

Proposed Use of PARTNER for Social Network Analysis for Contact Tracing: April 20, 2020

NEED. More Efficient and Reliable Contact Tracing in Pandemic Surveillance: Existing contact tracing methods are not sufficient. They are time consuming, inaccurate, and require an enormous workforce. Experts [cite](#) that “we will need to have a huge team of tens of thousands of people in place to trace the contacts of those who test positive”. Our leaders need to ask: Who will do this work? Public health workers? National guard? Laid off workers? What is the vision and strategy to move us to the next phase? And, global technology solutions demonstrate [issues of privacy and data security](#) that complicate the solution.

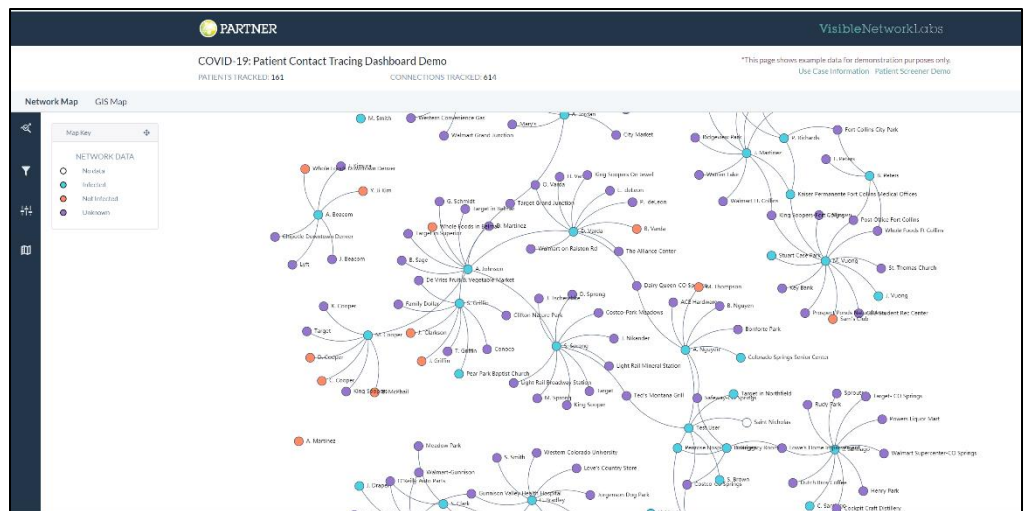
SOLUTION. Efficiently screen people for contact networks, store all data in one data platform to link all responses in real time contact network analysis data tracking and mapping, big data science analytics for modeling and prediction. Visible Network Labs has a [production-ready solution](#) that has been modified for the COVID-19 contact tracing use case. We use network science to simplify tracking complex relationships among people and places, improving speed and reliability to track contact networks. [PARTNER](#) is an evidence-based data tracking, geomapping, and network visualization tool for early detection, cluster analysis, pathway diffusion, and modeling to inform decision making, strategy, and to rapidly identify contact networks.

Using a simple web-based screener, the platform simplifies the complexity of linking contacts, understanding levels of risk, and provides COVID-19 instance scalable views throughout a population. The data identify trends and behaviors to provide population protection, resource allocation, and predictive analytics (see next page for visual).

HOW IT WORKS. Steps include:

- 1) Person enters a contact list using [a simple web-based link](#),
- 2) Data link up in real time [network maps/ analytics](#),
- 3) Decision-makers and health-care provides access data dashboard for updated real-time analytics and mapping

Data are stored on a secure Google cloud server. Maps are optimized for speed and big data. The [Platform](#) is customized for specific use cases to provide additional security and speed optimization. PARTNER can also be used to track interagency coordination, resource coordination, and patient referrals. The data entry questionnaire can be customized for various case uses. See this [RAND Report for an example](#).



THE TEAM Visible Network Labs (VNL) is a Colorado based network data science and strategy technology startup, led by Dr. Danielle Varda, that has over 20 years of working closely with companies, health care, and foundations to develop data tracking and learning systems to link relational analytics to business, policy, and community engagement outcomes. We have an expertise in public health preparedness and pandemic response and our clients span the public and private sectors, including the Bill & Malinda Gates Foundation, Robert Wood Johnson Foundation, Veterans Administration, US Health and Human Services, Kaiser, Centura Health, Thedacare Health, County Health Rankings and Roadmaps, Centers for Disease Control/ Rocky Mountain Prevention Health Center, ReThink Health, Massachusetts Public Health, LA Public Health, Connecticut Children’s Hospital, and many others.

How it Works: Data Entry to Visualization in One Platform

QUESTION 1

Please list all of the people with whom you have been in contact,* all physical locations you have visited, and all public transportation or ride-share vehicles you have used in the past 14 days.

*Contact means being in close proximity of a person, within 4 to 6 feet for more than a minute.

[Click Here to add new people, locations](#)

- Bellamie Varda
- Dan Varda
- Harlow Varda
- King Soopers On Jewel
- Linda deLeon
- Mary Cooney
- Olivia Varda
- Peter deLeon
- The Alliance Center
- Walmart on Ralston Rd

QUESTION 2

What was the nature of your contact with this person, location, or mode of transportation?

Organization	I had physical contact with this person or with surfaces in this location/ vehicle	I shared living space with this person	I shared food or drink with this person	I coughed or sneezed while in contact with this person/ location/ vehicle	No contact, only close to this person	Other
Linda deLeon	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Peter deLeon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Walmart on Ralston Rd	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Alliance Center	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Harlow Varda	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. Patient is screened and asked to click on this link. They answer two questions.

ACS Affiliate Orgs

Organization: Colorado Department of Health
 CONTACT: Blythe Moran
 4300 E Cherry Creek Dr
 Denver, CO 80244
 (303) 692-2000

Network Map

Member Information

COMMITTEE	ROLE	OTHER INFO	COMMITTEE	ROLE	OTHER INFO
XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX	XXXXXXXXXX
OTHER INFO	OTHER INFO	OTHER INFO	OTHER INFO	OTHER INFO	OTHER INFO

Relational Data

Partner Organization Name: Partner Contact Name: Acquaintance Colleague Friend Other Other

Childr

Depart

2. Patients can be looked at individually, including their data and contacts in their "member profiles".

