Building a real-time COVID data analytics hub in Ontario

Collaborative Insights. Transparent Data. Community Driven.

The Context

March 15…

ICUs are already full?!!?

Life pretty much as usual…

How are we going to get action?!?

Popular Latest

The Atlantic

IDEAS

The Extraordinary Decisions Facing Italian Doctors

There are now simply too many patients for each one of them to receive adequate care.

MARCH 11, 2020

Yascha Mounk
Contributing writer at *The Atlantic*

CLAUDIO FURLAN / LAPRESSE / AP

MORE BY YA MOUNK

Authoritarian Populis Six Classic Moves. Tr Response to COVID- Uses Five of Them.

KRISTY PARKER AND YA MOUNK

For the First Time, I'm Doubting My Decisio Come to America

YASCHA MOUNK

This Is Just the Begin

YASCHA MOUNK

TWO WEEKS AGO, Italy had 322 confirmed cases of the coronavirus. At that point, doctors in the country's hospitals could lavish significant attention on each stricken patient.

One week ago, Italy had 2,502 cases of the virus, which causes the disease known as COVID-19. At that point, doctors in the country's hospitals could still perform the most lifesaving functions by artificially ventilating patients who experienced acute breathing difficulties.

[Elise A. Mitchell: The shortages may be worse than the disease]

Today, Italy has 10,149 cases of the coronavirus. There are now simply too many patients for each one of them to receive adequate care. Doctors and nurses are unable to

The Problem

Data

Frozen Analysis

Speed

Fact From Fiction

Public Transparency

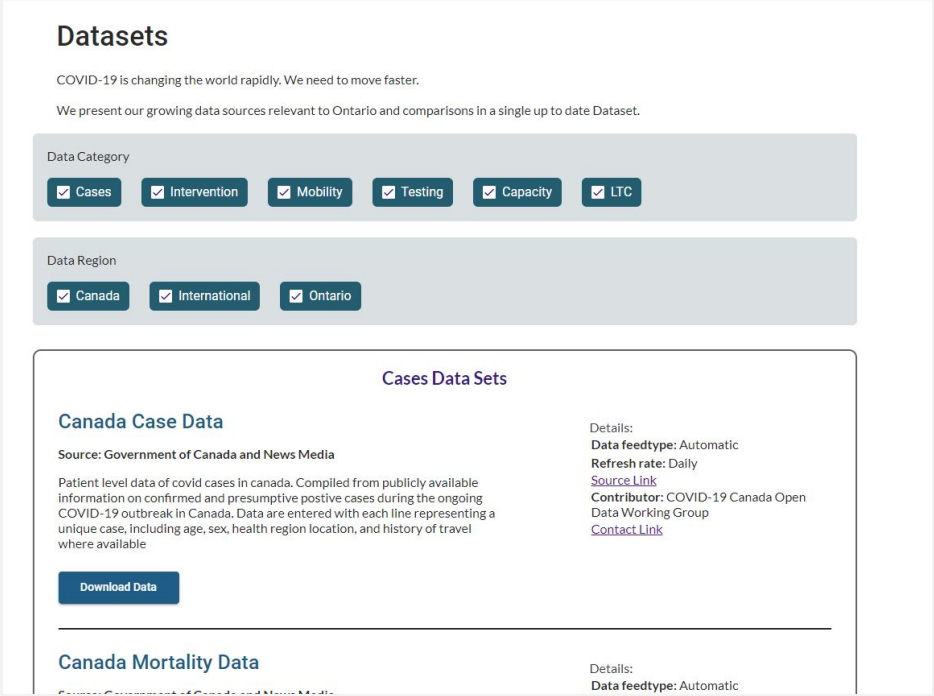
Solution

A collaborative of over 100 data minded individuals that collects relevant real-time data to help inform and monitor Ontario's response to COVID-19....

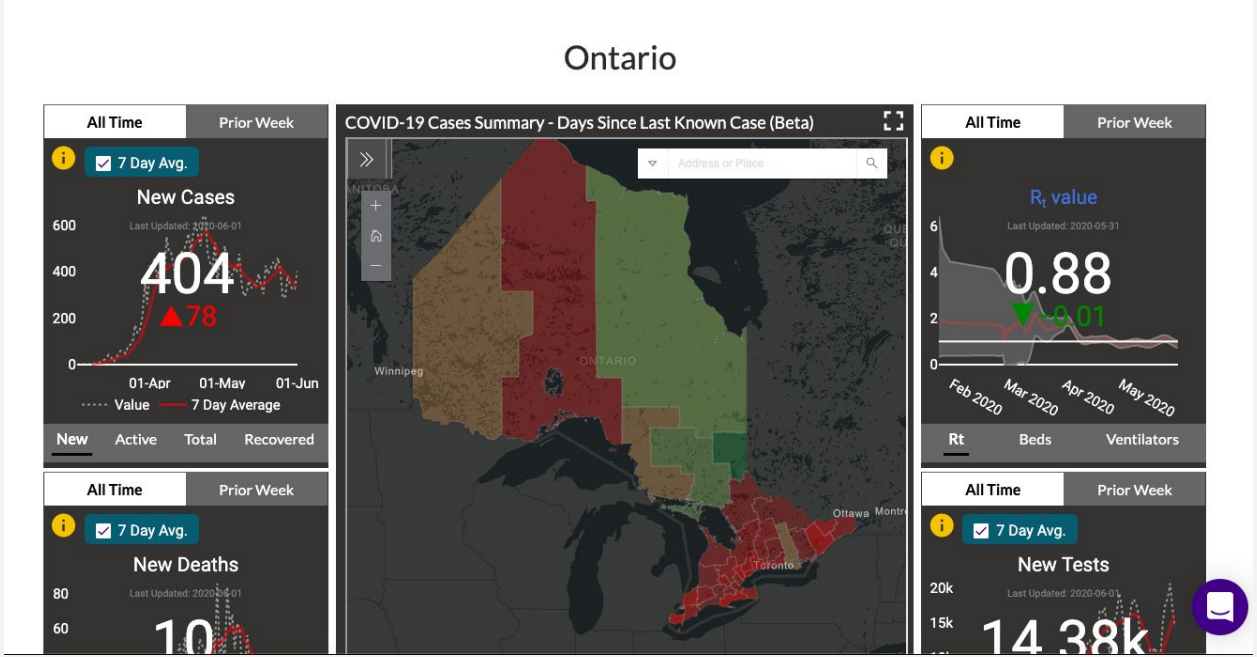
- Real time data + viz
- Extremely agile
- Credible

Results

Data


Datasets
COVID-19 is changing the world rapidly. We need to move faster.
We present our growing data sources relevant to Ontario and comparisons in a single up to date Dataset.
Data Category
Cases
Intervention
Mobility
Testing
Capacity
LTC
Data Region
Canada
International
Ontario
Cases Data Sets
Canada Case Data
Source: Government of Canada and News Media
Patient level data of covid cases in canada. Compiled from publicly available information on confirmed and presumptive postive cases during the ongoing COVID-19 outbreak in Canada. Data are entered with each line representing a unique case, including age, sex, health region location, and history of travel where available
Download Data
Details:
Data feedtype: Automatic
Refresh rate: Daily
Source Link
Contributor: COVID-19 Canada Open Data Working Group
Contact Link
Canada Mortality Data
Details:
Data feedtype: Automatic

Thirty Seven Dashboards



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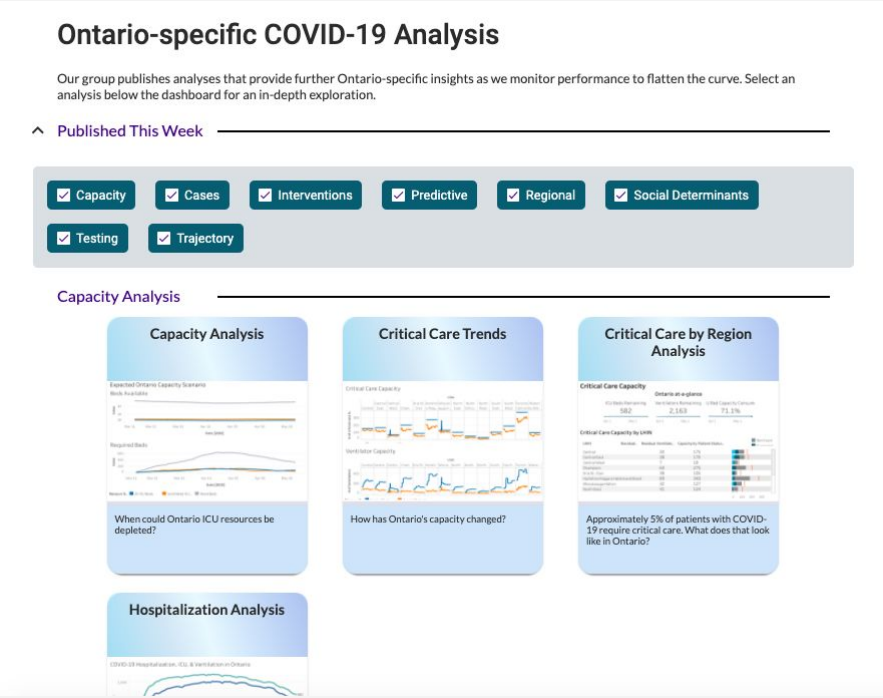
Analysis



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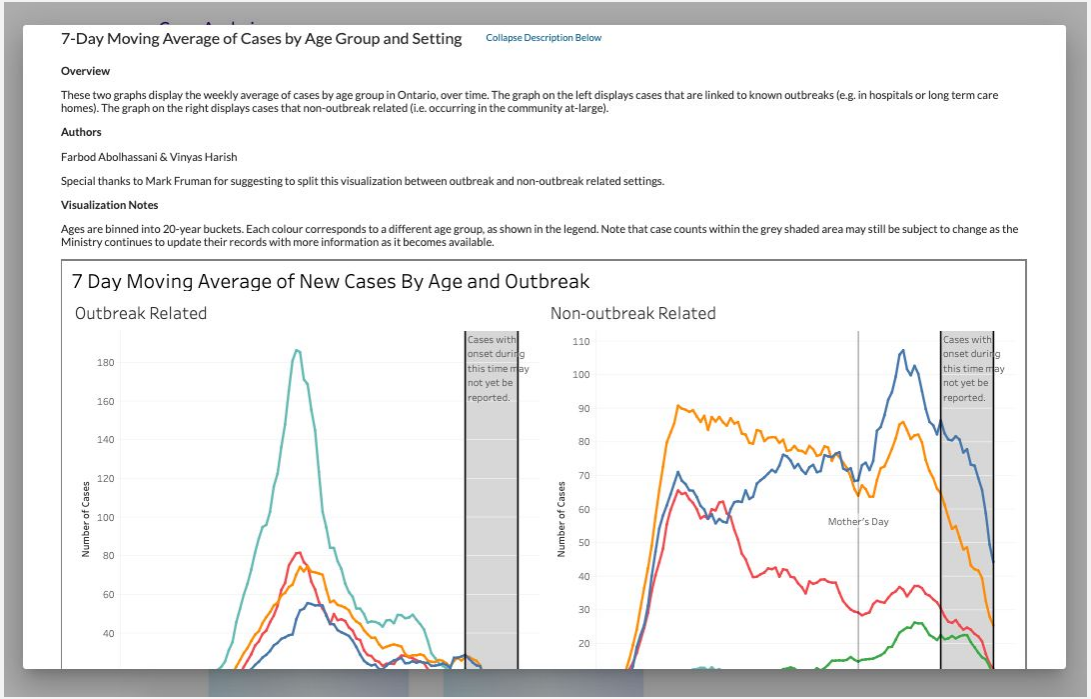
Analysis



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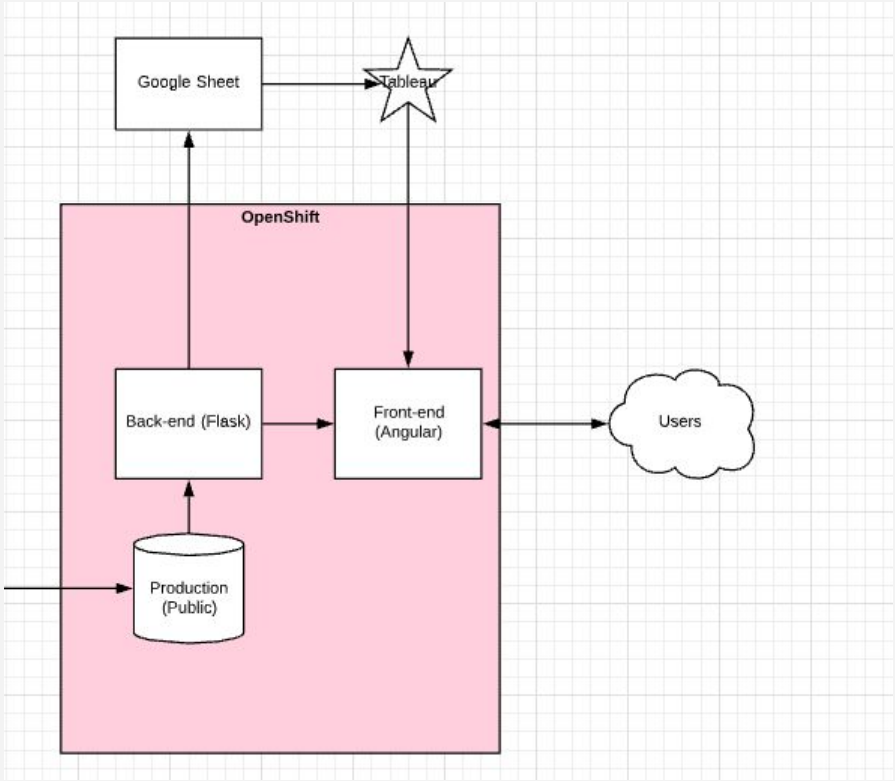
The How

Tableau Software

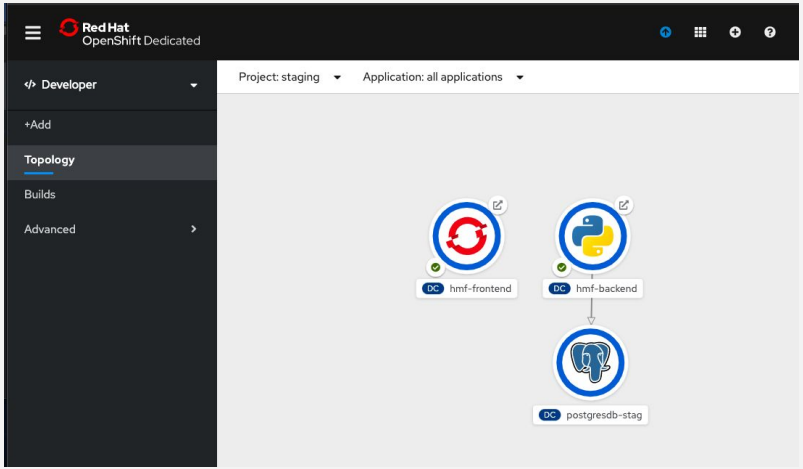
Data visualization company

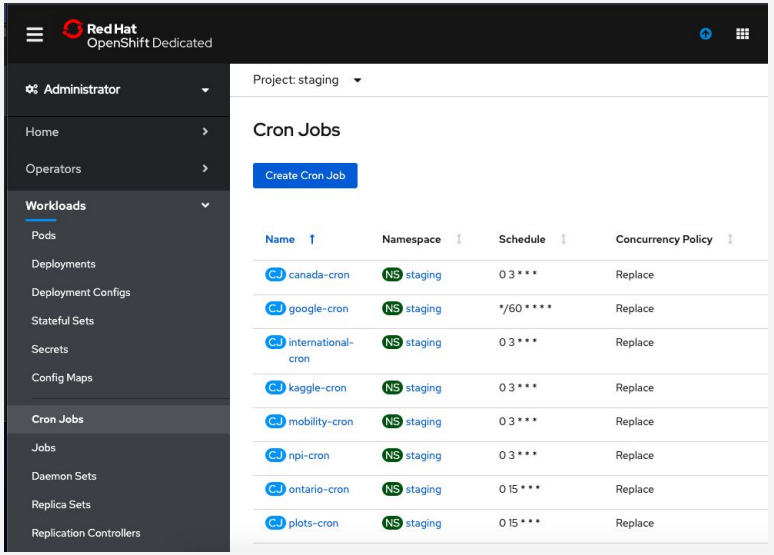
Plotly

Company



The How


Red Hat
OpenShift Dedicated
Developer
+Add
Topology
Builds
Advanced
Project: staging
Application: all applications
DC hmf-frontend
DC hmf-backend
DC postgresdb-stag


Red Hat
OpenShift Dedicated
Administrator
Home
Operators
Workloads
Pods
Deployments
Deployment Configs
Stateful Sets
Secrets
Config Maps
Cron Jobs
Jobs
Daemon Sets
Replica Sets
Replication Controllers
Project: staging
Cron Jobs
Create Cron Job
Name
Namespace
Schedule
Concurrency Policy
CJ canada-cron
NS staging
0 3 * * *
Replace
CJ google-cron
NS staging
*/60 * * * *
Replace
CJ international-cron
NS staging
0 3 * * *
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CJ kaggle-cron
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0 3 * * *
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CJ ontario-cron
NS staging
0 15 * * *
Replace
CJ plots-cron
NS staging
0 15 * * *
Replace

The How

.gitlab-ci.yml 3.35 KB

Edit | Web IDE | Lock | Replace | Delete

```
image: ebits/openshift-client

stages:
  - development
  - staging
  - production
  - cleanup

variables:
  TEMPLATE_FILE: "./ocp_template/hmf-frontend-template.yaml"
  TEMPLATE_NAME: hmf-frontend
  COMPONENT_NAME: hmf-frontend

.deploy: &deploy
  before_script:
    - oc login --server="$OPENSHIFT_SERVER" --token="$OPENSHIFT_TOKEN" --insecure-skip-tls-verify
  script:
    #- mv $CONFIG_FILE src/assets/config/config.json
    #- RESULT=0
    #- oc create configmap $APP-config --from-file=src/assets/config/config.json 2> /dev/null || RESULT=$?
    #- echo $RESULT
    #- (if [ "$RESULT" == 1 ]; then
    #        oc delete cm $APP-config;
    #        oc create configmap $APP-config --from-file=src/assets/config/config.json;
    #        oc label configmap $APP-config app=$APP;
    #   fi);
    #- mv $CONFIG_FILE src/assets/config/config.json
    - oc apply -f $TEMPLATE_FILE
    - RESULT=0
    - oc get services $APP 2> /dev/null || RESULT=$?
    - echo $RESULT
    - (if [ "$RESULT" == 1 ]; then
```

The Team

Meet The Team

Our team of experts stands behind the mission of fighting and ending COVID-19.

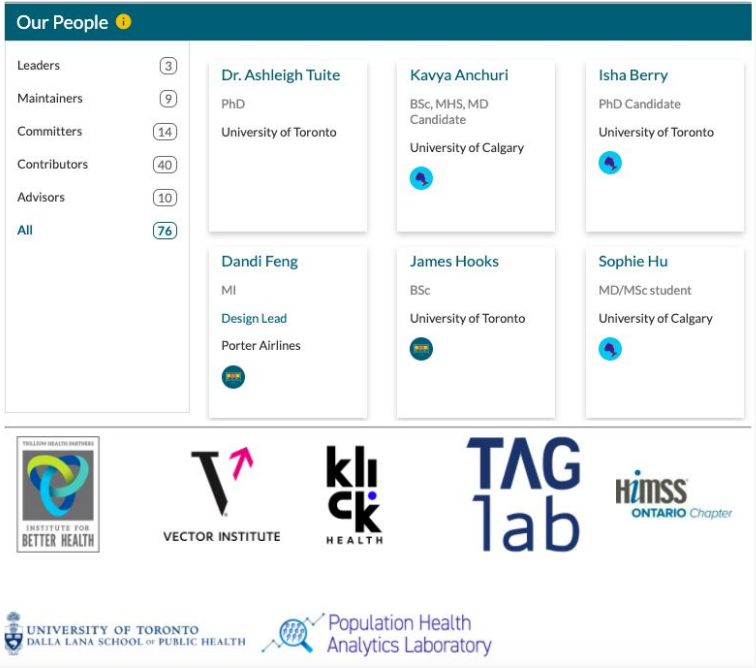
240+ Slack Members

15+ data analyses on Ontario's response

20+ KPIs monitored in near real-time

If you want to get involved, check out our Gitlab.

Our team works on

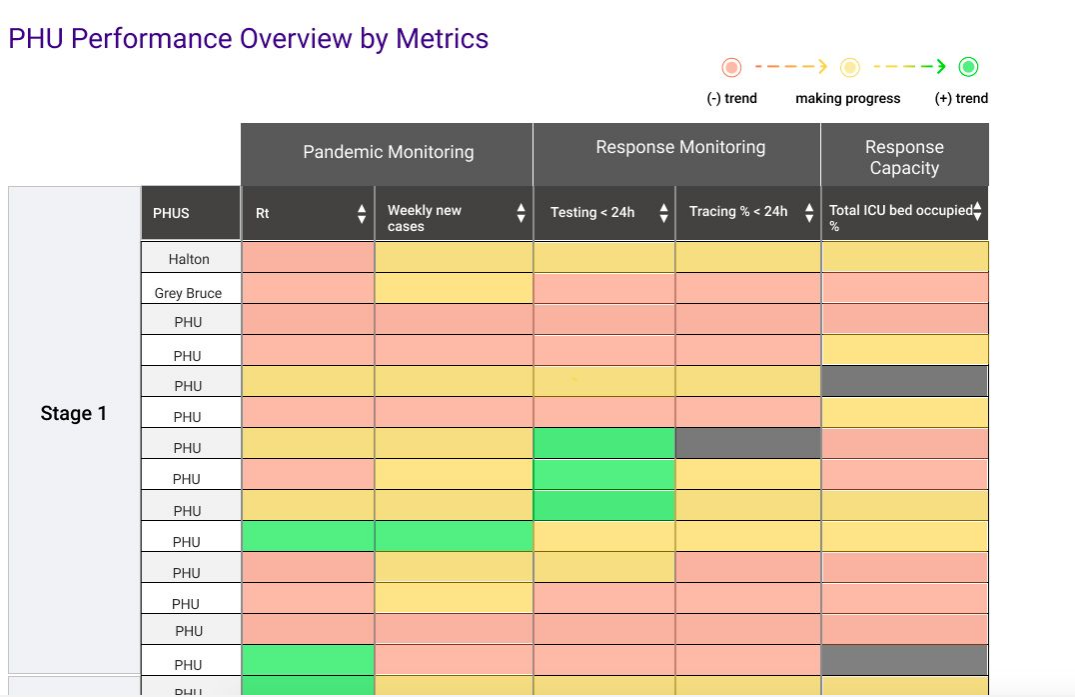


Challenges

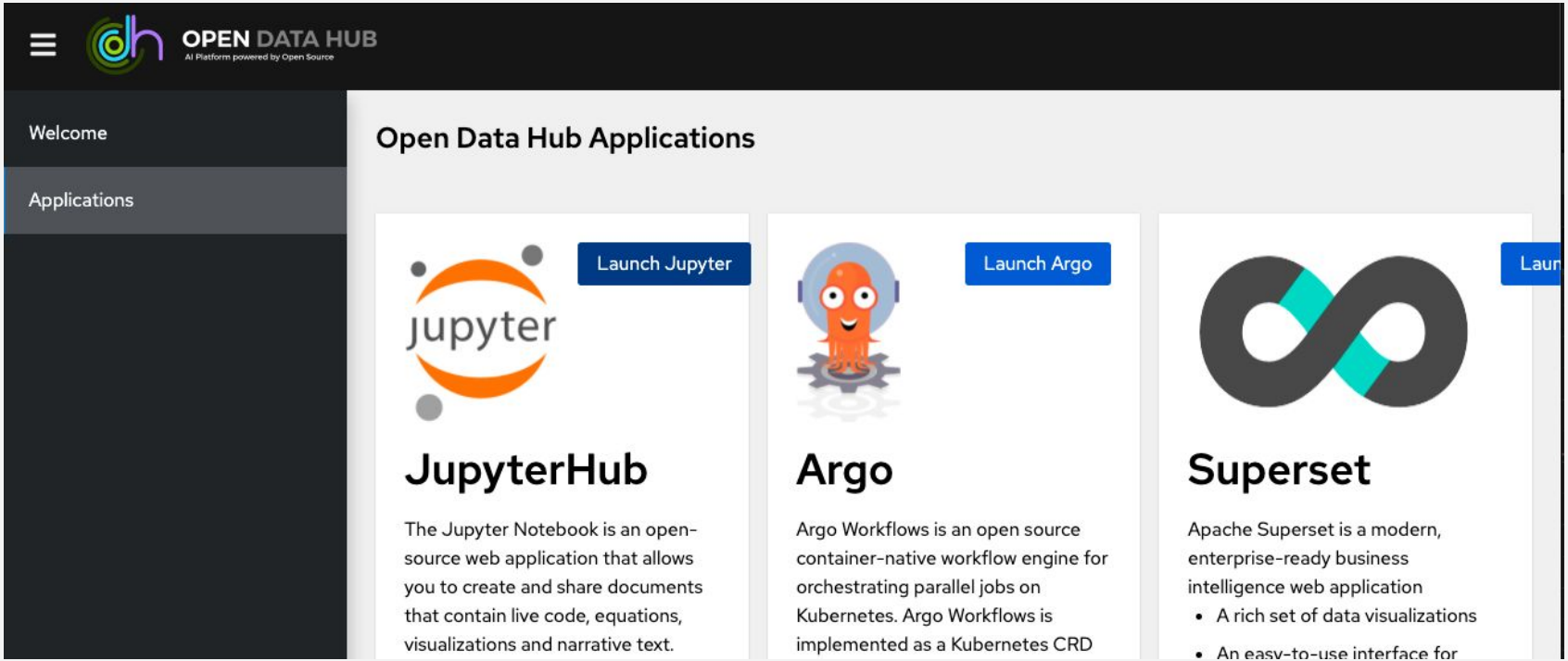
Ontario itself has discordant data...

A	B	C	D	E	F	
Row_ID	Accurate_Episc	Age_Grou	Client_Ge	Case_Acq	Outcome1	Ou
27493	12:00:00 AM	<20	FEMALE	Informatic	Resolved	Yes
6146	5/23/2002	<20	FEMALE	Contact of	Resolved	(bl
3458	1/1/2020	50s	MALE	Contact of	Resolved	(bl
9337	1/1/2020	80s	MALE	Neither	Resolved	(bl
27300	1/10/2020	40s	FEMALE	Contact of	Resolved	Yes
6258	1/15/2020	60s	MALE	Informatic	Resolved	(bl
15252	1/21/2020	50s	MALE	Travel-Rel	Resolved	(bl
14993	1/22/2020	50s	FEMALE	Travel-Rel	Resolved	(bl

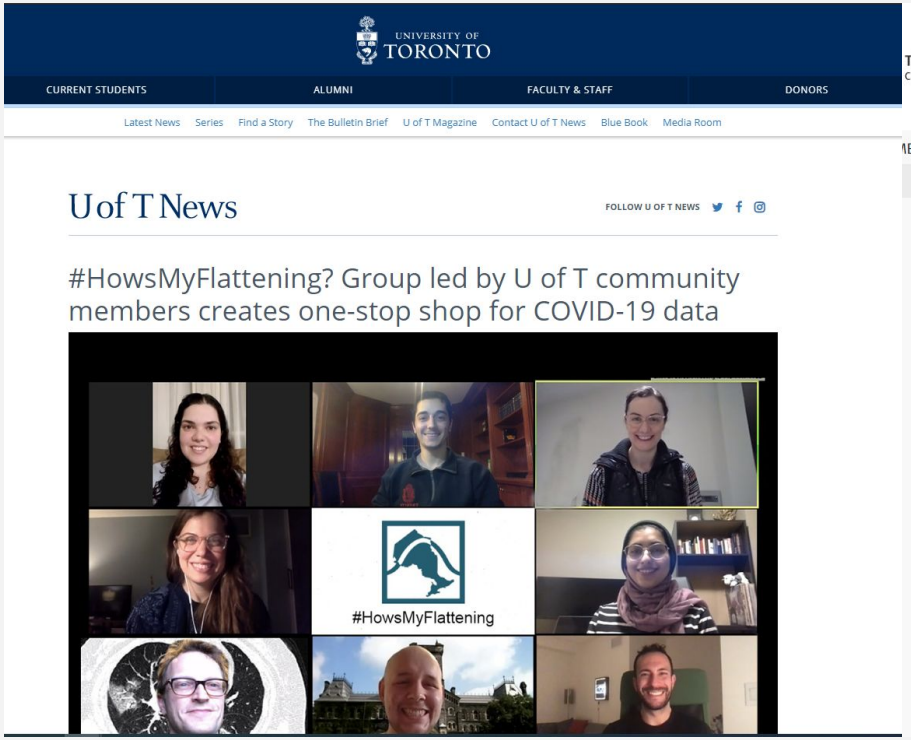
Whats Next: Reopening

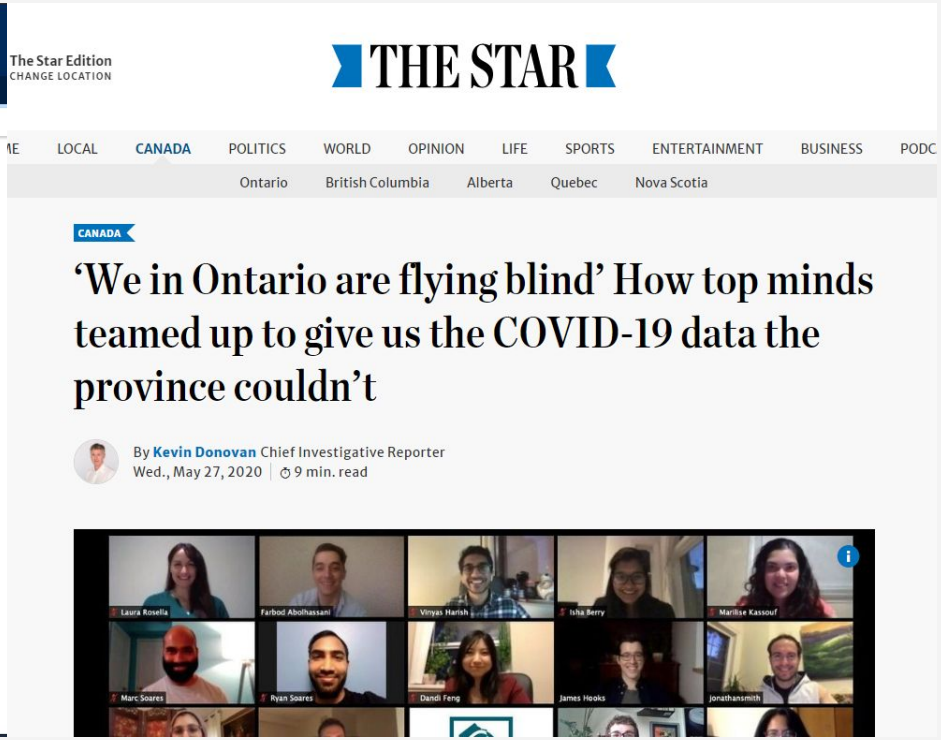


Whats Next: Open Data Hub



Response





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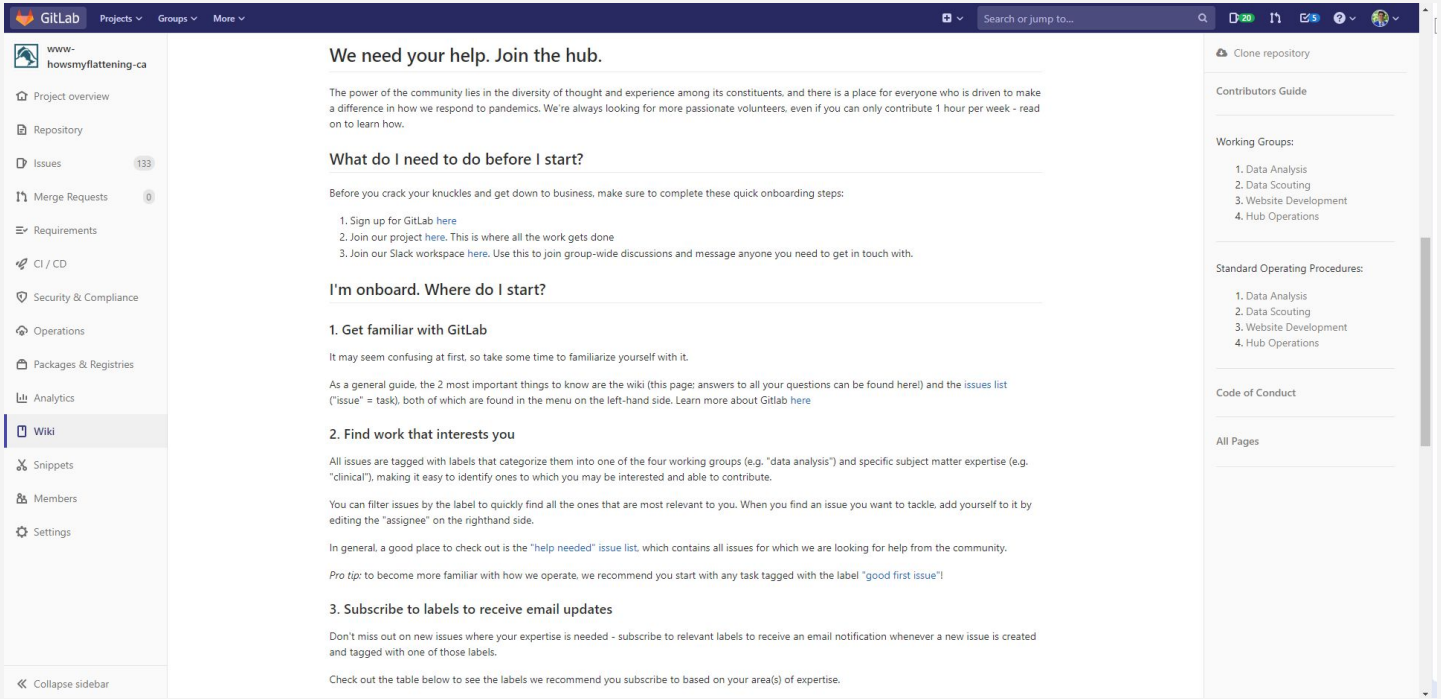
Response

1. “It is SO reassuring to have a group that is actually compiling data to track the spread and able to monitor the repercussions of reopening the economy in a timely fashion. Thank you, thank you. Stay safe all of you and thank you for trying to keep us all safe.”
2. “This is excellent and relevant information. Thank you. **It has been lacking in Provincial public health Briefings and updates.**”
3. “Excellent work on making data visible, transparent and accessible. I wish I had know about this site earlier as I was collecting and maintaining my own data. This has everything I need and IMHO this should be the dashboard for Ontario. Many thanks”
4. “**The Canadian way, with our reliance on science and data, our openness, provides a great comfort.**”
5. “I want to say thanks a million to all the selfless passionate volunteers for sharing your gift of knowledge without any monetary gain to improve the health outcomes of Ontarians. It is an angelic mission and I'm sure you will be richly blessed for your compassionate efforts.”
6. “Finally....someone has provided up to date and specific information. **I live in Brighton Ontario and under normal times I visit Belleville a lot for shopping etc. I was never able to pin down exactly how those places were affected. Til now...thank you.**”
7. “You all are doing incredible work and should be commended.”

Join US! Contribute Analysis + Data + Skillset



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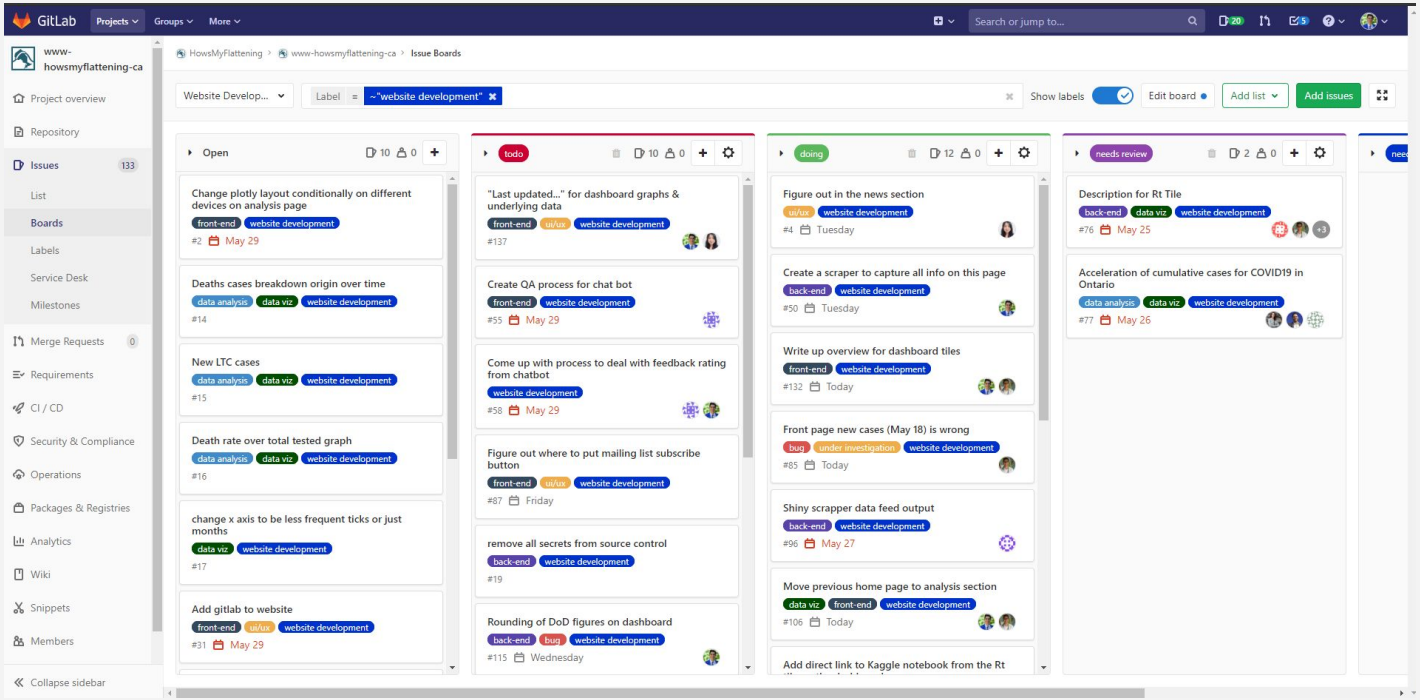
Community in Action



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Summary

60-day old **collaborative**

bringing **100+** talented people together

Showing value of **open** data **+** analytics mindset to *move quickly* to generate health insights

Putting them in 1 place (visually) to help inform decision-makers

Join us!

info@howsmyflattening.ca

@howsmyflattening

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