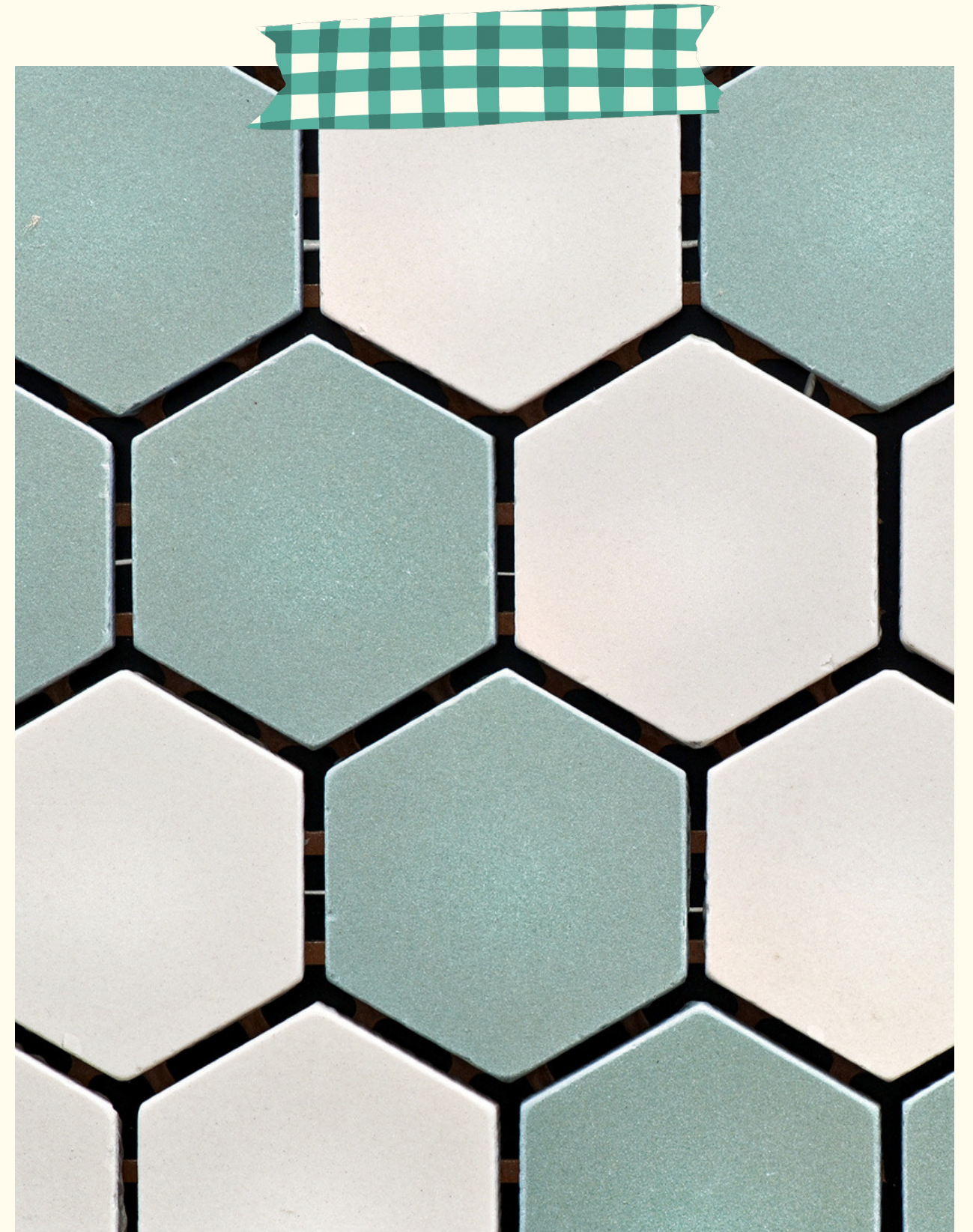


Maintaining Order Amidst Chaos

with open-source workflow



A bit about me



Lillian Lu

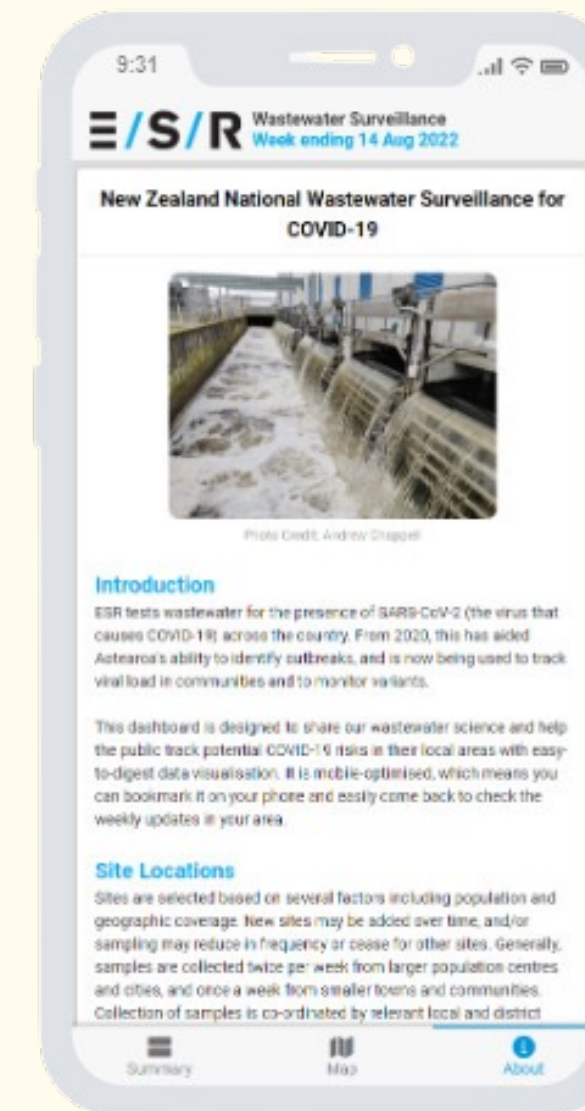
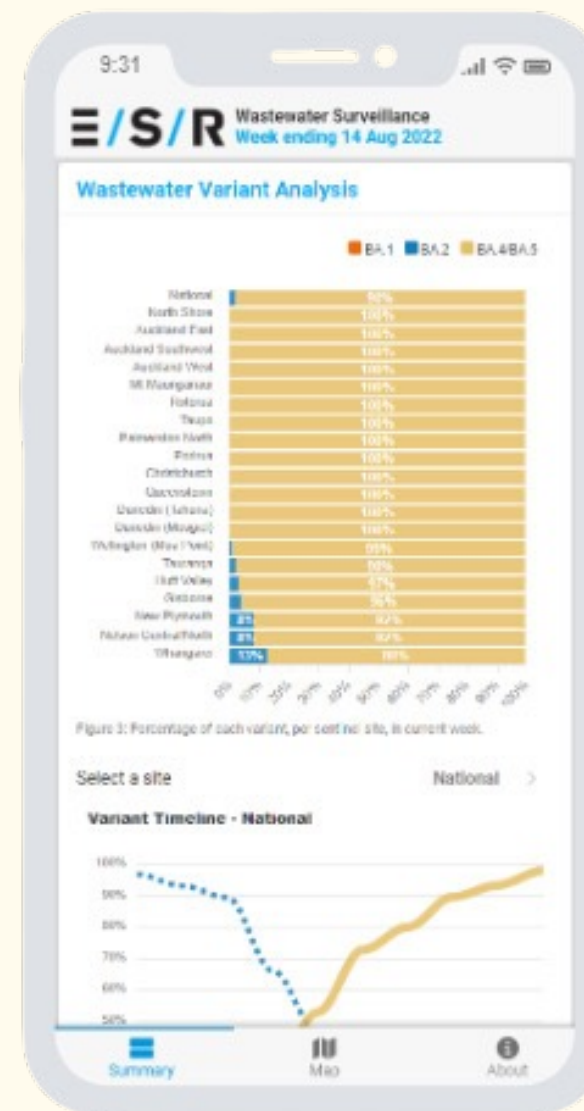
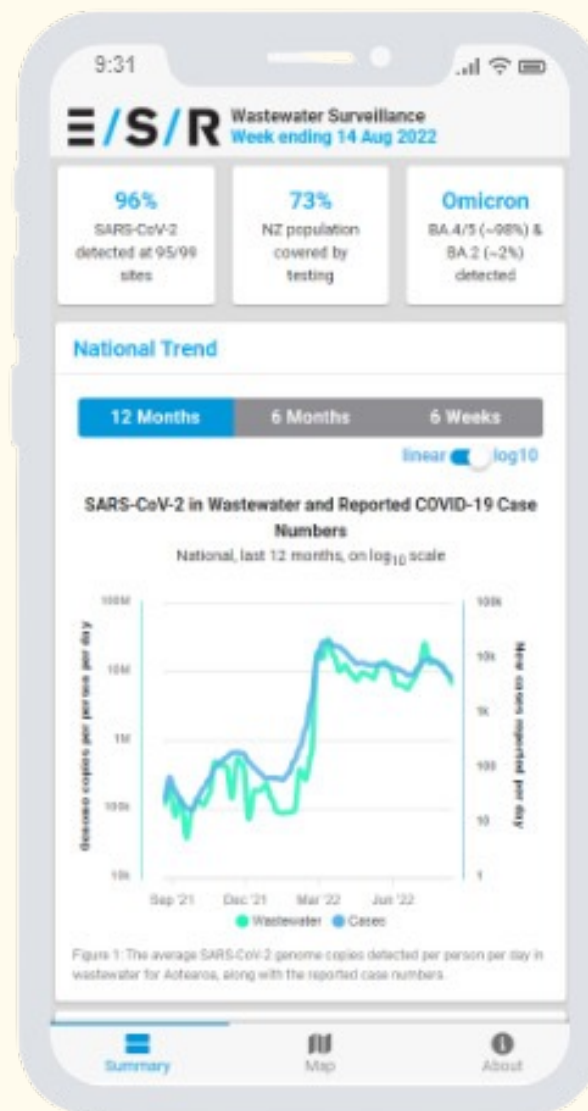
- Background in design & marketing
- Career switch in 2020
- Master of Analytics
- Data scientist/analyst/consultant



Ministry for the
Environment
Manatū Mō Te Taiao



I love R!



National Monitoring System (NMS)

An annual dataset with information collected from local authorities on their implementation of the **Resource Management Act**.



National Monitoring System (NMS)

An annual dataset with information collected from local authorities on their implementation of the **Resource Management Act**.

Compliance

Time

Cost

Efficiency

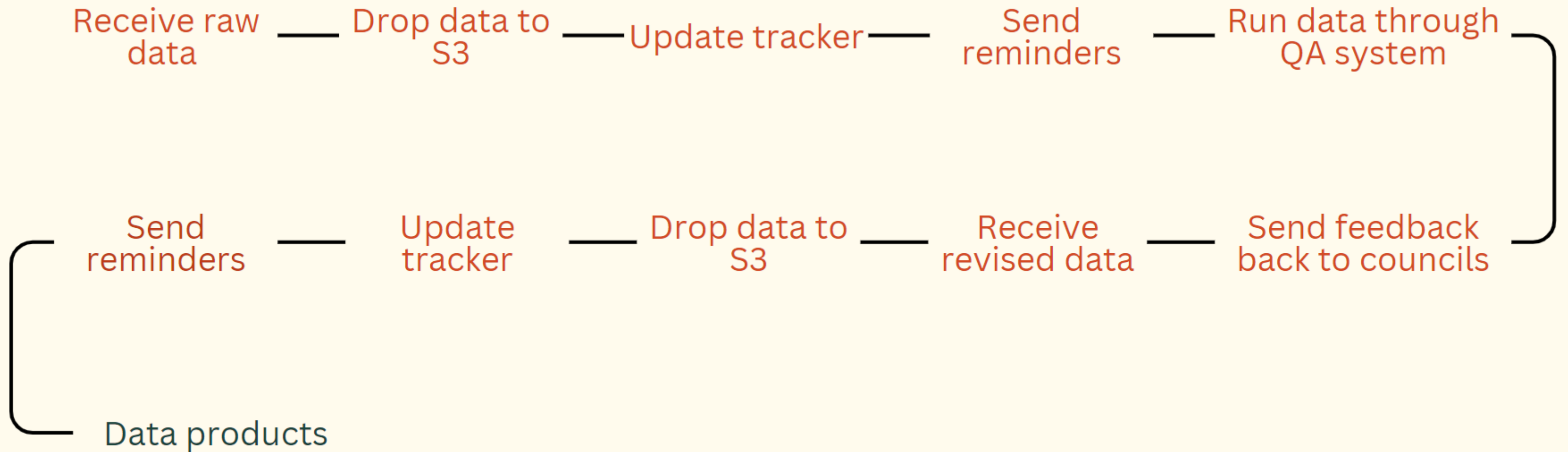


National Monitoring System (NMS)

78 councils are required to provide information in a spreadsheet and email it to MfE.



NMS workflow







There is always
room for improvement





There is always
room for improvement


There is always something
within your control




NMS Project Management App


NMS Project Management


TrackingData UploadContact ListIssue Log


Ministry for the Environment
Manatū Mo Te Taiao


2024-04-26 09:52


No submission
0

To process
1

Resubmission
0

Await revision
8

To reprocess
0

Cycle complete
69

Tracking Table

Filter by status

Update status

Send reminder

Add notes

Show 20 entries

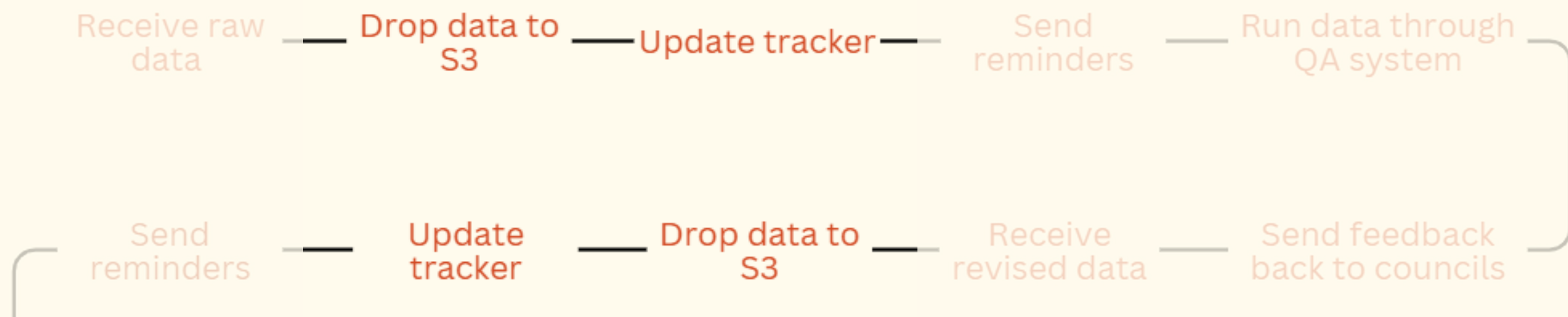
Search:

Council_name	Status	Status_updated_date	Due_date	Days_left_til_due	Reminder_sent_date	Final_sub_date	Note	Note_updated_date
Ashburton District	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Auckland	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Bay of Plenty Regional	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Buller District	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Carterton District	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Central Otago District	Cycle complete	2024-04-18	2024-04-18	0		2024-02-28		
Christchurch City	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Clutha District	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Dunedin City	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Environment Canterbury	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		



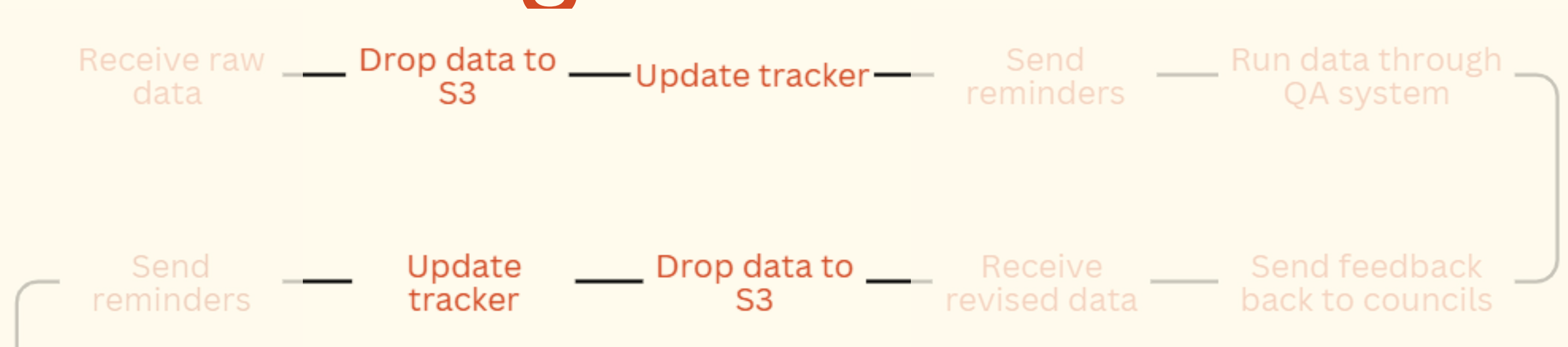


Chaos #1 Status tracking





Chaos #1 Status tracking



Every time a council submits their data, or requests an extension, we update the tracking table.





Solution

- ✓ Connect to S3 buckets
- ✓ Upload data within the app
- ✓ Triggers status update
(bucket dependent)



C:/Working/NMS.proj.mgt - Shiny

http://127.0.0.1:34797/ | Open in Browser

Republish


NMS Project Management

Tracking

Data Upload

Contact List

Issue Log



Mission for the Environment
We are the future

2024-04-28 10:57



No submission
1



To process
1



Resubmission
0



Await revision
8



To reprocess
0



Cycle complete
68

Tracking Table

Filter by status

Update status

Send reminder

Add notes

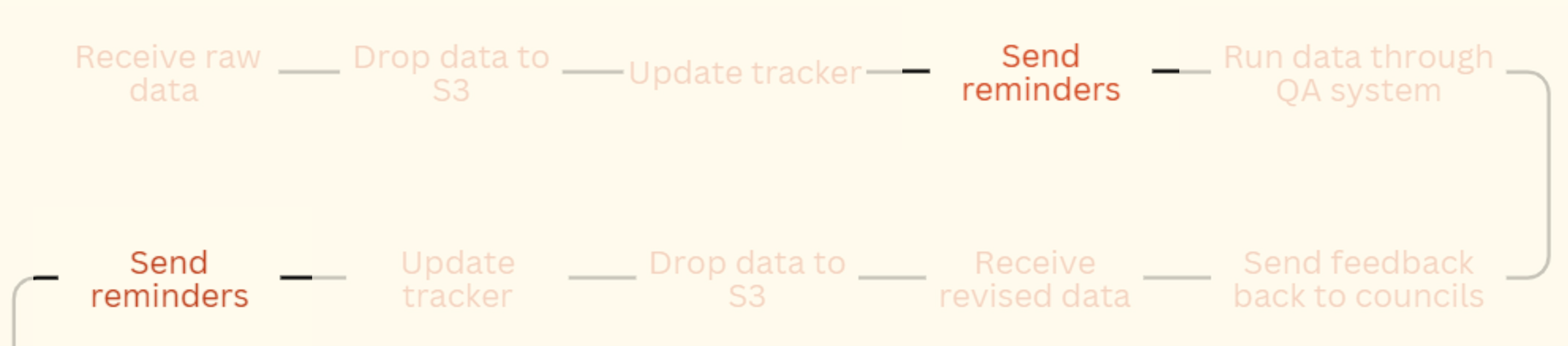
Show 20 entries

Search:

10:57 am
28/04/2024

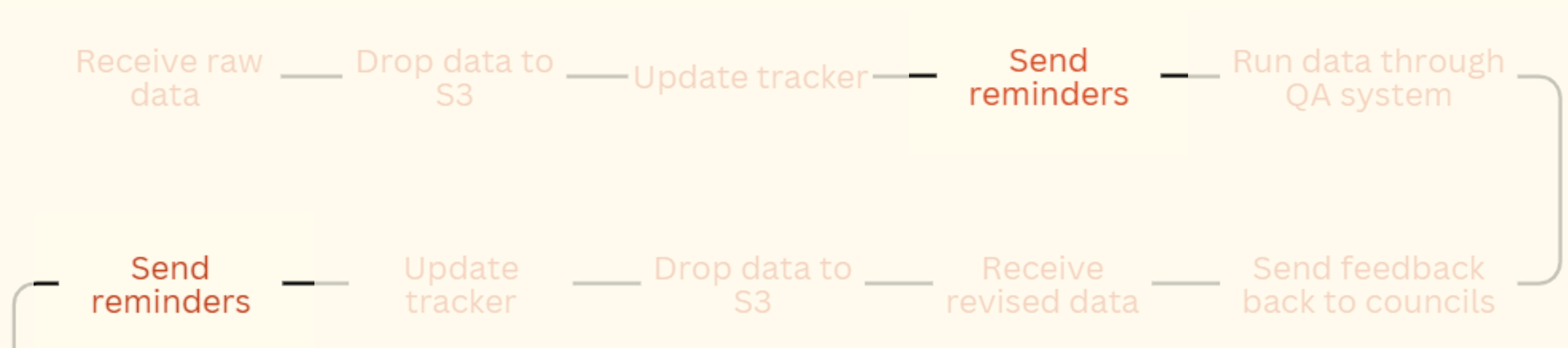


Chaos #2 Follow ups





Chaos #2 Follow ups



We send reminders to councils who are late in submitting their raw or revised data.





Solution

- ✓ Filter contact list by status
- ✓ Download filtered contact list
- ✓ Send email directly from R



C:/Working/NMS.proj.mgt - Shiny

http://127.0.0.1:34797 | Open in Browser

Republish


NMS Project Management

Tracking


Data Upload


Contact List


Issue Log


Mission for the Environment
Weave the World


2024-04-28 11:18


No submission
0

To process
2

Resubmission
0

Await revision
8

To reprocess
0

Cycle complete
68

Tracking Table

Filter by status

Update status

Send reminder

Add notes

Filter by status

No submission

To process

Resubmission

Await revision

To reprocess

Cycle complete

Search:

	Status	Status_updated_date	Due_date	Days_left_til_due	Reminder_sent_date	Final_sub_date	Note	Note_updated_date
	To process	2024-04-28	2024-04-09	0		2023-12-22		
	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Bay of Plenty Regional	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Buller District	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Carterton District	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Central Otago District	Cycle complete	2024-04-18	2024-04-18	0		2024-02-28		
Christchurch City	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Clutha District	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Dunedin City	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Environment Canterbury	Cycle complete	2024-04-18	2024-04-18	0		2023-12-22		
Environment Southland	Cycle complete	2024-04-18	2024-04-18	0		2024-03-04		

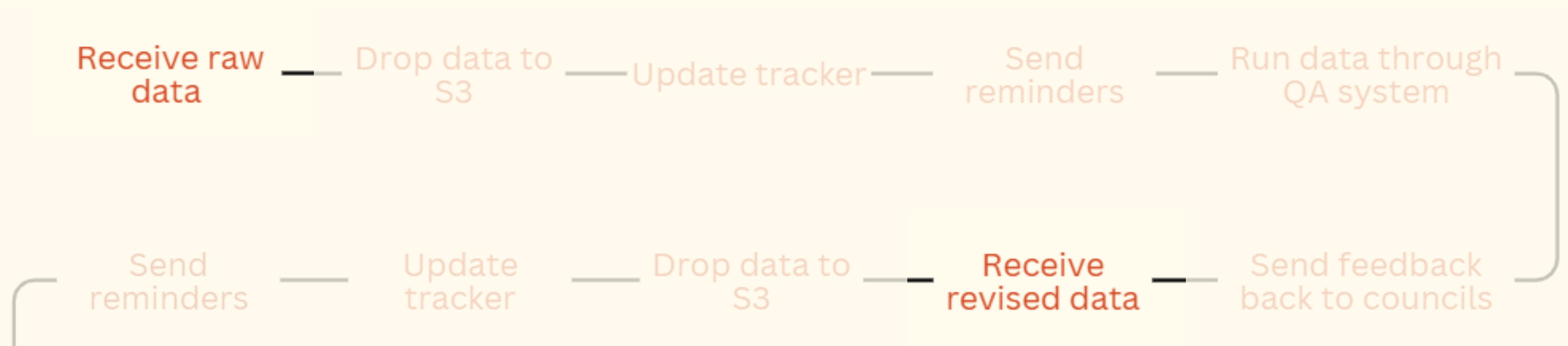
11:18 am
28/04/2024





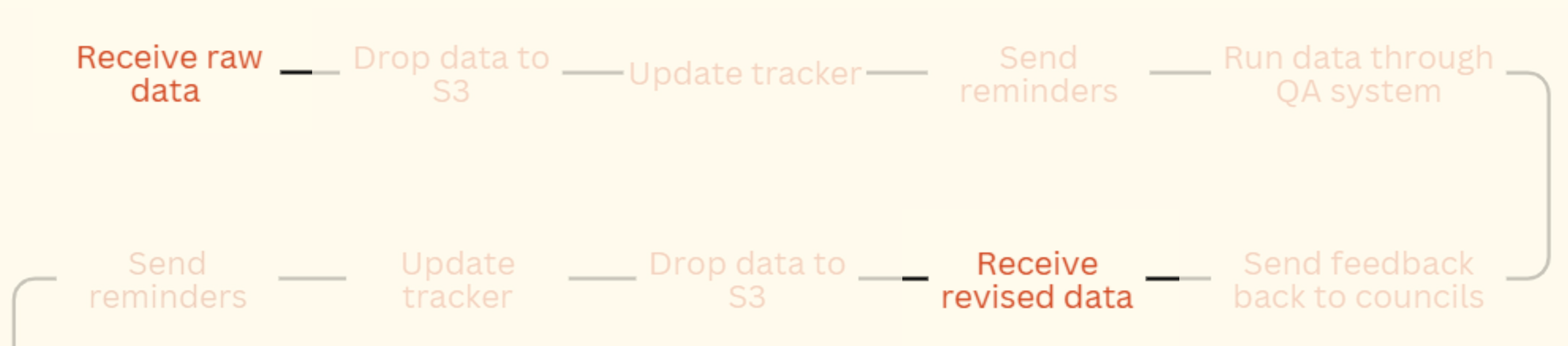
Chaos #3

Incoming data





Chaos #3 Incoming data



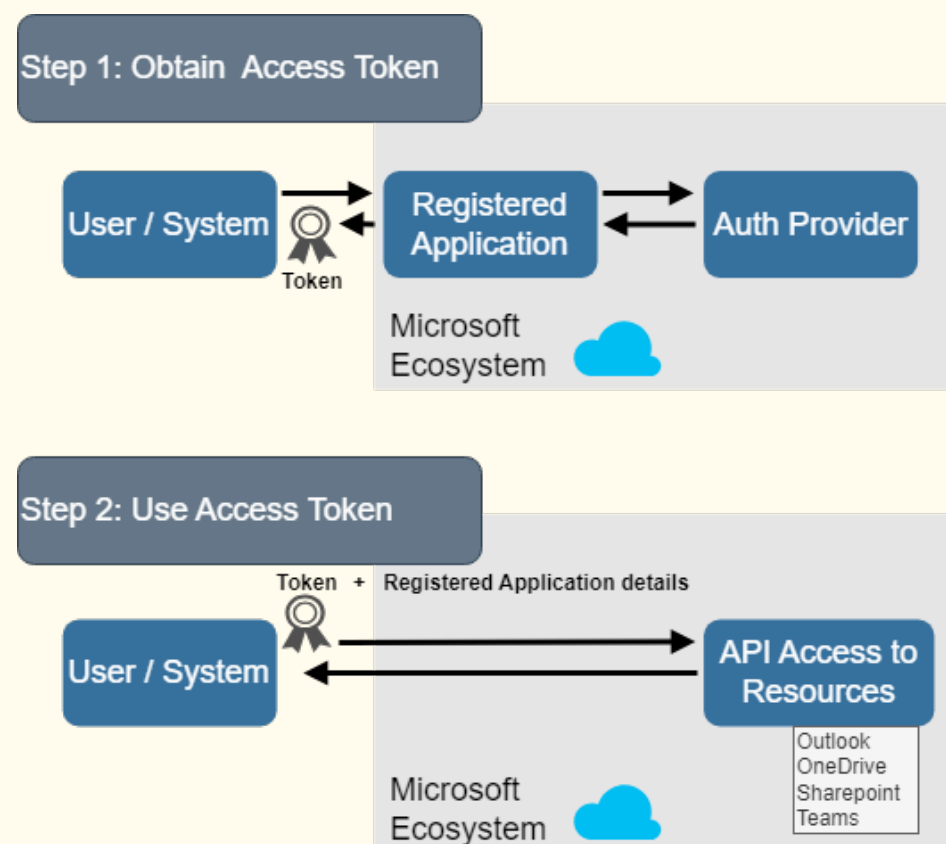
Data is sent to the mailbox, which we need to manually save to the desktop and upload to S3.





Solution (w.i.p.)

- ✓ Look for emails with attachment
- ✓ Upload data to S3 buckets



NMS Project Management Tracking Data Upload Contact List Issue Log

2024-04-29 20:03

Manual upload

Auto refresh

Browse...

No file selected



NMS cycle

2022-23

S3 Folder

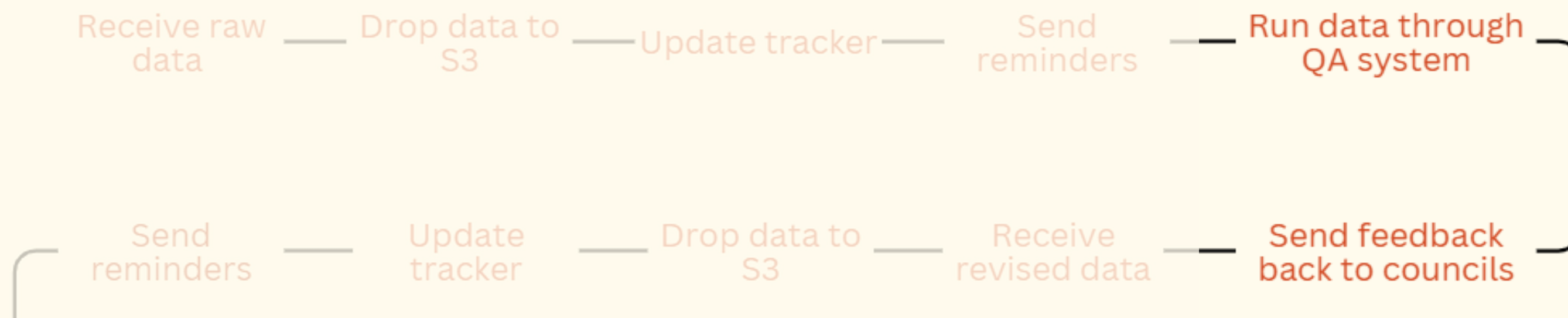
raw

concept mockup





Chaos #4 Quality check



We manually open 78 feedback spreadsheets, classify them, and send each to its respective council.





Solution (w.i.p.)

- ✓ Trigger QA processing within app
- ✓ Assign feedback files to councils
- ✓ Send email directly from R

left_til_due	Reminder_sent_date	Final_sub_date	Note	Feedback Files
0		2023-12-22		
0		2023-12-22		
0		2023-12-22		
0		2023-12-22		
0		2023-12-22		
0		2024-02-28		
0		2023-12-22		
0		2023-12-22		
0		2023-12-22		
0		2023-12-22		

concept mockup



6/11/2023 2:55 pm



Update on NMS (freshly off the NMS project management app!):

9 no submissions

22 raw submissions to be processed

21 overdue on Gorby feedback re

26 Gorby returns now sitting on A

13/11/2023 11:43 am

Morning everyone, update of NMS submission status



1/12/2023 8:50 am

Update on NMS



revisions are slowly coming in

Out of the 28 that we're waiting
Malborough, Napier and Nelson

4/12/2023 2:32 pm

update of NMS:



I'm processing New Plymouth's raw data now. Today's the due date for revision data. A few came in this morning, but we probably will wait till tomorrow to do a bulk update on that.



Notes

- It is not the only solution



Notes

- It is not the only solution
- Save time -> reduce errors



Notes

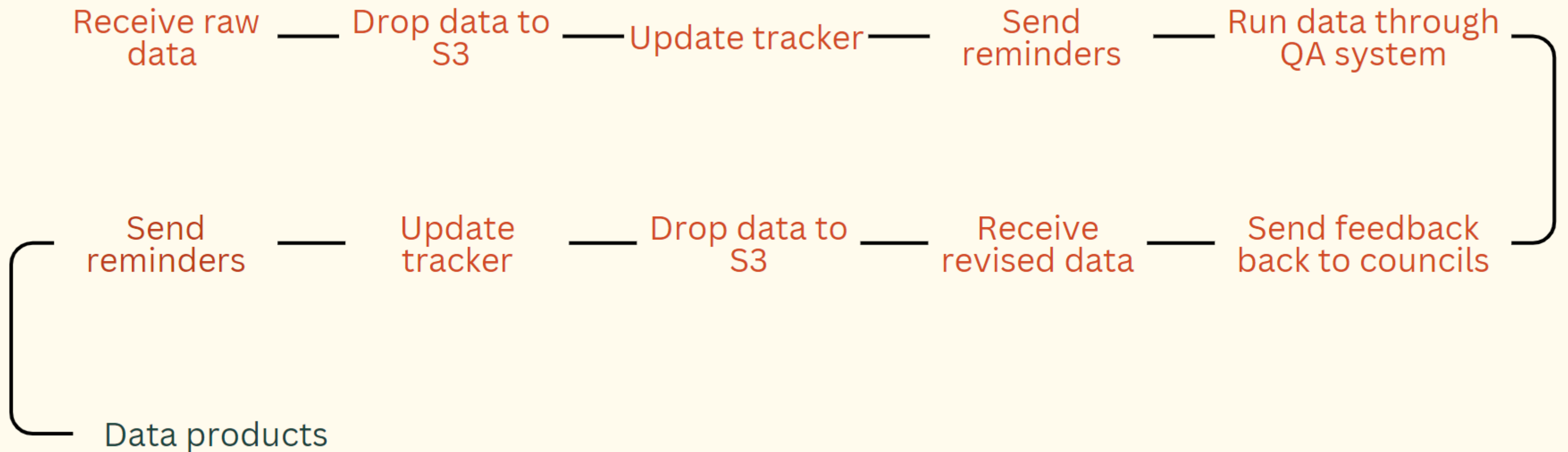
- It is not the only solution
- Save time -> reduce errors
- Be careful not to create another chaos



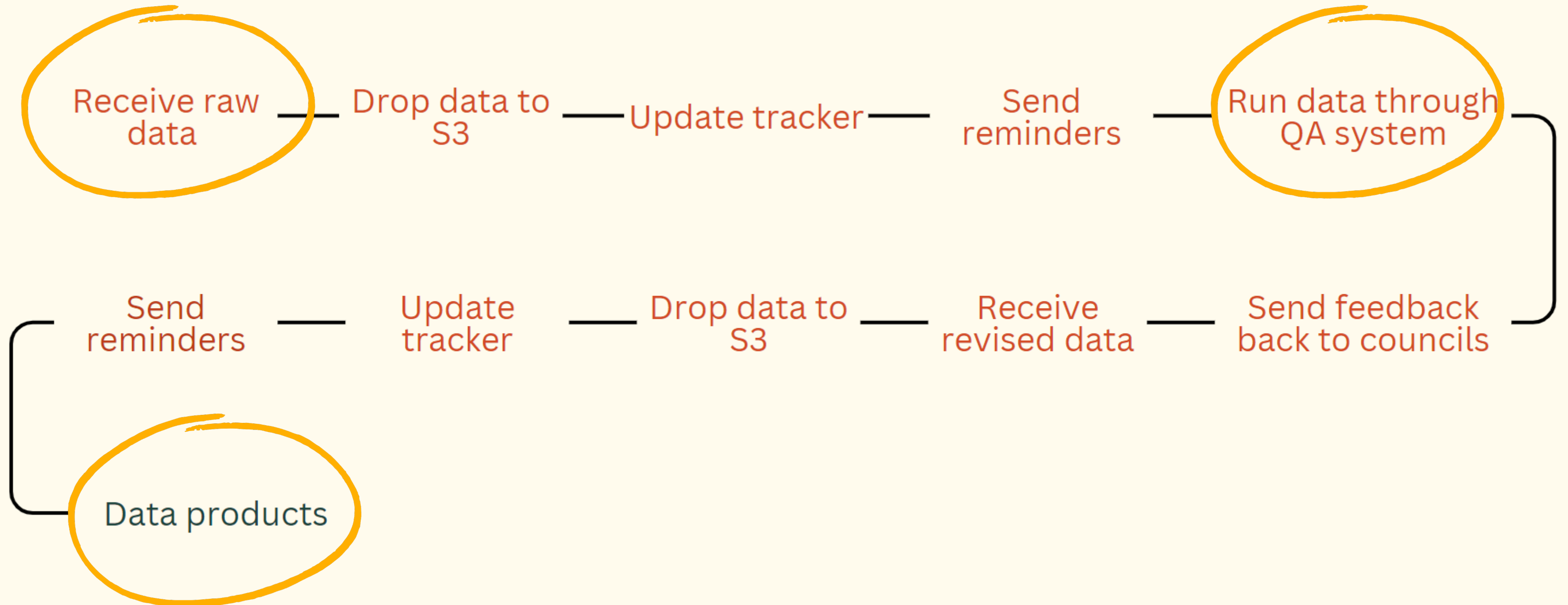
```
fct_S3upload.R
fct_send_email.R
fct_tracking_helpers.R
mod_contact_list.R
mod_issue_log.R
mod_S3_upload.R
mod_tracking_card.R
mod_tracking_table.R
play_test.R
run_app.R
utils.R
```



There are more work to do...



There are more work to do...



“Always leave
a place better
than you found it.”