

COVID-19 challenge

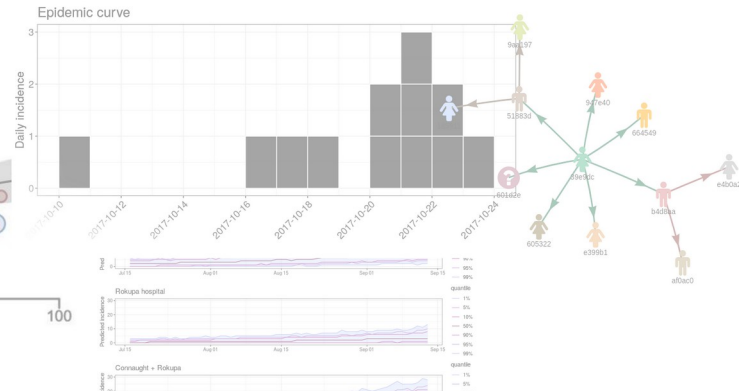
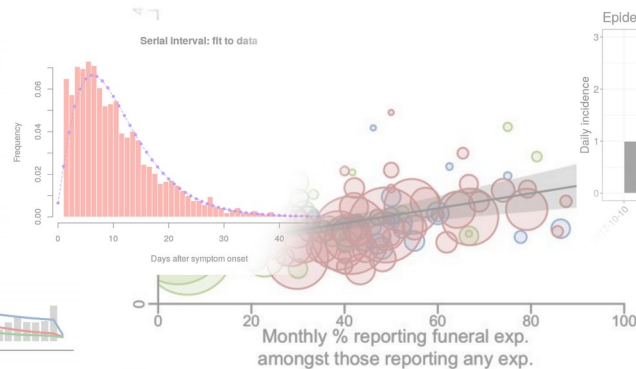
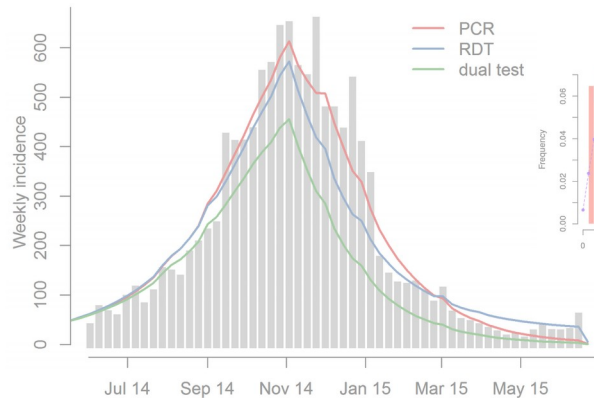
A collaborative platform to help the epidemic response using R

M. Rolland
mj.rolland@gmail.com

August 28, 2020

RECON

R Epidemics CONSortium



Hospital bed occupancy projections

Description

Specifying the distribution of the length of hospital stay (LoS) for COVID-19 patients by the inter-quartile range (IQR, 25%-75% range). See the 'Inputs' tab for details on these distributions.

Length of hospital stay (LoS) distribution

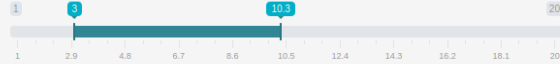
CMMID General (World)

Distribution

☒ weibull

☐ gamma

LoS IQR (in days)



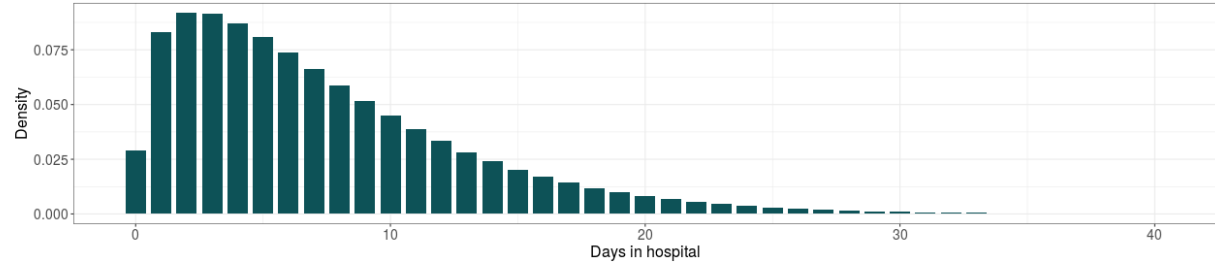
Admissions

Length of Stay

Epidemic Parameters

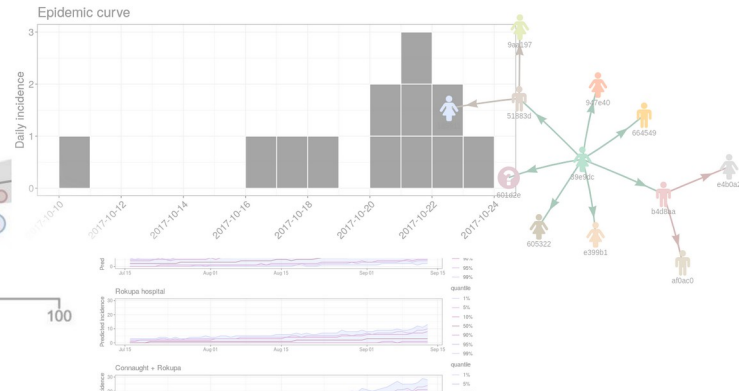
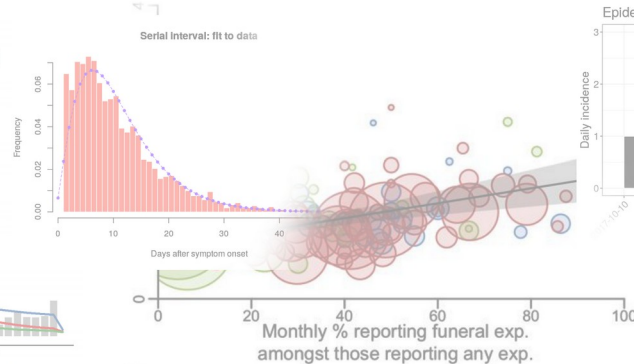
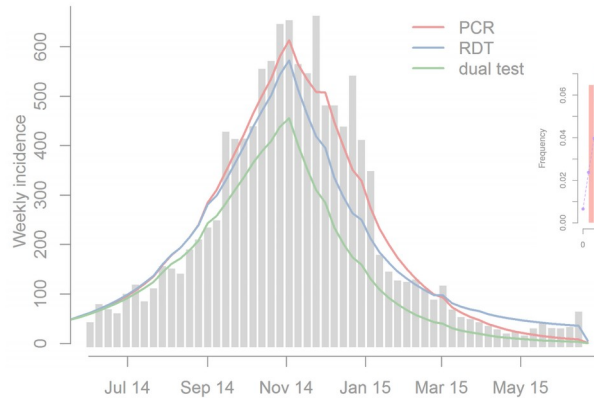
Main results

Length of stay in hospital



Median LoS: 6.0 days
95% interval: (0.4, 22.2) days
Distribution: $W(k=1.3, \lambda=8.0)$

R Epidemics CONSortium



Hospital bed occupancy projections

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Length of hospital stay (LoS)

CMMID General (World)

Distribution

☒ weibull

☐ gamma

LoS IQR (in days)



Admissions

Length of Stay

Epidemic Parameters

Main results

Length of stay in hospital



Inferring COVID-19 cases from deaths of confirmed cases

Authors: Thibaut Jombart, Sam Abbott, Amy Gimma, Kevin Zandvoort, Sam Clifford, Christopher Jarvis, Timothy Russell, Sebastian Funk, Hamish Gibbs, Rosalind Eggo, Adam Kucharski, [CMMID COVID-19 Working Group](#)¹, John Edmunds

Disclaimer: This model is not peer-reviewed. The results generated here should not be interpreted to predict exact numbers of cases. Please read the [study summary](#) on the [LSHTM CMMID website](#).

[Explanations](#) [Graphics](#) [Summary table](#)

Data input

Dates of Death (Format 'yyyy-mm-dd', e.g. 2020-02-18, separated by spaces or new lines. The date range must be 7 days or less):

2020-08-28 ...

Model input

Reproduction number (R):



Case Fatality Ratio (CFR), in %:



Duration of simulations (days after last death):



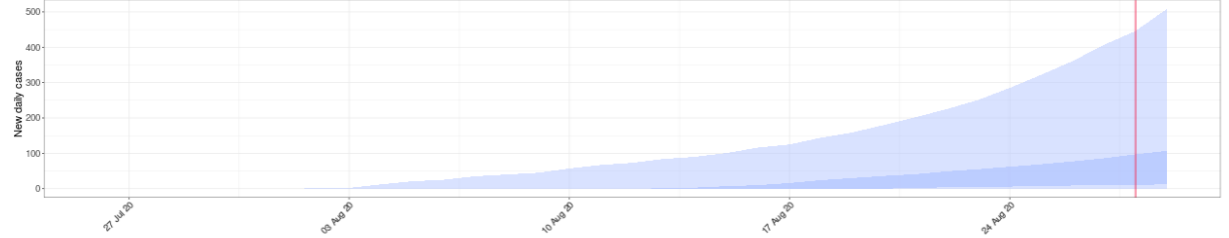
Number of simulation (50 trajectories per simulations):



[Simulate](#)

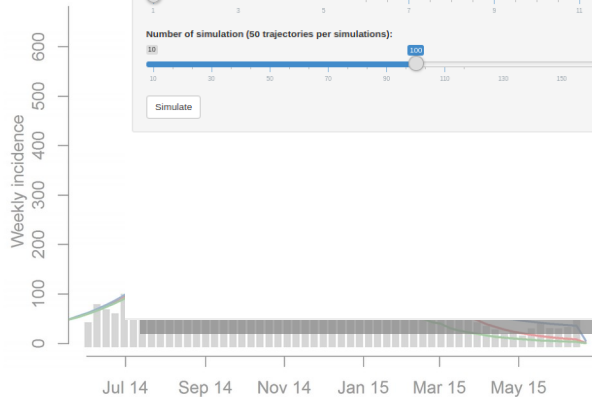
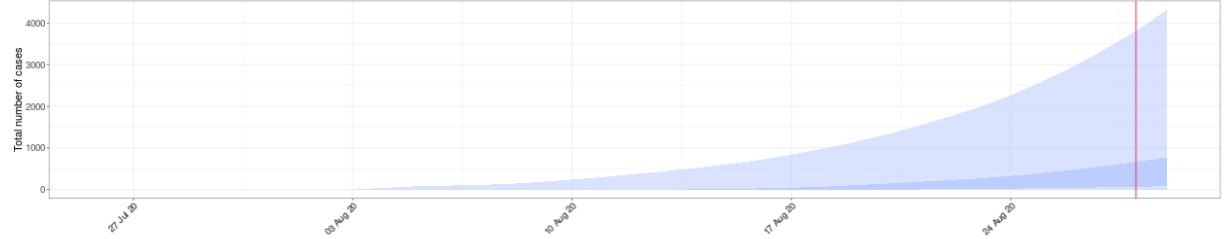
Simulation results: new cases per day

Cases Inferred from deaths: projections



Simulation results: cumulative cases

Cases Inferred from deaths: cumulative projections



Monthly % reporting funeral exp. amongst those reporting any exp.



RECON

R Epidemics **CON**sortium

www.repidemicsconsortium.org

COVID-19 challenge

COVID-19 challenge

RECON

package

maintainers

COVID-19 challenge

RECON
package
maintainers

Field
agents

COVID-19 challenge

RECON
package
maintainers

Field
agents

R
Community

COVID-19 challenge

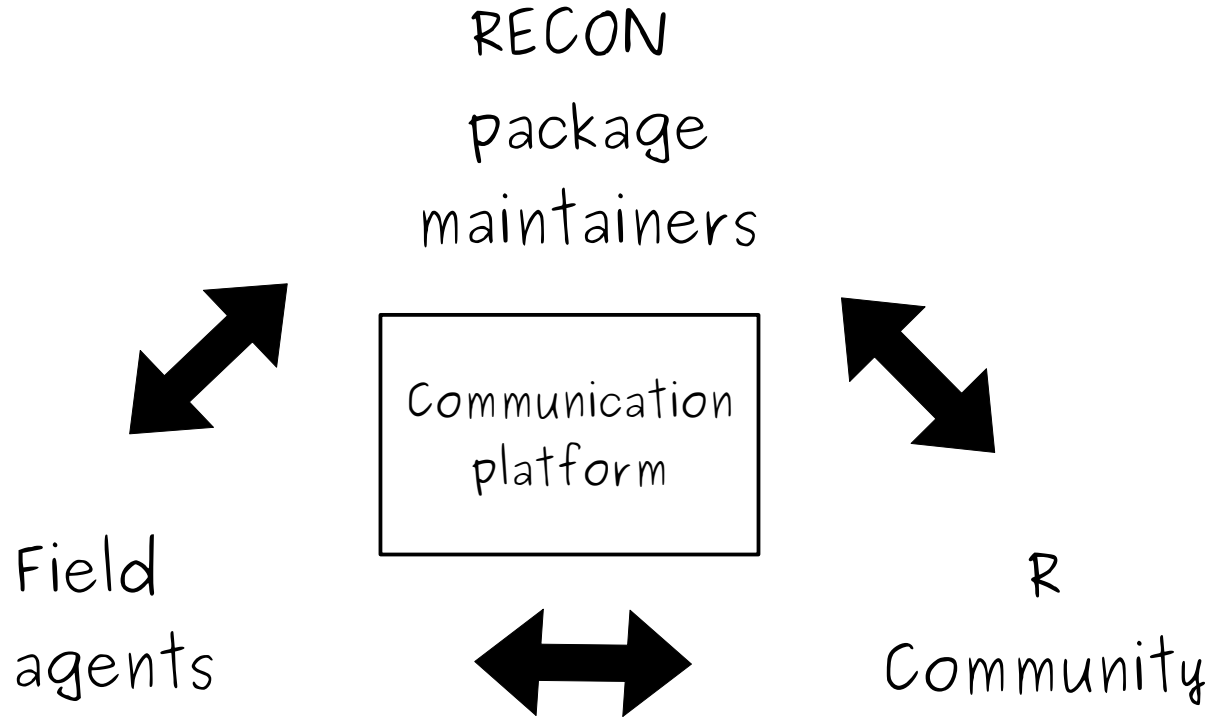
RECON
package
maintainers

Communication
platform

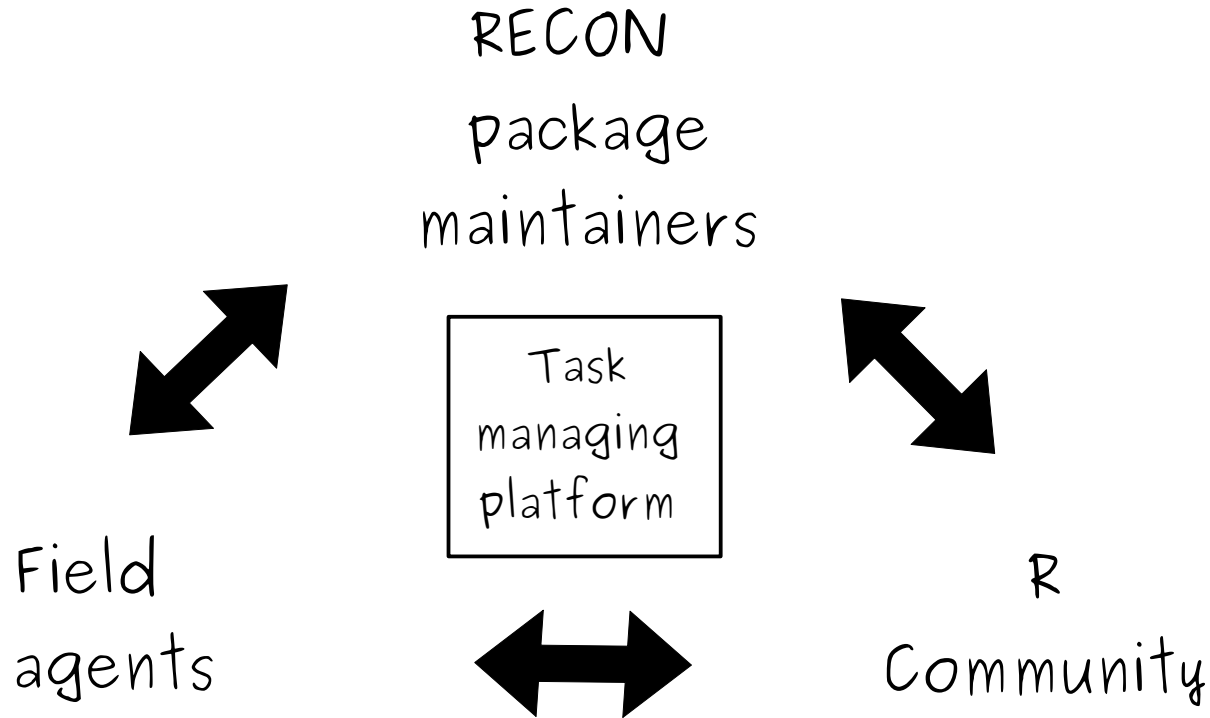
Field
agents

R
Community

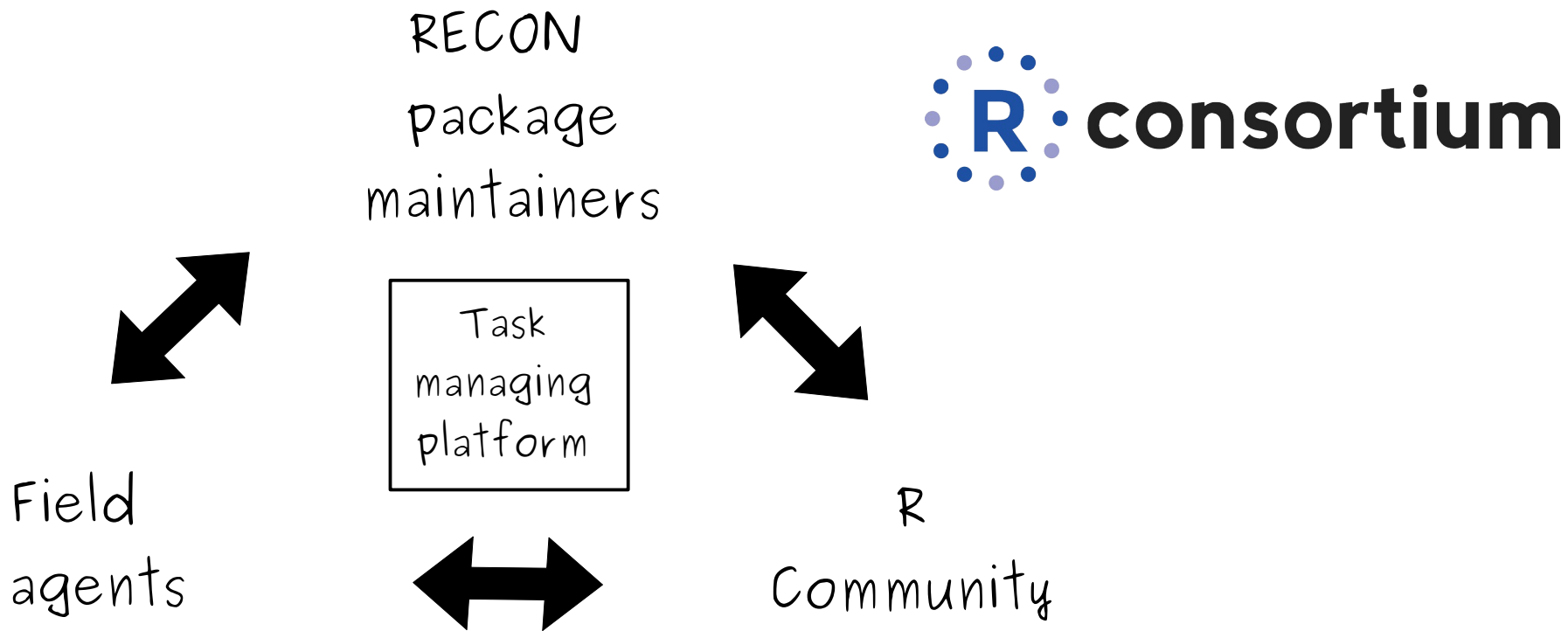
COVID-19 challenge



COVID-19 challenge



COVID-19 challenge



Task Definition

A Task

Modify existing function



Modify existing function



suggest new package



Modify existing function



Suggest new package

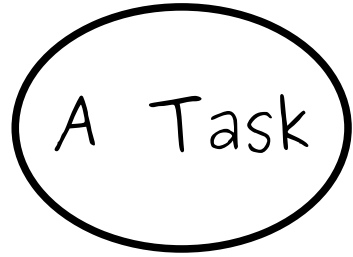


Request new function

Modify existing function



Suggest new package



Request new function

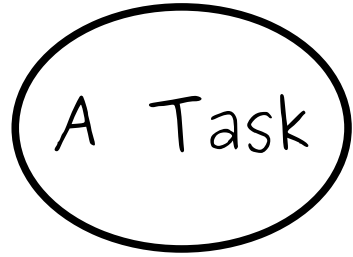


Code review

Modify existing function



Suggest new package



Request new function

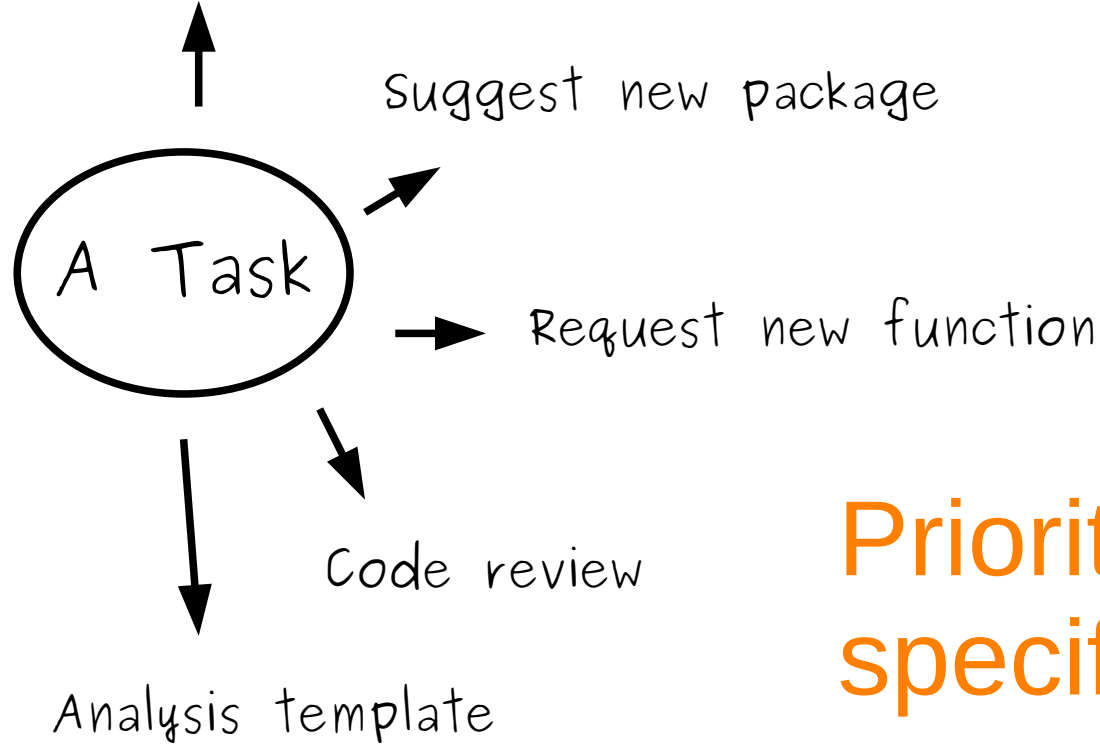


Code review



Analysis template

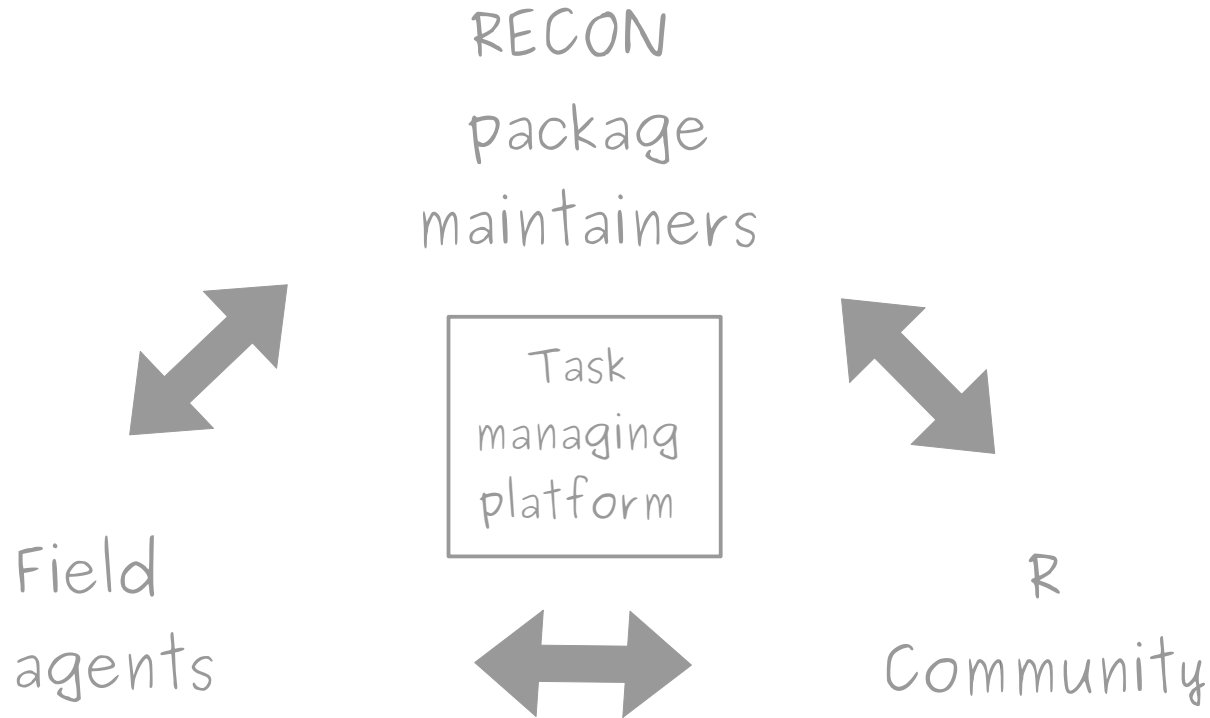
Modify existing function



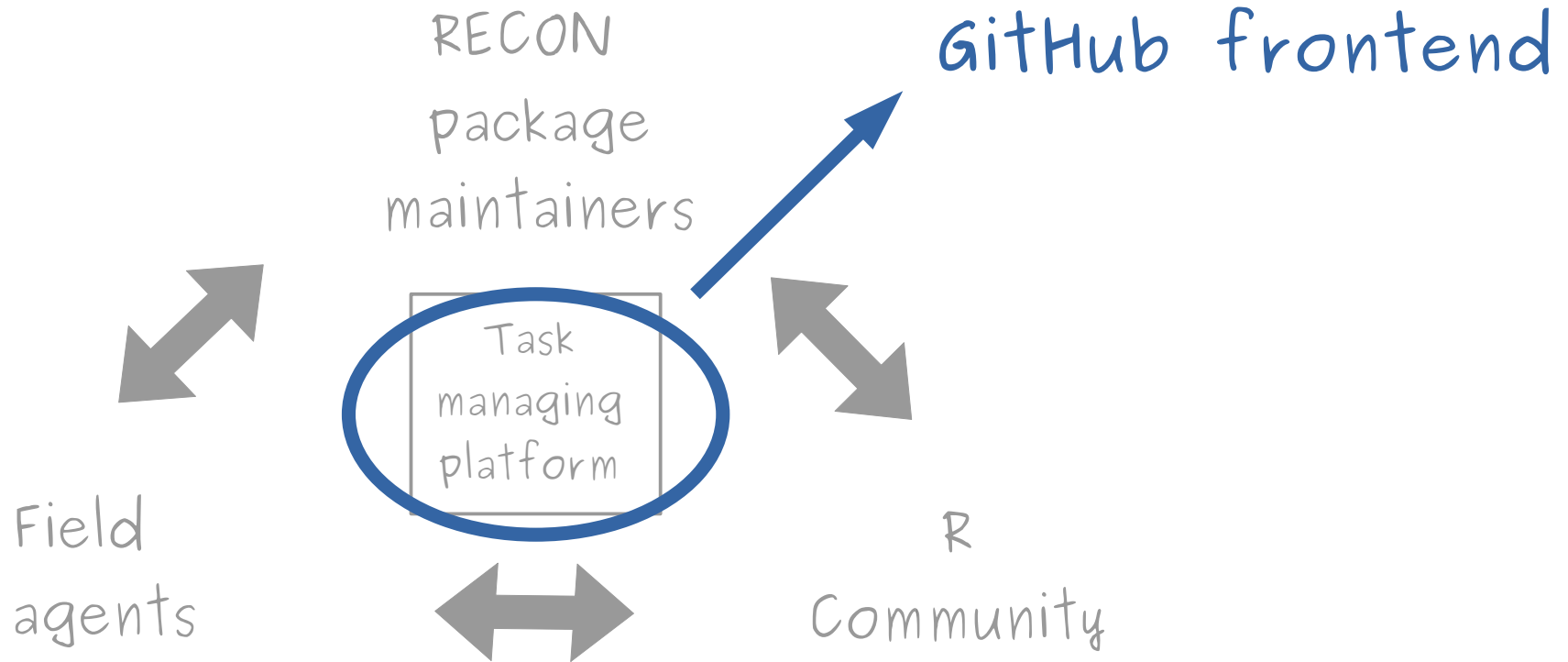
Priority to COVID-19
specific tasks

Platform specifications

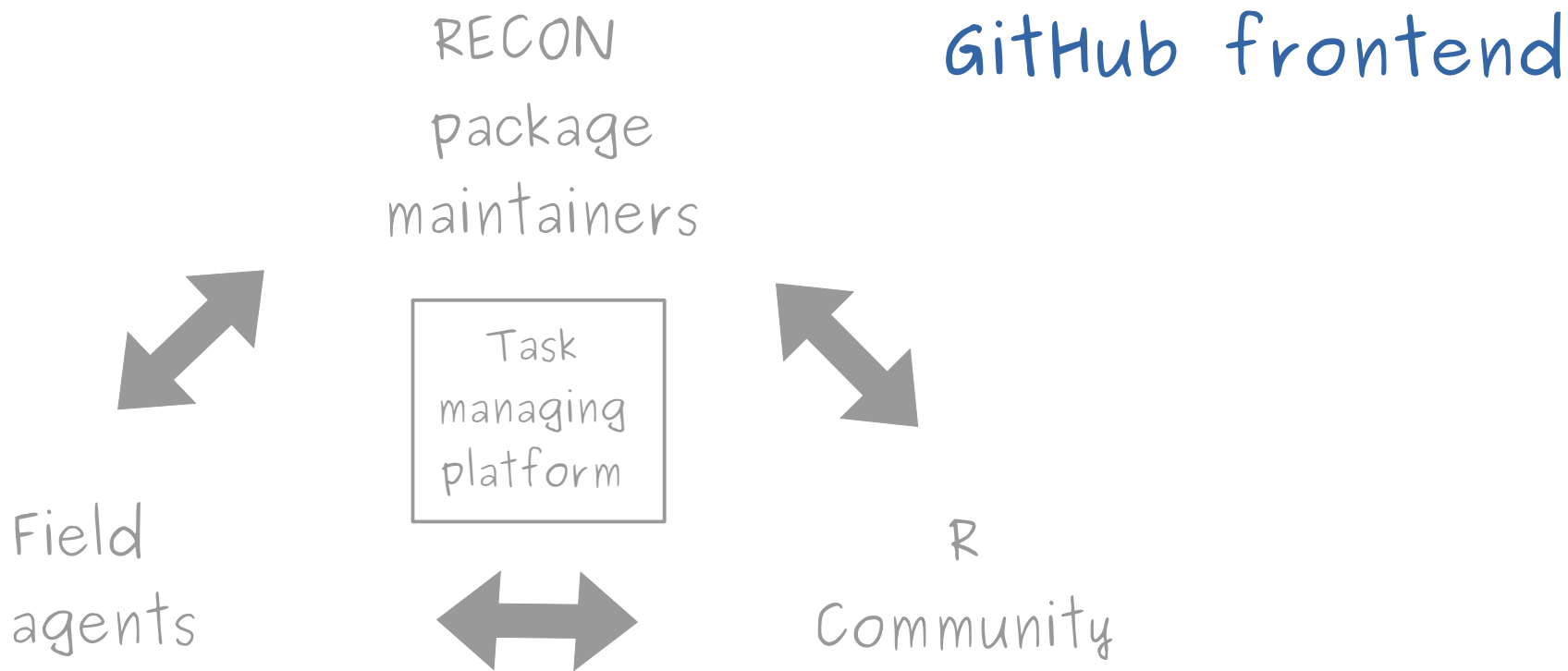
COVID-19 challenge



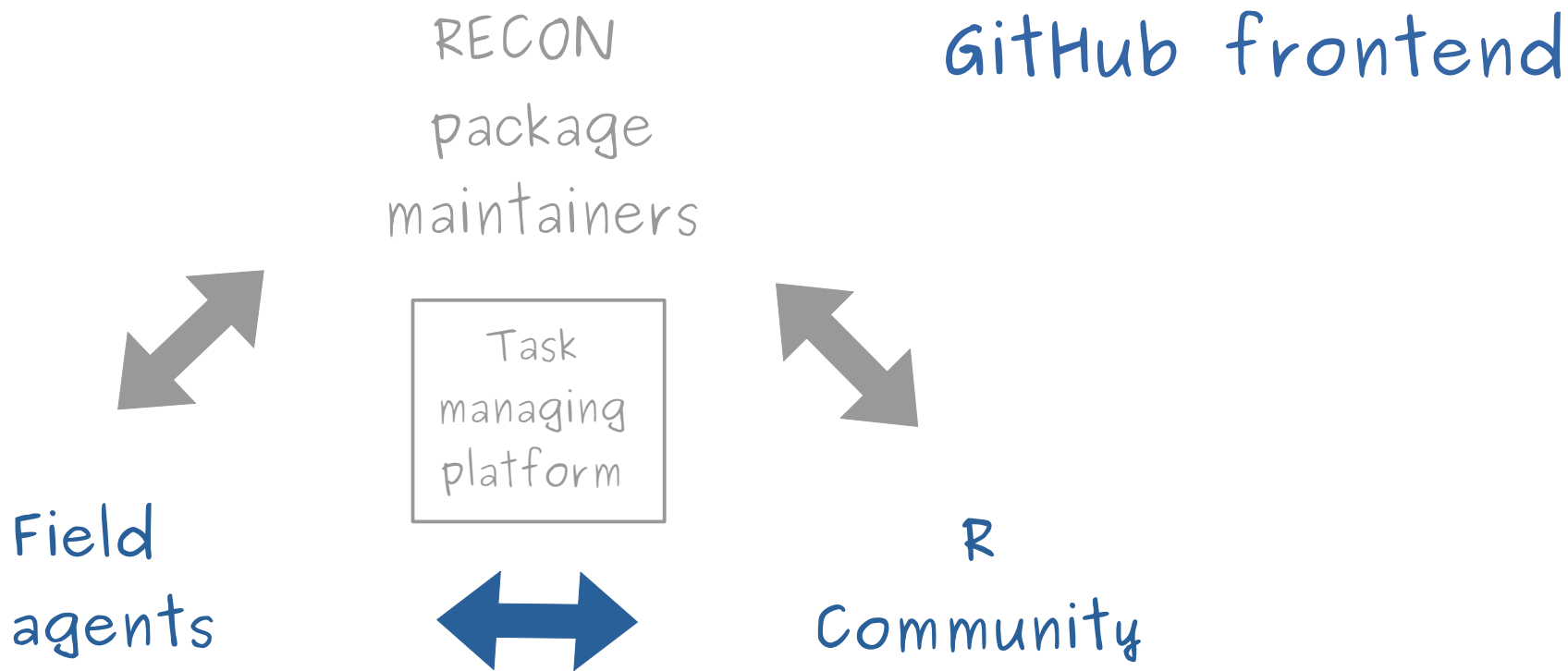
COVID-19 challenge



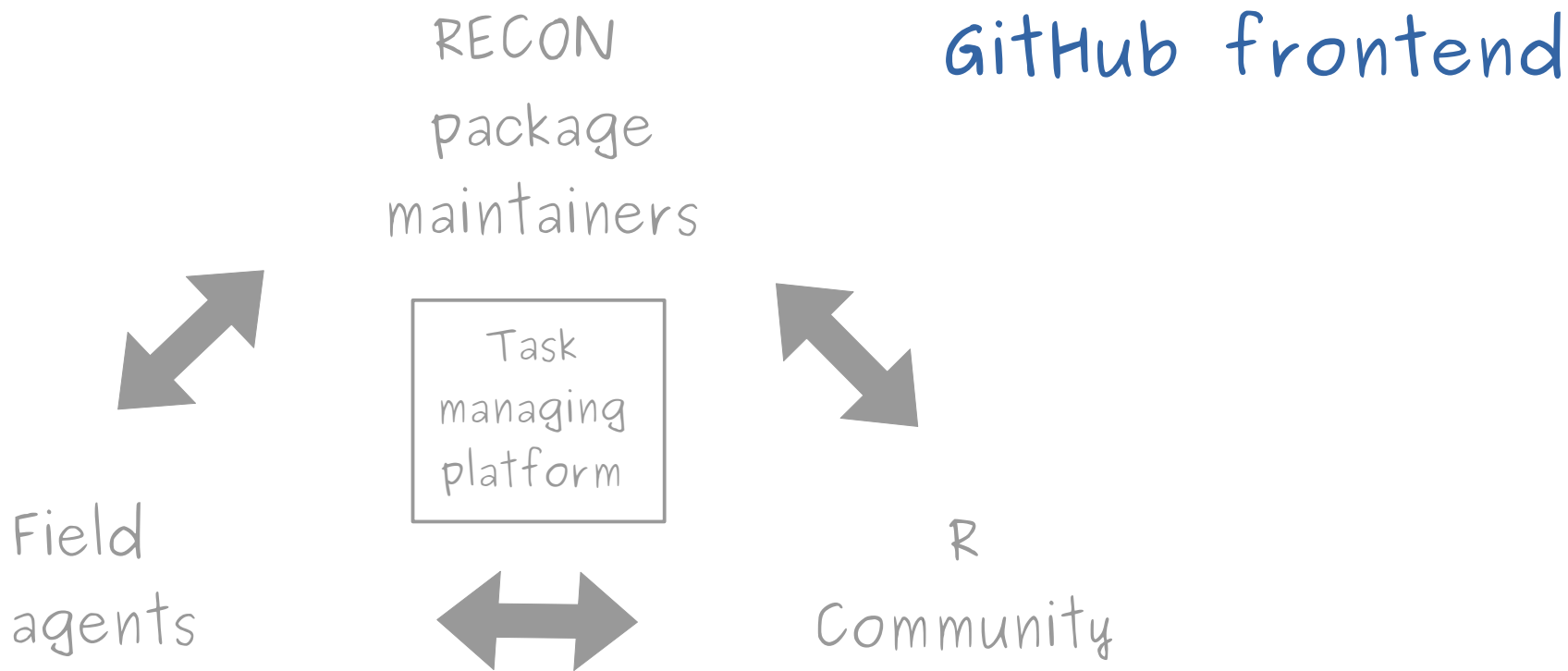
COVID-19 challenge



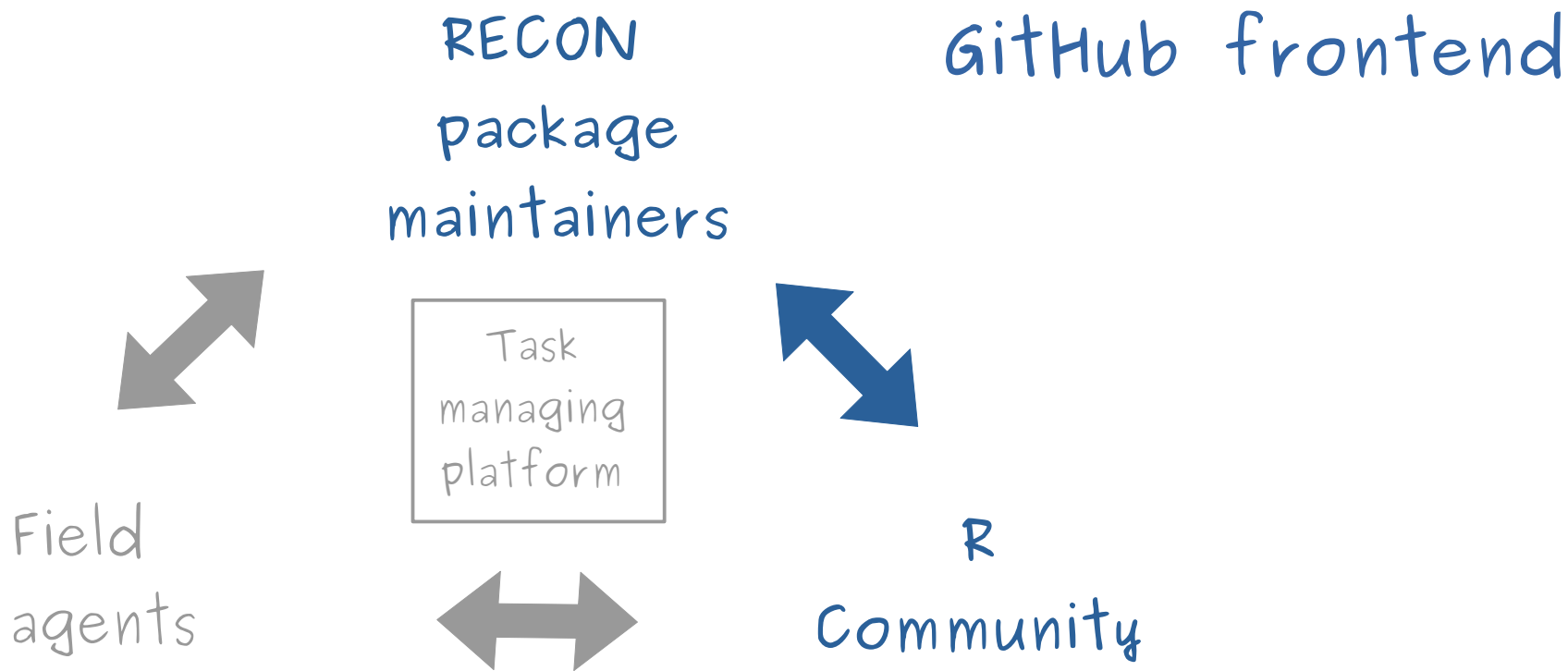
COVID-19 challenge



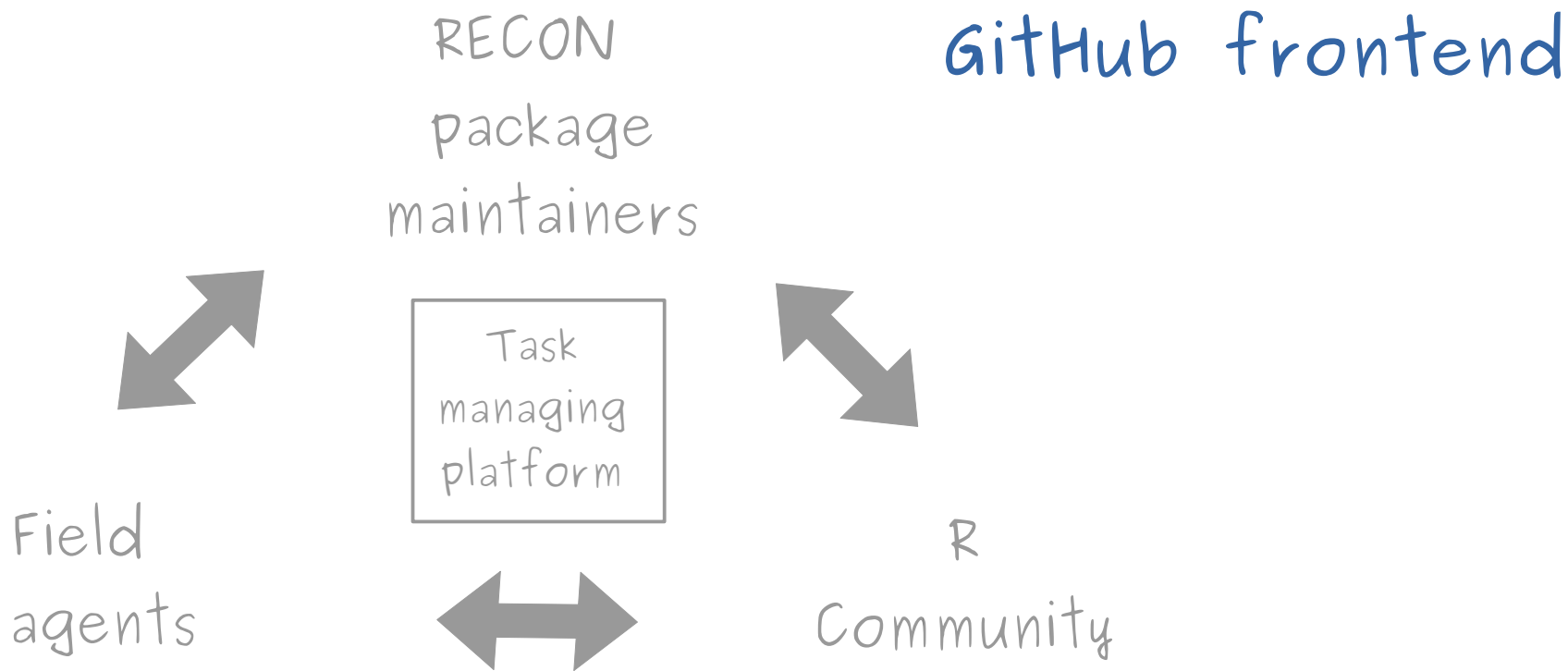
COVID-19 challenge



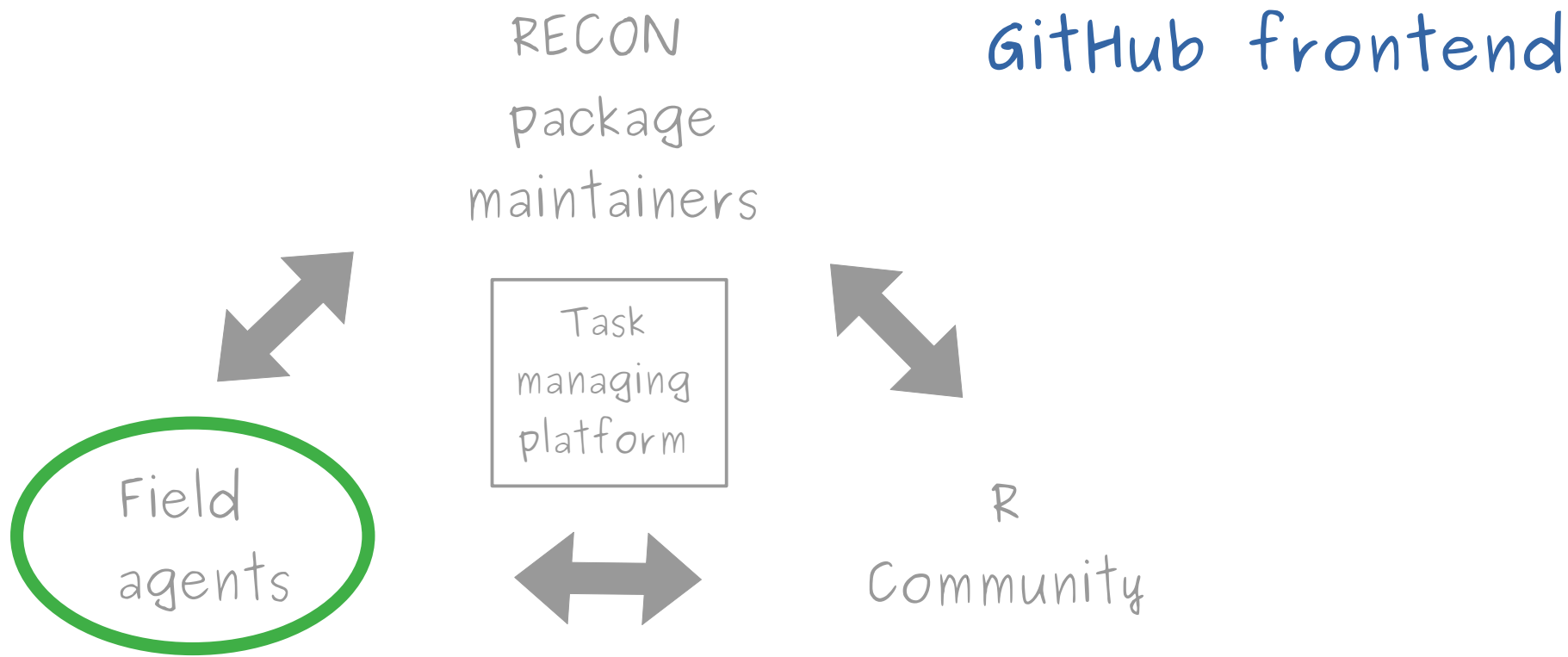
COVID-19 challenge



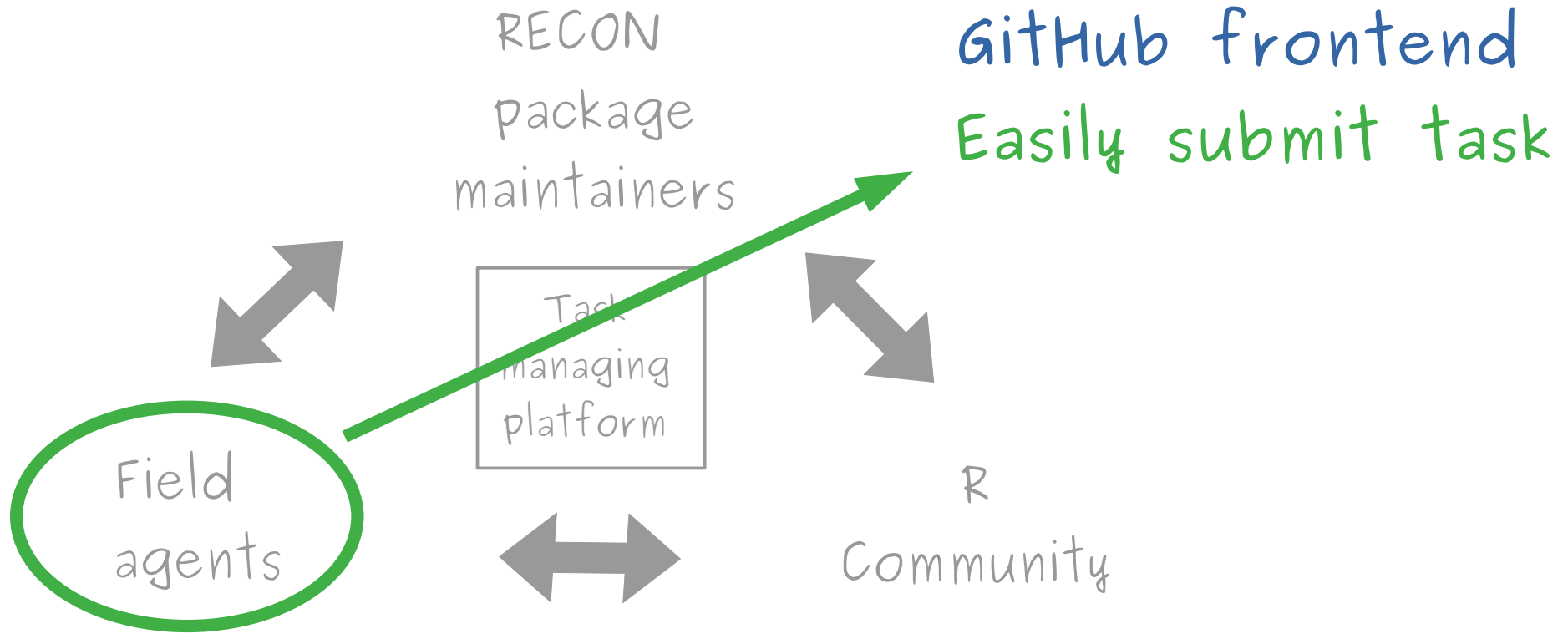
COVID-19 challenge



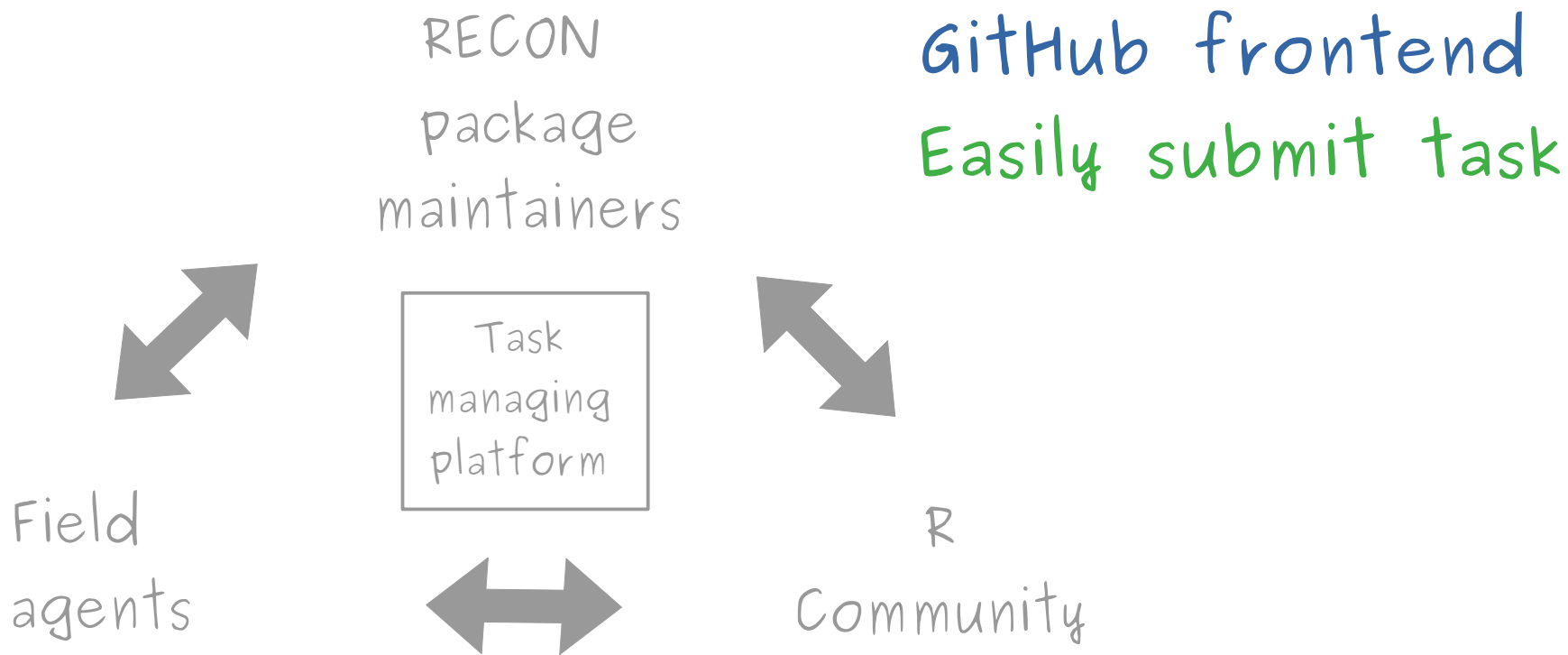
COVID-19 challenge



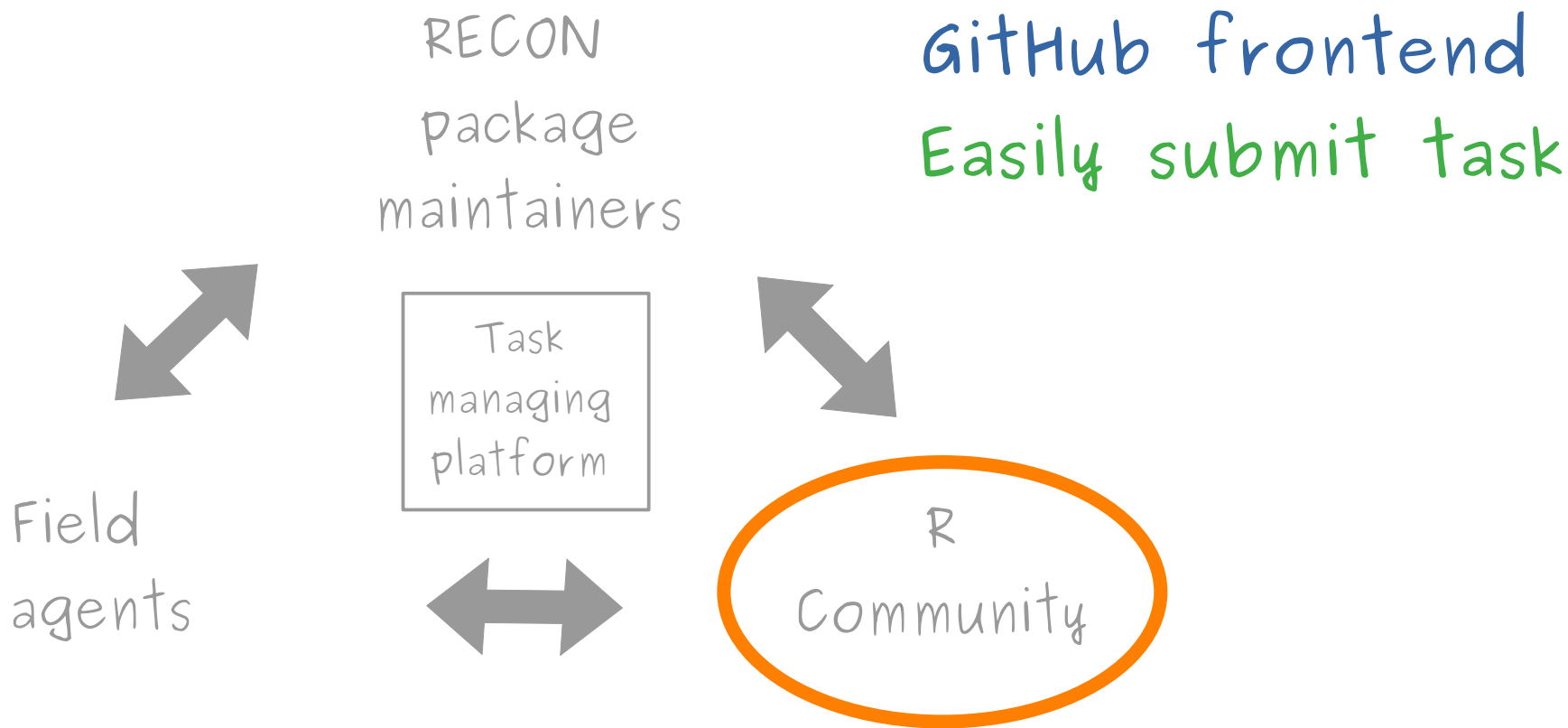
COVID-19 challenge



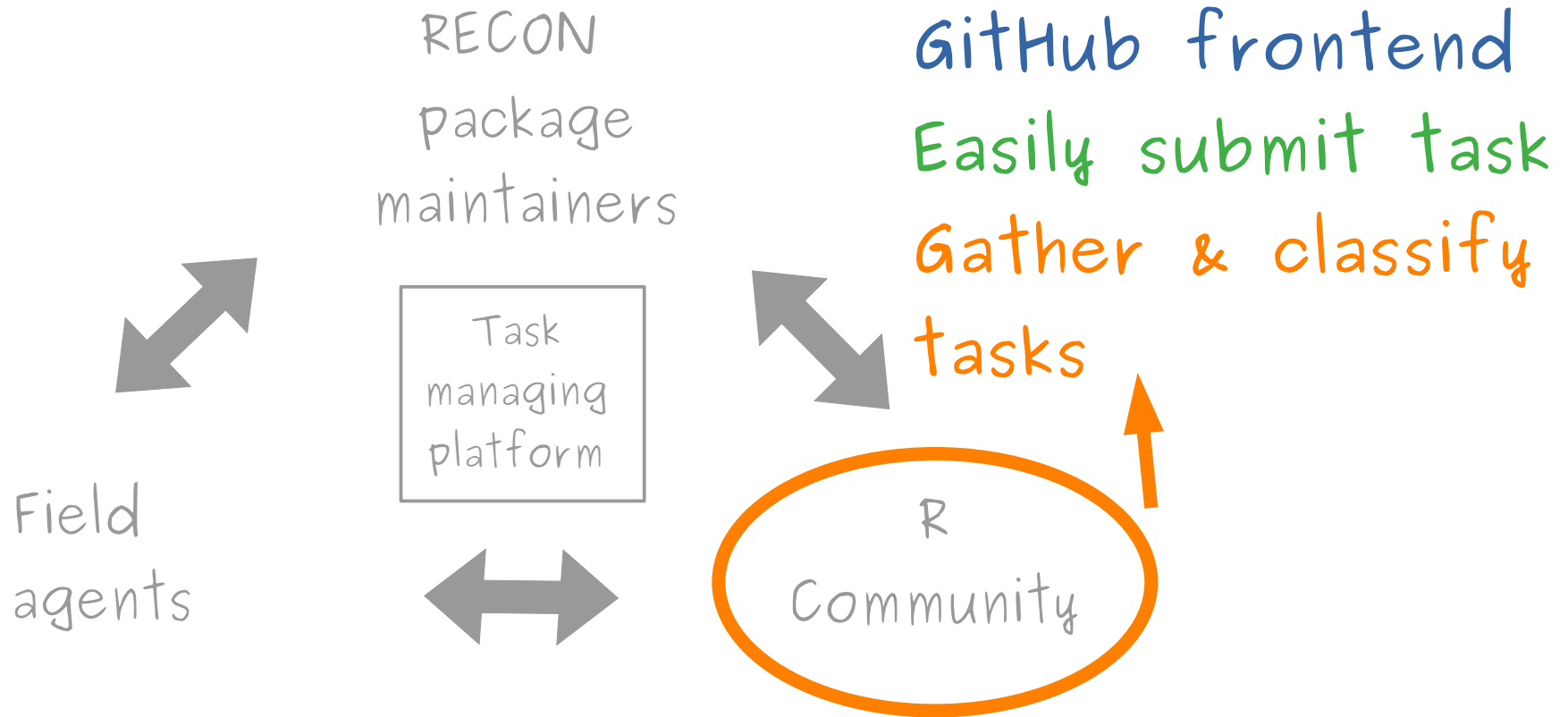
COVID-19 challenge



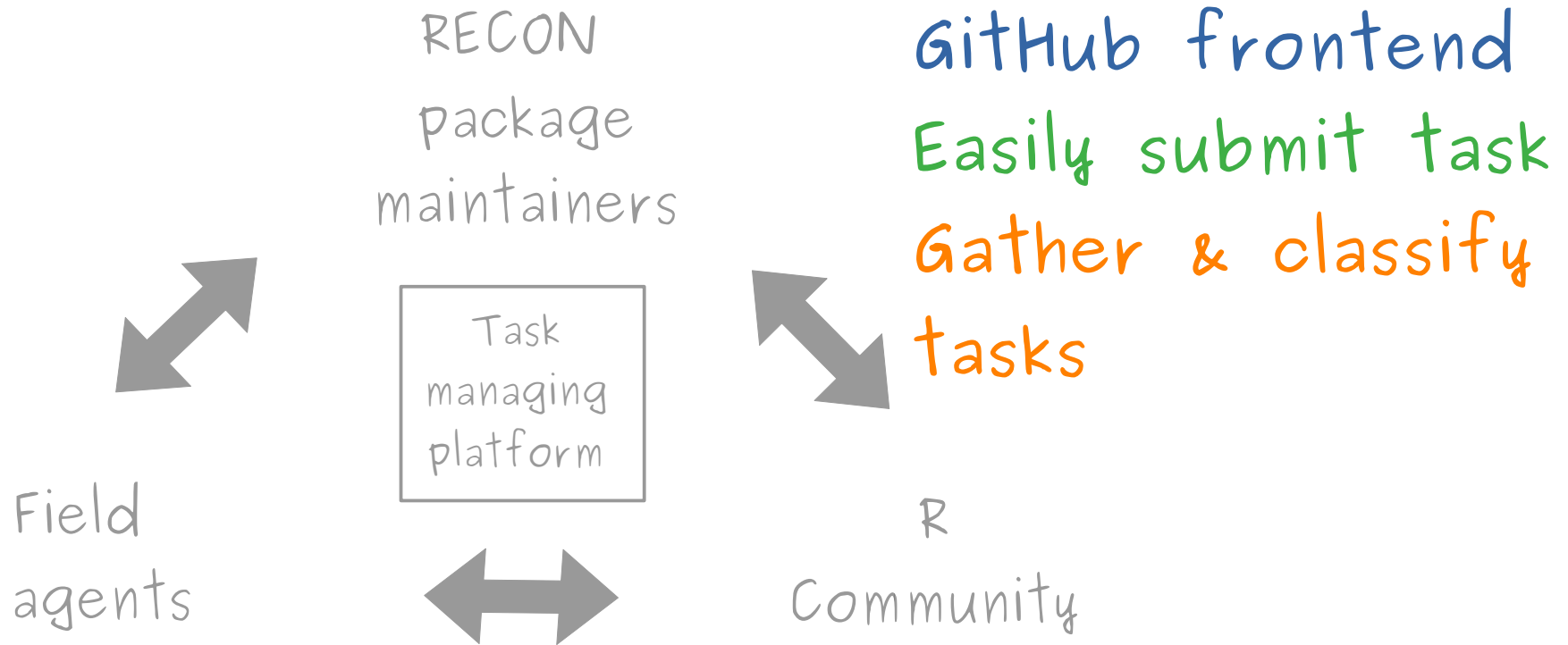
COVID-19 challenge



COVID-19 challenge



COVID-19 challenge



Task Lifecycle





ABOUT LEARN EXPLORE

LOG IN

Be part of the global response to COVID19

Join a community of field epidemiologists, infectious disease modellers and volunteer R programmers and contribute to develop free and open source R tools used in the response to the COVID19 epidemic.

Tools developed by the R epidemics consortium (RECON) are essential in helping professionals design outbreak analytics pipelines in response to COVID19.



The tasking manager is a direct communication channel between field agents actively working on the response to COVID19 and the R community.

Your R programming skills can help field agents around the world.



1 Field agent opens task



Create a task

Use available labels to reflect the nature of the task. In particular, for rating the complexity and the priority of the task.

Task Complexity

Task priority

Assigned Repo

Assignee to Help

Assign task to specific github user or repo

CLOSE

NEW TASK

[/ sub-nati](#)
[n LMIC](#)

nal Tags:

DETAILS

Final Tags:

Priority: High

Complexity: Medium

Priority: High

Complexity: Medium

[SHOW DETAILS](#)[SHOW DETAILS](#)[SHOW DETAILS](#)

From netlify

Priority: Low

Complexity: Low

[NEw Attempt](#)

Priority: Low

Complexity: Low

myTitle


Priority: Low

Complexity: Low

Search 🔍

Rows per page: 10 1-2 of 2 < >

My Submitted Tasks


Search 

Repo	Title	Description	Complexity	Priority	Status	Created	Notes	Updated
covid19hub	Demo task	just a demo	Complexity_Low	Priority_Low	pending	2020-08-26 20:29:05		2020-08-26 20:29:05
covid19hub	Demo task for DSCC19	Show DSCC attendees task creation template	Complexity_Low	Priority_Low	approved	2020-08-26 20:27:22	very interesting task	2020-08-26 20:30:46

Rows per page: 10 1-2 of 2 < >

1 Field agent opens task





- 
- 1 Field agent opens task
 - 2 Project board validates task

Search

Rows per page: 10 1-2 of 2 < >

This is a Review page

Search


Author	Title	Description	Complexity	Priority	Created	Updated	Notes	Actions
							very interesting task	
mjrolland	Demo task for DSCC19	Show DSCC attendees task creation template	Complexity_Low	Priority_Low	2020-08-26 20:27:22	2020-08-26 20:27:22		
mjrolland	Demo task	just a demo	Complexity_Low	Priority_Low	2020-08-26 20:29:05	2020-08-26 20:29:05		

Rows per page: 10 1-2 of 2 < >

Search 🔍

Rows per page: 10 1-2 of 2 < >

My Submitted Tasks

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Rows per page: 10 1-2 of 2 < >

This is an explore page

Here is a list of all the proposed and pending tasks submitted to RECON.

Filter Complexity: None | Filter Priority: None

- [Demo task](#)

Priority: Low
Complexity: Low

Additional Tags:

[SHOW DETAILS](#)
- [Demo task for DSCC19](#)

Priority: Low
Complexity: Low

Additional Tags:

[SHOW DETAILS](#)
- [Demo Title](#)

Priority: Low
Complexity: Low

Additional Tags:

[SHOW DETAILS](#)
- [Package: fit discretised distributions to match expected distributional properties](#)

Priority: Medium
Complexity: Medium

Additional Tags:

[SHOW DETAILS](#)
- [Functions to import reported daily sub-national new cases and deaths from LMIC](#)

Priority: High
Complexity: Medium

Additional Tags:

[SHOW DETAILS](#)
- [Apple mobility reports](#)

Priority: Medium
Complexity: Low

Additional Tags:

[SHOW DETAILS](#)
- [high complex medium priority](#)

Priority: Medium
Complexity: High

Additional Tags:

[SHOW DETAILS](#)
- [medium complex high priority](#)

Priority: High
Complexity: Medium

Additional Tags:

[SHOW DETAILS](#)
- [From netlify](#)

Priority: Low
Complexity: Low

Additional Tags:

[SHOW DETAILS](#)

This is an explore page

Here is a list of all the proposed and pending tasks submitted to RECON.

complexity Filter Priority None

[Demo task](#)

Priority: Low
Complexity: Low

Additional Tags:

SHOW DETAILS

[Demo task for DSCC19](#)

Priority: Low
Complexity: Low

Additional Tags:

SHOW DETAILS

[Demo Title](#)

Priority: Low
Complexity: Low

Additional Tags:

SHOW DETAILS

[Package: fit discretised distributions to match expected distributional properties](#)

Priority: Medium
Complexity: Medium

Additional Tags:

SHOW DETAILS

[Functions to import reported daily sub-national new cases and deaths from LMIC](#)

Priority: High
Complexity: Medium

Additional Tags:

SHOW DETAILS

[Apple mobility reports](#)

Priority: Medium
Complexity: Low

Additional Tags:

SHOW DETAILS

[medium complex high priority](#)

Priority: Medium
Complexity: High

Additional Tags:


SHOW DETAILS


[From netlify](#)

Priority: Low
Complexity: Low

Additional Tags:

SHOW DETAILS

- 
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- 1 Field agent opens task
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 - 3 R programmer browses tasks

This is an explore page

Here is a list of all the proposed and pending tasks submitted to RECON.

Filter Complexity
None

Filter Priority
None

CREATE NEW TASK

[Demo Title](#)

Priority: Low
Complexity: Low

Additional Tags:

SHOW DETAILS

[Package: fit discretised distributions to match expected distributional properties](#)

Priority: Medium
Complexity: Medium

Additional Tags:

SHOW DETAILS

[Functions to import reported daily sub-national new cases and deaths from LMIC](#)

Priority: High
Complexity: Medium

Additional Tags:

SHOW DETAILS

[Apple mobility reports](#)

Priority: Medium
Complexity: Low

Additional Tags:

SHOW DETAILS

[high complex medium priority](#)

Priority: Medium
Complexity: High

Additional Tags:

SHOW DETAILS

[medium complex high priority](#)

Priority: High
Complexity: Medium

Additional Tags:

SHOW DETAILS

[From netlify](#)


Priority: Low
Complexity: Low


[NEw Attempt](#)

Priority: Low
Complexity: Low

[myTitle](#)

Priority: Low
Complexity: Low

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 - 4 R programmer assigns him/herself task
 - 5 Field agent + R programmer solve task

Apple mobility reports #7

New issue

🕒 Open **ffinger** opened this issue on 15 Apr · 2 comments



ffinger commented on 15 Apr • edited ▾

Collaborator 😊 ...

Make apple mobility data available from R.

<https://www.apple.com/covid19/mobility>

It's already a CSV, so very easy to wrap it.

Want to include this in your package **@nacnudus**?

Or in NCoVUtils **@seabbs**?



nacnudus commented on 15 Apr

😊 ...

@ffinger thanks, but my package is only for the Google data.



thibautjombart commented on 20 Apr

Contributor 😊 ...

Yes may for NCoVUtils **@seabbs**?

@ffinger maybe add labels to make the issue more visible?



ffinger added **enhancement** **low_complexity** **medium_priority** **new_package** labels on 20 Apr

Assignees

No one assigned

Labels

enhancement

low_complexity

medium_priority

new_package

Projects

None yet

Milestone

No milestone

Linked pull requests

Successfully merging a pull request may close this issue.


None yet


Notifications


Customize

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- 
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PLATFORM

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PLATFORM

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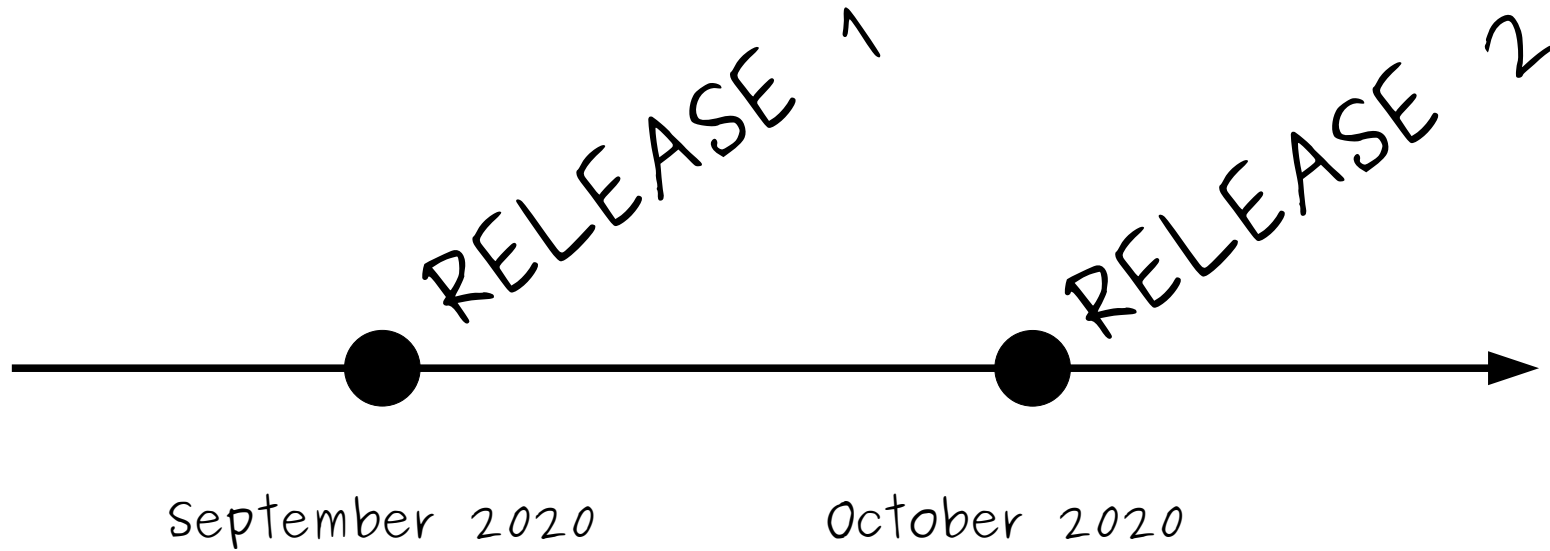
GITHUB

Milestones

Milestones



Milestones



Join the response against
COVID19!

Join the response against COVID19!



@RECONEPI



repidemicsconsortium@gmail.com



www.repidemicsconsortium.org



github.com/reconhub/

Thank you :)

Thank you :) %>%

Thank you :) %>%

questions() ?