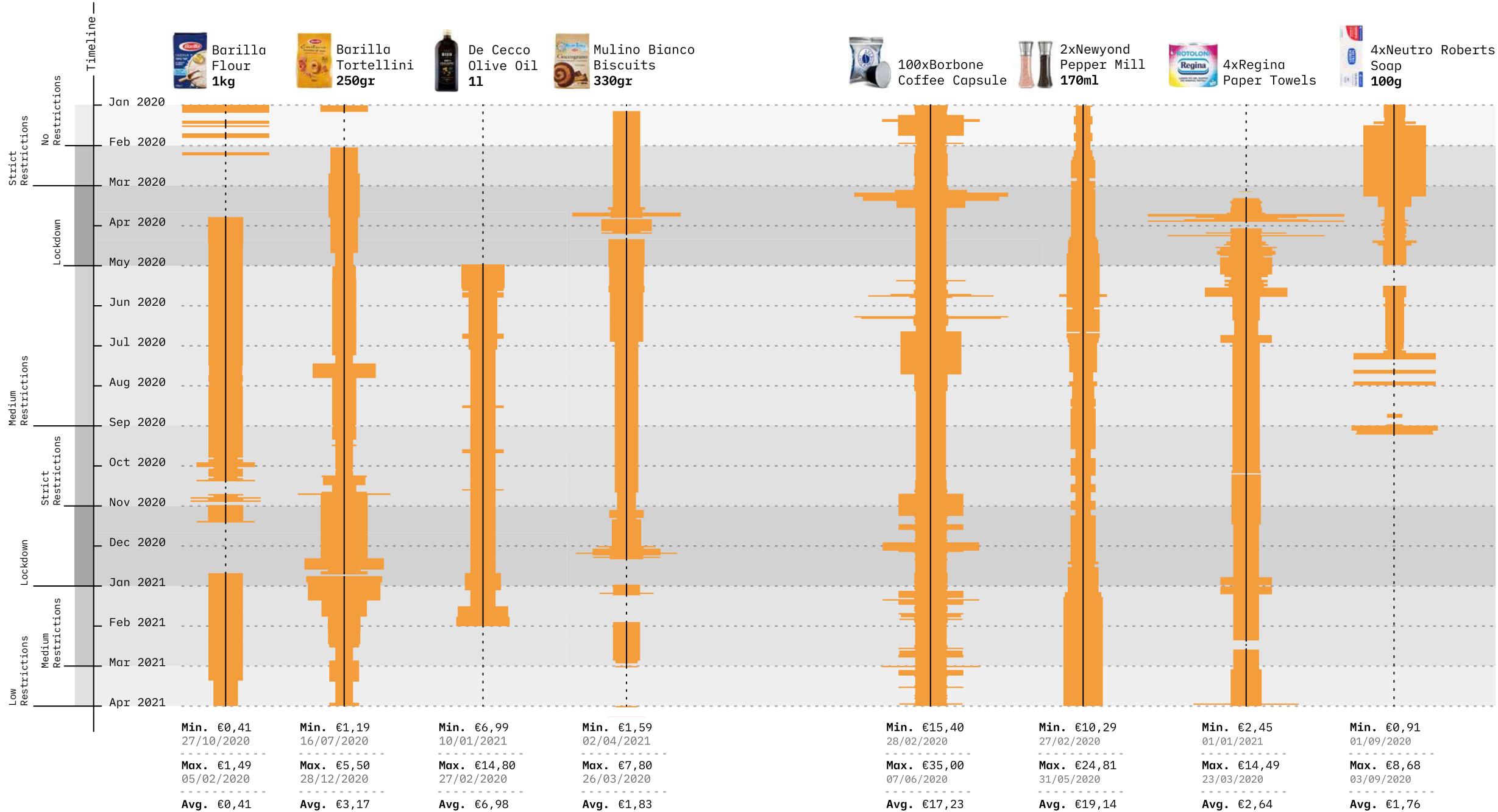
Exponential increase in prices during the first Lockdown

Food and basic necessities, such as toilet paper, had seen steep growths during the two waves and thus the lockdown caused by them. In the “in between time” prices have been quite constant and close to the pre-pandemic one.

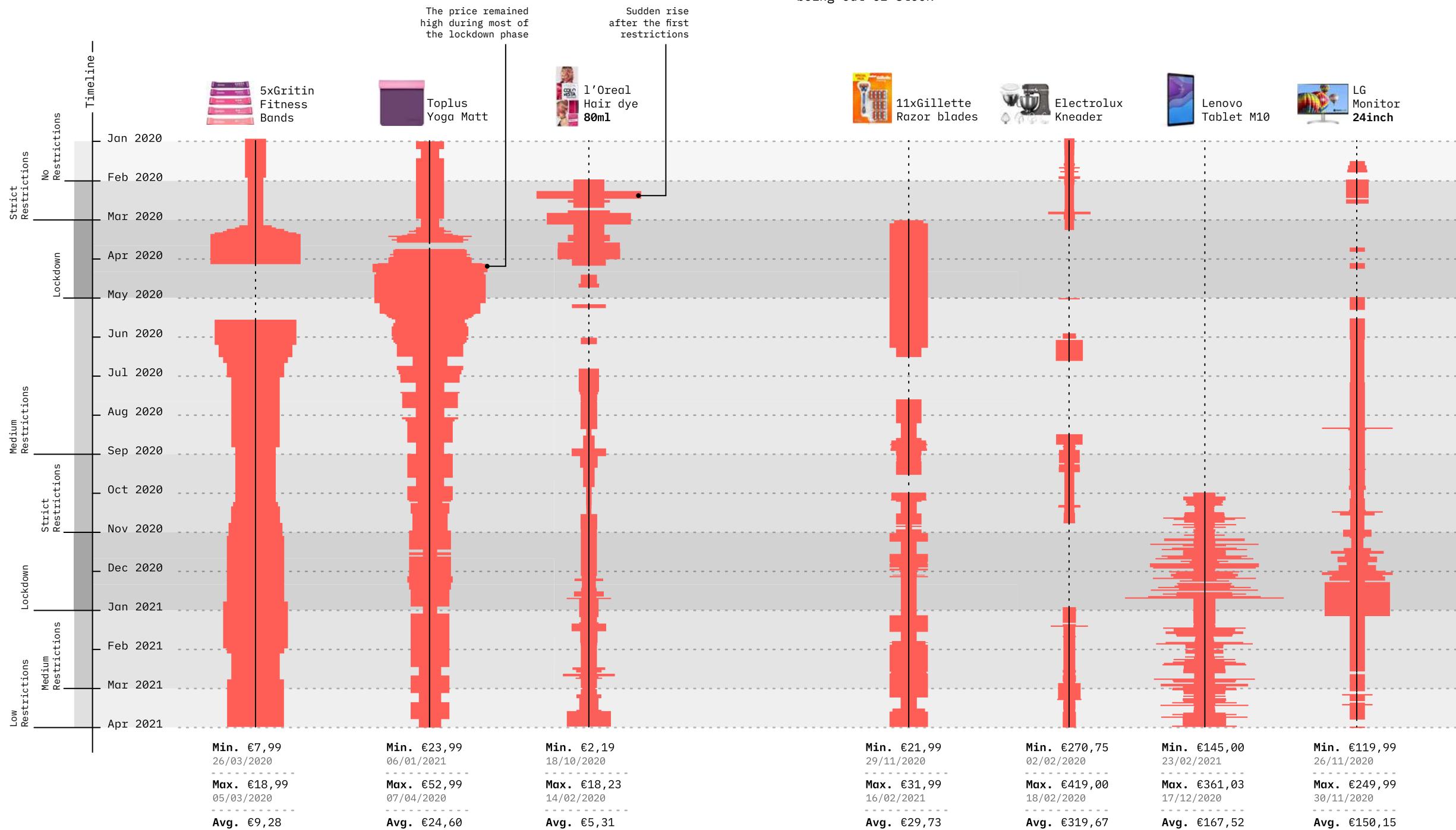
Price Fluctuations on Amazon.it

Available Price Data

Unavailable Price Data,
possibly due to the product
being out of stock

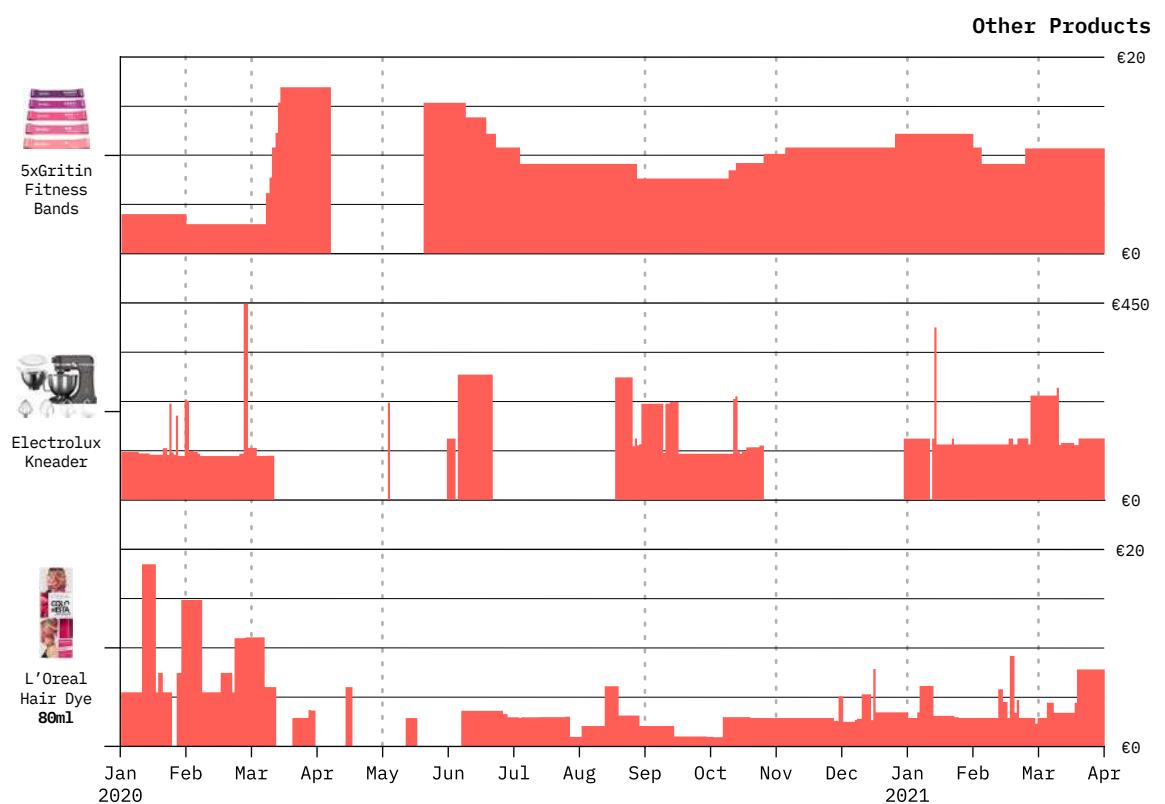
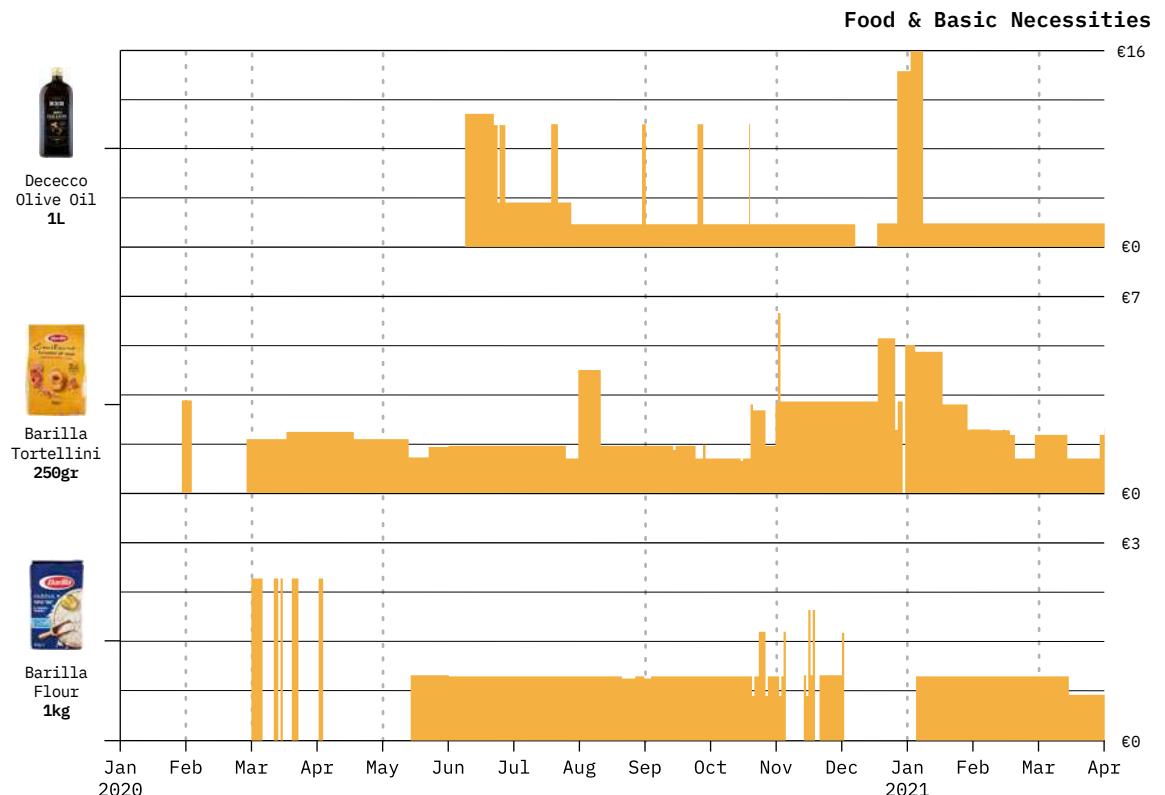
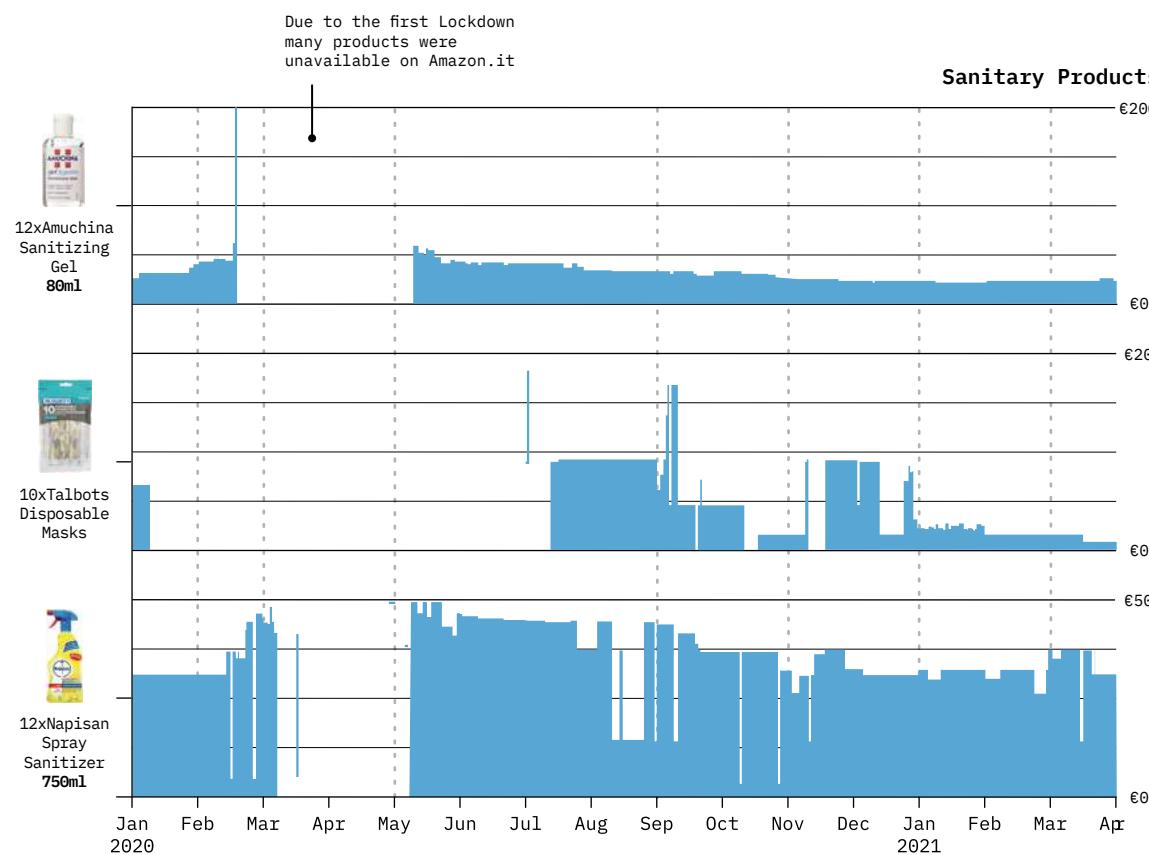


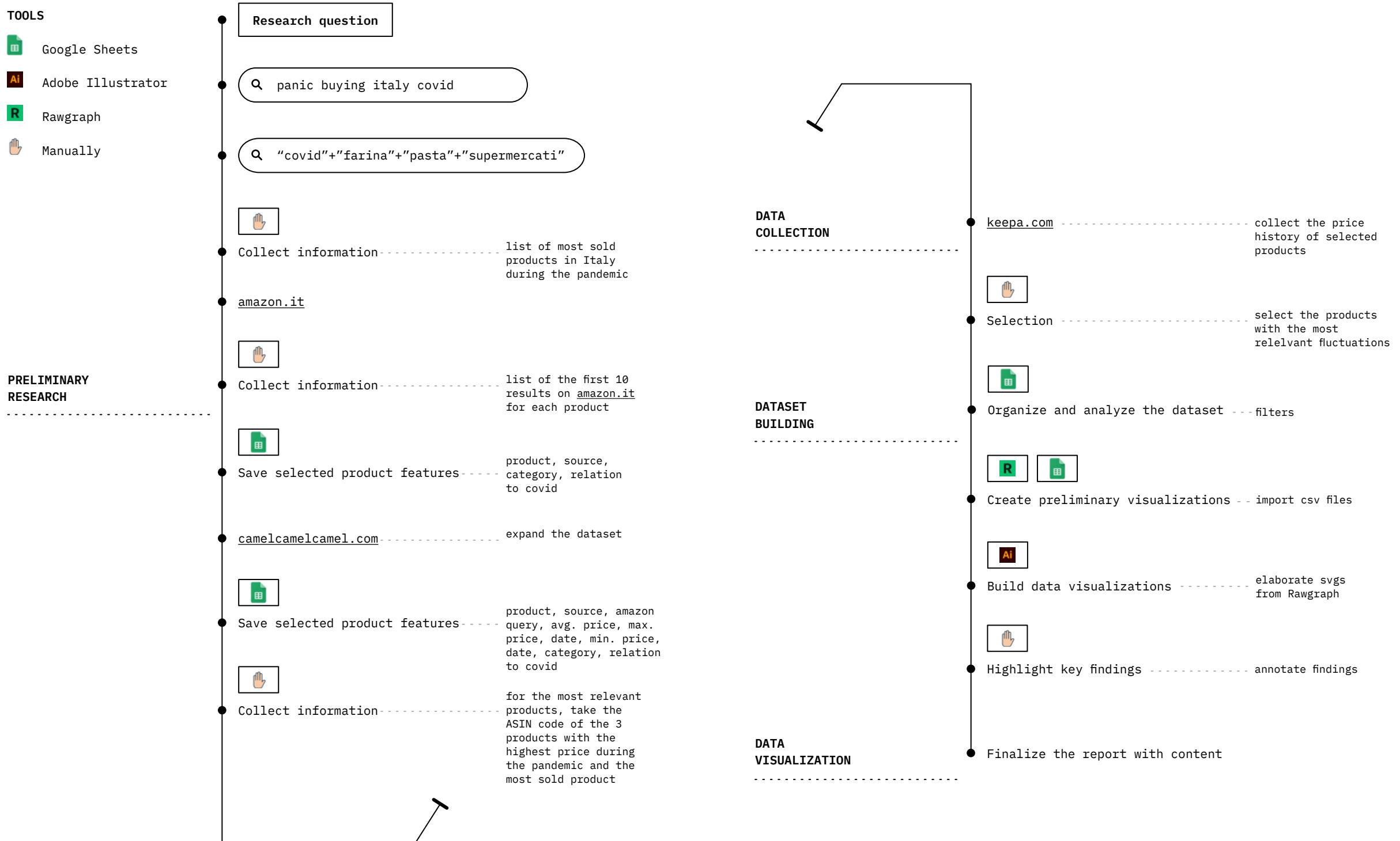
Quarantine Social media trends have influenced prices



Products sold out due to panic buying

Some of the analyzed products have gone sold out on Amazon before and during the first lockdown. It was impossible to find them. These are: razors, bread mixers, Amuchina, flower, pasta, olive oil, masks, nasal spray and sanitizing gel for surfaces.



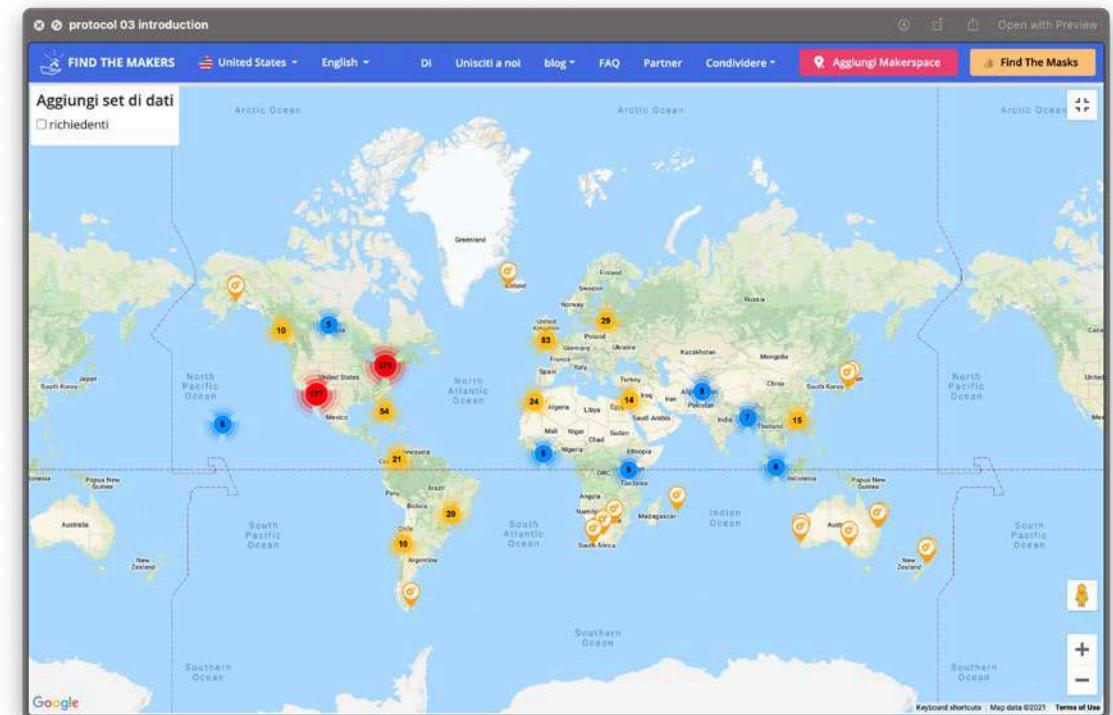




RESOURCES

How did the open source communities react to the sudden need of medical supplies in the context of Covid-19?

The **worldwide medical supply chain** was not ready for the pandemic. Different countries of the world had different reactions: while China focused on increasing production and converting companies, **Europe** and the **US** saw the widespread growth of **open source projects**. The international community of makers, hackers, crafters, DIY-ers, and small-to-medium scale manufacturers answered quickly, producing over 48 million units of personal protective equipment and medical supplies worldwide.



Data in the next pages refers to projects uploaded on opensourcemedicalsupplies.org.

OSMS is an initiative that brought together a global network of over 70,000 makers, fabricators and medical professionals to meet the medical supply needs stemming from the pandemic.

Anybody from all over the world could submit a project to the library, but before being uploaded the project had to be reviewed by the OSMS team, based in the USA.



THUMBNAILS OF THE PROJECTS

Since not all projects had a thumbnail, just 203 of the original 220 totals are included in this visualization

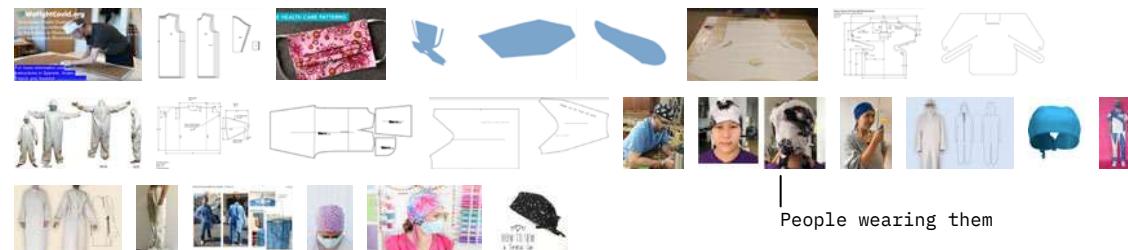
Face shields



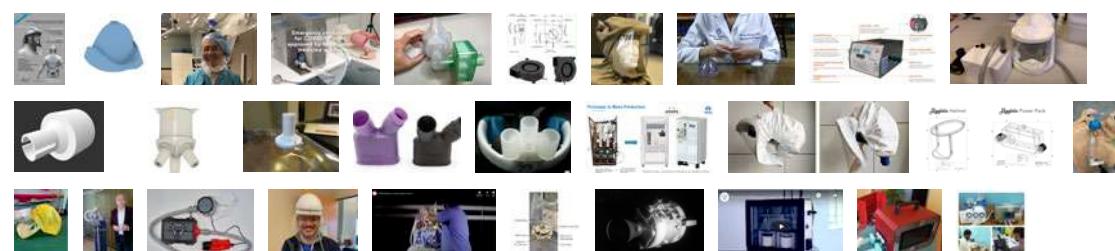
Googles



Protective clothing



Ventilators



Projects in opensourcemedicalsupplies.org library

Decontamination



Hospital bed 1



Hand sanitizer



Models for 3D print

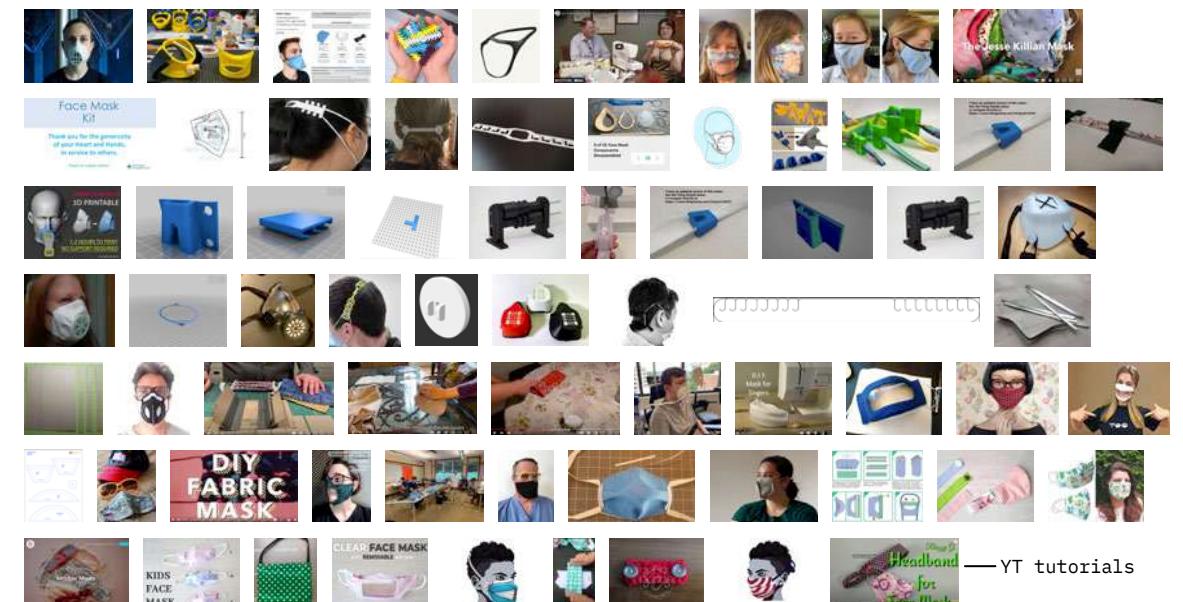


Examination

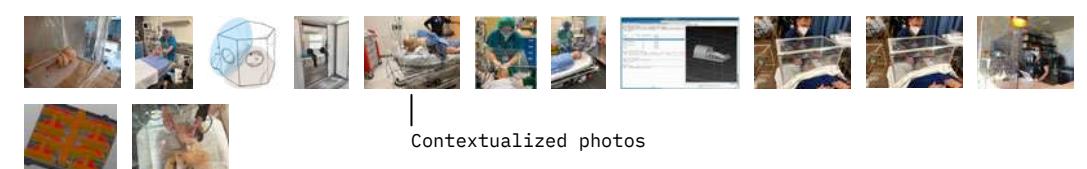


Circuits, Arduino

Face masks



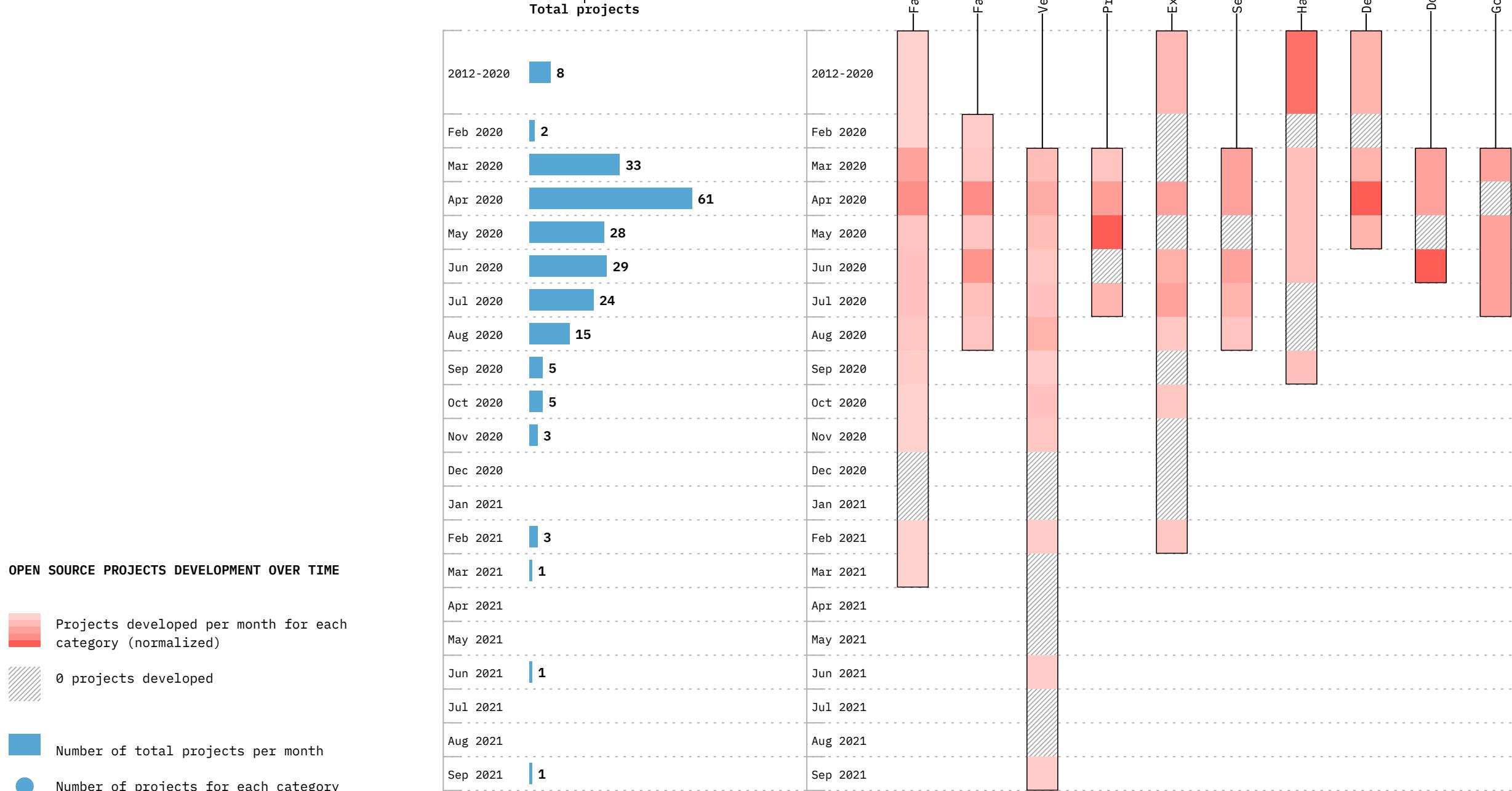
Separators



Contextualized photos

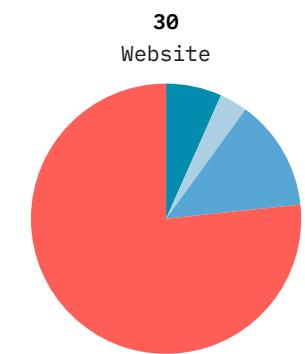
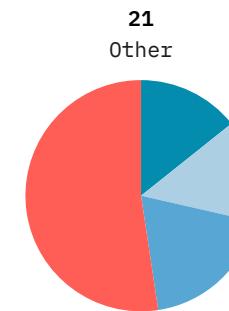
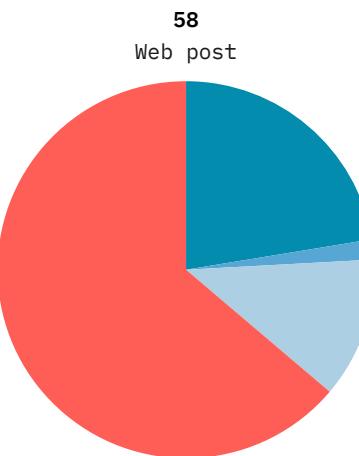
Different timelines for different equipment

Open source covid objects projects were thriving in the first phase of the pandemic. However, while projects regarding some categories of objects are concentrated in a few months, others were shared in a wider time lapse.

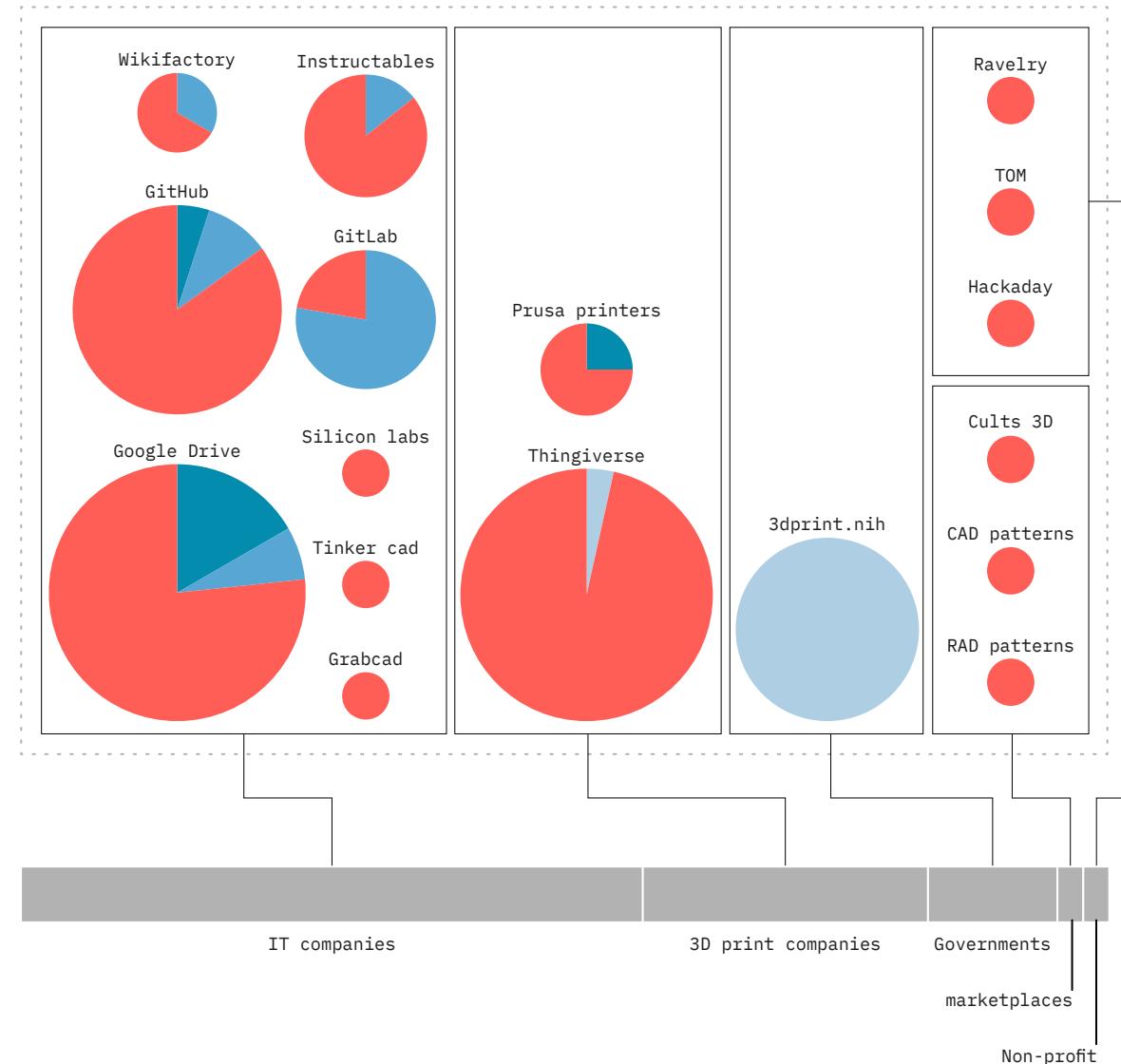


Independent makers use big tech services

The individual and voluntary initiative was critical for the development of open-source covid objects projects, but their further development and sharing exploited platforms and services provided by big companies.



126
Repositories



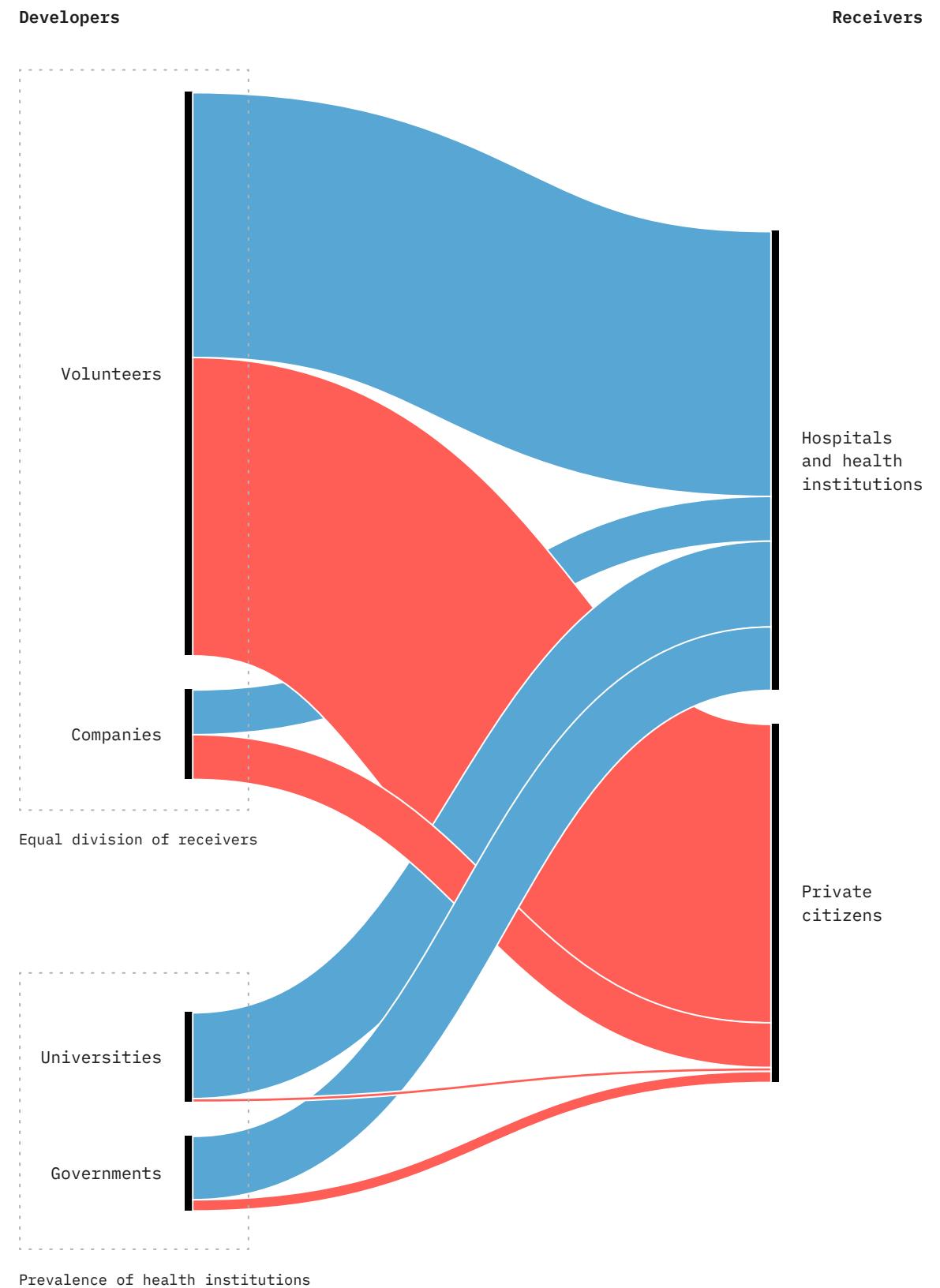
Universities and governments focused on professionals

While private companies and volunteers designed for the general public, as well as for healthcare professionals, universities and governments focused on the latter category.

RELATIONS BETWEEN DEVELOPERS AND RECEIVERS

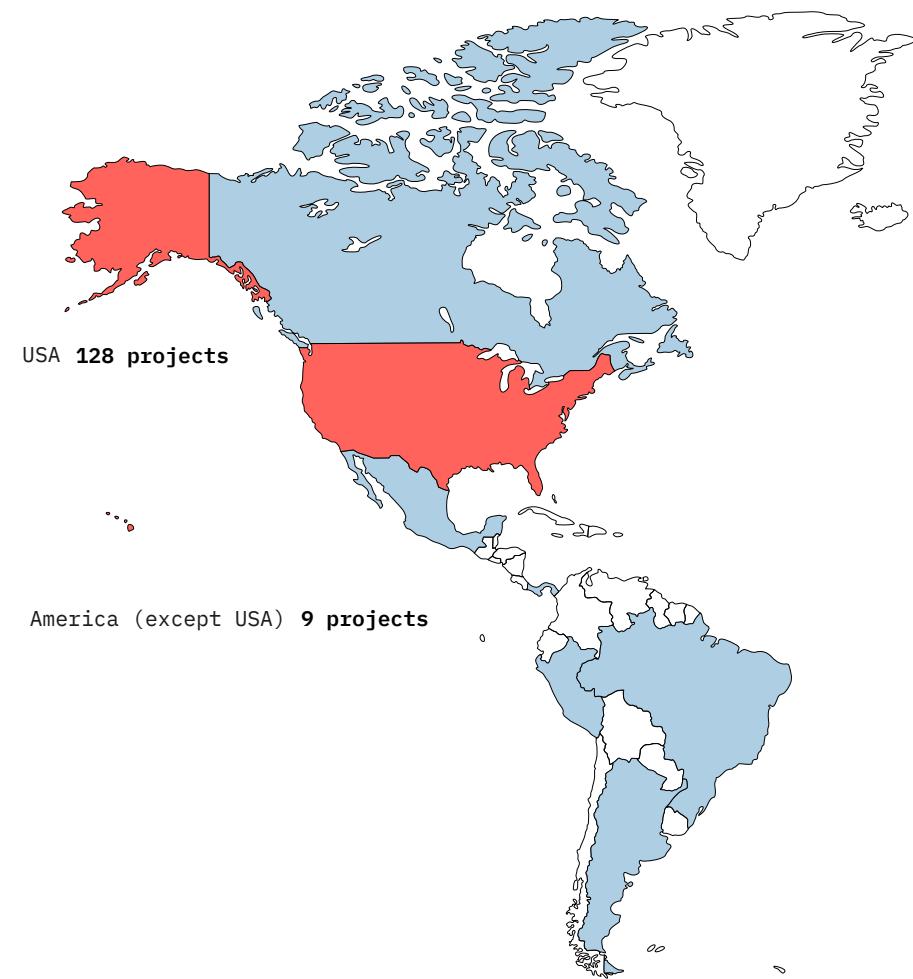
- █ Projects addressed to private citizens and individuals
- █ Projects addressed to healthcare professionals on any level

 Developers showing a similar behavior



3D-printing as a first choice in the USA

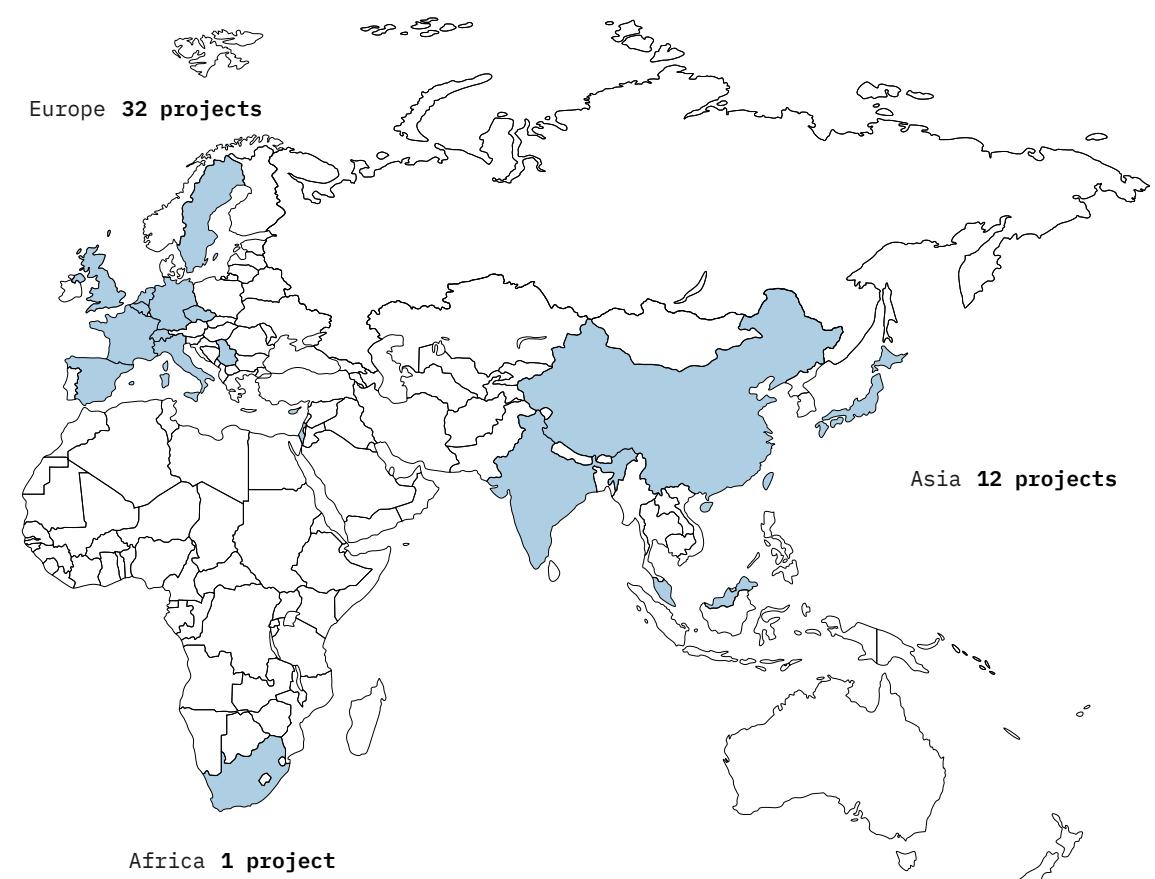
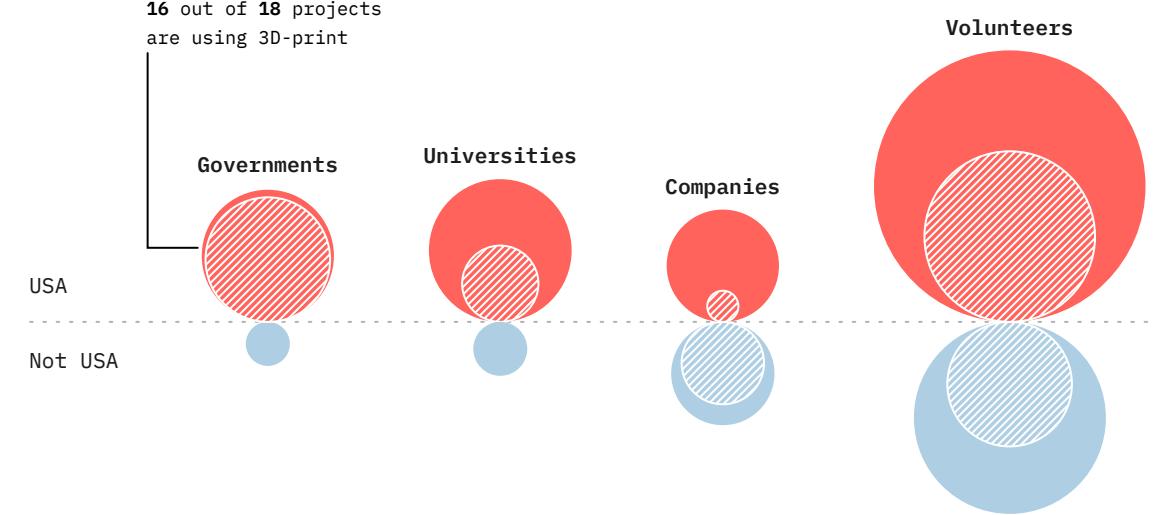
The USA was the country with the highest concentration of developers. The US government itself participated in many projects, mainly using 3D print technology.

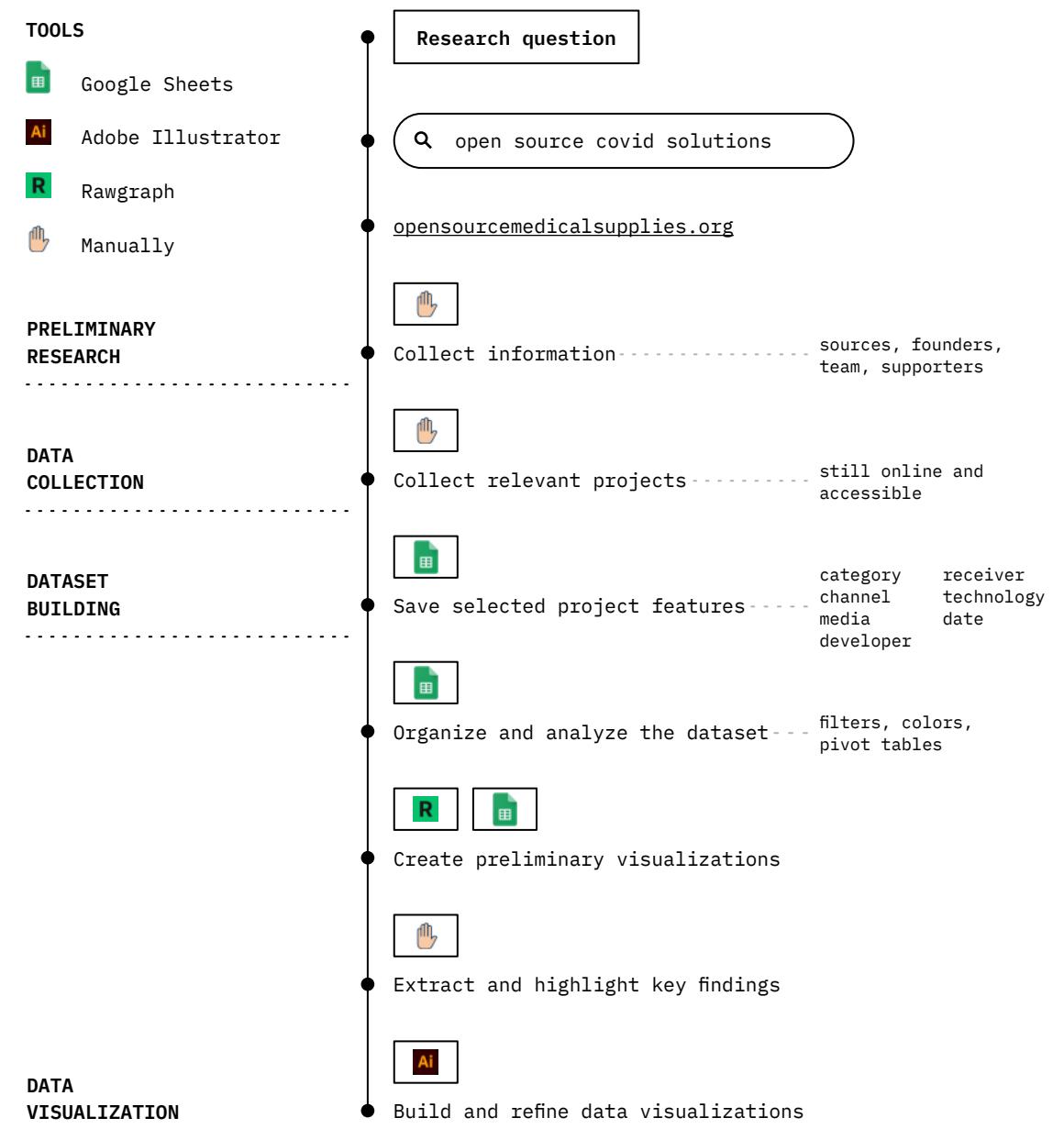


PROJECTS DEVELOPED IN THE WORLD

- USA
- Other countries in which were developed projects
- Countries in which were not developed projects
- Total projects
- 3D-print projects
- Number of projects

16 out of 18 projects
are using 3D-print







RESOURCES