Scalable SARS-CoV-2 Testing Strategies

This content is currently sitting on: http://coronaopensource.github.io/ I'm completely open to moving it elsewhere / merging with another project / etc. My singular goal is to increase testing capacity as quickly as possible.

Go to dashboard

The future needs large scale testing. This will need rapid, coordinated mass manufacturing.

We've had to harness and coordinate the industrial might of the world many times before. In 1941 it was the open sharing of information such as the "EN" grades of steel to standardise industry. Remember "EN" stood for Emergency Number!

And the world did it again during the development of the internet. Private industry collaborating around open designs, information and a common set of interoperable standards.

- The goal is to get more, and accurate testing globally.
- The scale and extended time periods required means this also needs to be affordable.

Although this project is called CoronaOpenSource, the project still welcomes existing and new closed source implementations for testing that are effective in increasing the global rate of affordable testing.

The dashboard

The dashboard will help anyone understand the options and their tradeoffs:

- what technologies / protocols are available
- which ones have been clinical validated end-to-end: from patient to result.
- what they cost
- to achieve a level of testing, what's the total level of resources needed? (swabs, chemicals, plastics, robotics, facilities)
- which companies, government facilities or NGOs might provide these resources

Standards

After a conversation with Daniel Goodwin and Joi Ito, it's clear that interoperability is key for large scale testing. For example we have standards for:

- 96 well plates from ANSI/SBS/SLAS
- pipette accuracy etc

But we don't have standards for:

- sample collection tubes
- transport media (chemical buffer / solutions)
- lysis media (chemical buffer / solutions)
- pipette tips; dimensions, wettability, filtration standards, recycling etc
- depth of wells in 96 well plates
- inter region data exchange

This is a call to action and a place to organise and agree upon those standards.

The interactive version is based off of the Scalable SARS-CoV-2 Testing Strategies spreadsheet. Code.