AI Powered Bin Inspection

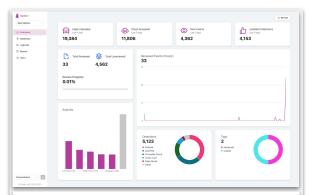
FOGO and Recycling waste streams





Automating Bin inspections

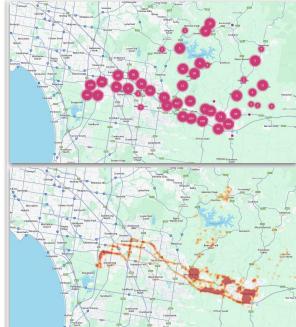
- Bin waste contamination
- FOGO and Recycle waste streams



Collection ID	Latitude	Longitude	Formatted Address
2b2d162b-3507-4521-b8da-8878289d2abd	-27.524450302124000	152.99075317382800	106 Strickland Terrace, Gr
0bd02d0d-8e12-4c60-8e25-a95693e6edfd	-27.52016262151300	152.98707579262600	122 White St, Graceville C
23e59c0f-a841-4e8a-b6a8-33ca44764d35	-27.52544403076170	152.99098205566400	90 Strickland Terrace, Gra
02621118-7a10-4b28-b572-1b031e6330db	-27.518605571240200	152.98060096800300	10 Austral Ave, Graceville
2c332482-456a-401d-b80c-1f20df0e79eb	-27.510391235351600	152.97015380859400	2 Laurel Ave, Chelmer QL
046f00fa-f9dc-4ce9-971b-a884490a70bb	-27.511931922636000	152.9719943809320	115 Honour Ave, Chelmer
245dc1e2-2d6b-40f1-a595-1c0637f4d758	-27.50248908996580	152.97518920898400	Station Rd near Coonan S
0b81cae8-4a3b-4d73-9498-5c80ceced69a	-27.501325607299800	152.96900939941400	49 Finney Rd, Indooroopil
1c2c5b39-c1f2-4217-94ca-0c40d295b24c	-27.597225189209000	152.98280334472700	44 State Route 30, Inala C
26f8b647-e9d5-4062-9647-163013500246	-27.511775982566200	152.97868341207500	107 Queenscroft St, Cheli
1cbc00cc-d0eb-45ad-b58a-edf04676e232	-27.515499140135900	152.98046104610000	9 Scout Ln, Chelmer QLD
4600-222 -0-6 4E47 0-46 400-00400-0E	27 5205600274220	150 07045450004400	1 Addison Del Crossville

Data at your fingertips

- Insightful dashboard statistics
- Export tabular data for analysis



Contamination heatmaps

- Overview of state of contamination
- Targeted education for residential bins

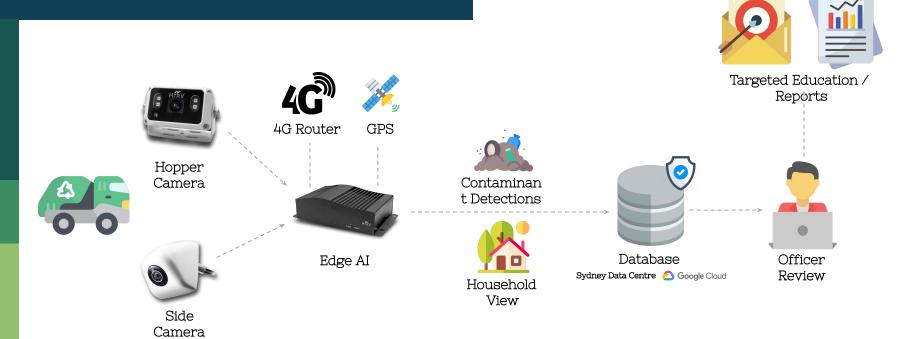








Solution Architecture



The Hardware



Hopper Camera

Contamination detections





Side Camera

For household matching



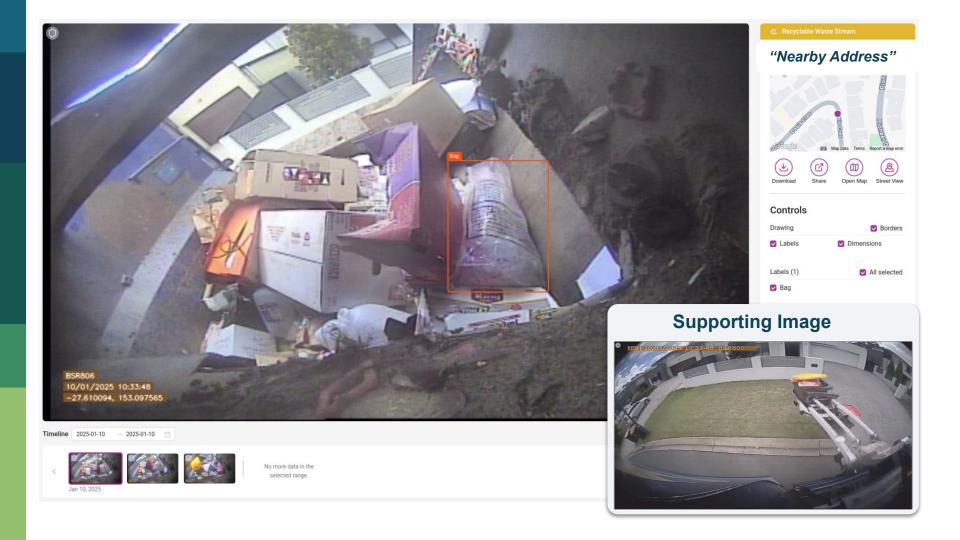
Edge Computer and 4G Router

All housed in protective casing



Categories Detectable

Waste stream	Class	Examples			
Recycle / Green	Bag Plastic bags, soft plastic film				
Green	Bottle Drink bottles				
	Jug	Milk jugs, water jugs, chemical containers			
	Can	Soda cans, aerosol cans			
	Cup	Drinking cups, buckets			
	Cardboard	Natural cardboard			
	Вох	Printed boxes, tubs			
	Paper Bag	Recyclable grocery bags			
	Molded Pulp	Compostable food containers, egg cartons			
	Paper Printed	Newspaper, flyers, gift bags			
Recycle	Log	Large tree stumps, branches			
	Palm	Palm tree sheaths			

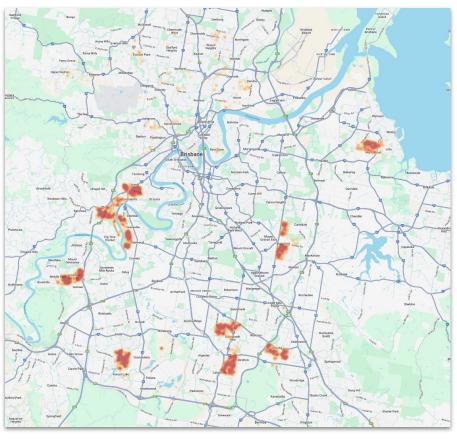




Contamination data map points



Contamination heat map



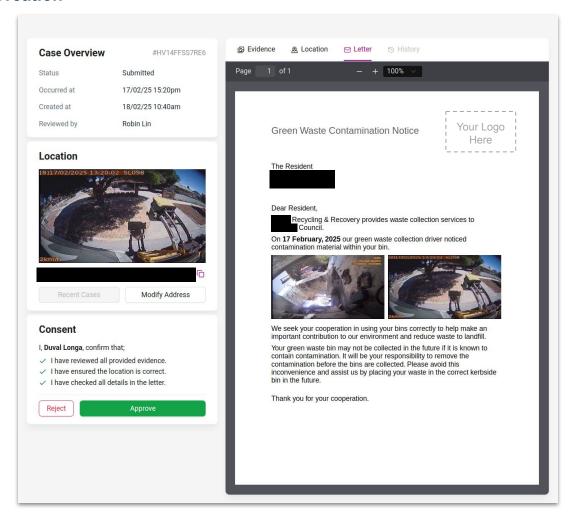


Example Exportable Data

Collection ID	Latitude	Longitude	Formatted Address	Local Government Area	Route	State	Suburb	Created At	Last Detected At	URL
2b2d162b-3507-4521-b8da-8878289d2abd	-27.524450302124000	152.99075317382800	Strickland Terrace, Graceville QLD 4075, Australia	Brisbane City	Strickland Terrace	Queensland	Graceville 4075	2023-07-11T02:59:54+00:00	2023-07-10T23:03:14+00:00	https://squid.visionhq.io/admin/
0bd02d0d-8e12-4c60-8e25-a95693e6edfd	-27.52016262151300	152.98707579262600	White St, Graceville QLD 4075, Australia	Brisbane City	White Street	Queensland	Graceville 4075	2023-07-11T03:00:15+00:00	2023-07-10T22:55:56+00:00	https://squid.visionhq.io/admin/
23e59c0f-a841-4e8a-b6a8-33ca44764d35	-27.52544403076170	152.99098205566400	trickland Terrace, Graceville QLD 4075, Australia	Brisbane City	Strickland Terrace	Queensland	Graceville 4075	2023-07-11T03:00:22+00:00	2023-07-10T23:03:55+00:00	https://squid.visionhq.io/admin/
02621118-7a10-4b28-b572-1b031e6330db	-27.518605571240200	152.98060096800300	ustral Ave, Graceville QLD 4075, Australia	Brisbane City	Austral Avenue	Queensland	Graceville 4075	2023-07-11T03:00:06+00:00	2023-07-10T22:51:59+00:00	https://squid.visionhq.io/admin/
2c332482-456a-401d-b80c-1f20df0e79eb	-27.510391235351600	152.97015380859400	urel Ave, Chelmer QLD 4068, Australia	Brisbane City	Laurel Avenue	Queensland	Chelmer 4068	2023-07-11T03:04:47+00:00	2023-07-10T23:49:13+00:00	https://squid.visionhq.io/admin/
046f00fa-f9dc-4ce9-971b-a884490a70bb	-27.511931922636000	152.9719943809320	Honour Ave, Chelmer QLD 4068, Australia	Brisbane City	Honour Avenue	Queensland	Chelmer 4068	2023-07-11T03:05:03+00:00	2023-07-11T00:10:28+00:00	https://squid.visionhq.io/admin/
245dc1e2-2d6b-40f1-a595-1c0637f4d758	-27.50248908996580	152.97518920898400	ion Rd near Coonan St, stop 23, Indooroopilly QLD 4068, Australia	Brisbane City		Queensland	Indooroopilly 4068	2023-07-11T03:07:45+00:00	2023-07-11T00:33:57+00:00	https://squid.visionhq.io/admin/
0b81cae8-4a3b-4d73-9498-5c80ceced69a	-27.501325607299800	152.96900939941400	inney Rd, Indooroopilly QLD 4068, Australia	Brisbane City	Finney Road	Queensland	Indooroopilly 4068	2023-07-11T03:08:14+00:00	2023-07-11T00:35:42+00:00	https://squid.visionhq.io/admin.
1c2c5b39-c1f2-4217-94ca-0c40d295b24c	-27.597225189209000	152.98280334472700	state Route 30, Inala QLD 4077, Australia	Brisbane City	State Route 30	Queensland	Inala 4077	2023-07-11T03:10:46+00:00	2023-07-11T00:49:36+00:00	https://squid.visionhq.io/admin.
26f8b647-e9d5-4062-9647-163013500246	-27.511775982566200	152.97868341207500	Queenscroft St, Chelmer QLD 4068, Australia	Brisbane City	Queenscroft Street	Queensland	Chelmer 4068	2023-07-11T02:44:14+00:00	2023-07-10T21:06:02+00:00	https://squid.visionhq.io/admin.
1cbc00cc-d0eb-45ad-b58a-edf04676e232	-27.515499140135900	152.98046104610000	out Ln, Chelmer QLD 4068, Australia	Brisbane City	Scout Lane	Queensland	Chelmer 4068	2023-07-11T02:46:11+00:00	2023-07-10T21:15:42+00:00	https://squid.visionhq.io/admin/
1f89a333-a2cf-4547-8a16-192a88488a25	-27.52066993713380	152.97845458984400	ldison Rd, Gradeville QLD 4075, Australia	Brisbane City	Addison Road	Queensland	Graceville 4075	2023-07-11T03:30:46+00:00	2023-07-10T20:07:32+00:00	https://squid.visionhq.io/admin/
1fca9616-059a-45d1-98cc-e361c310e235	-27.51205892767760	152.9786173067990	Campsey St, Chelmer QLD 4068, Australi	Bristiane City					2023-07-10T21:05:57+00:00	https://squid.visionhq.io/admin/
03fcad04-daa7-4c74-82a6-6fa8c1afe6f7	-27.515794769860800	152.98002619296300	eybourne St, Chelmer (10 4068, Australi	66					2023-07-10T21:39:09+00:00	https://squid.visionhq.io/admin/
031a5089-dbf4-4b55-bad3-25a8e77746f0	-27.51258089672770	152.97785947099300	ilenwood St, Chelmer QLD 4068, Australia	Brisbane City					2023-07-10T20:56:07+00:00	https://squid.visionhq.io/admin/
2795af0d-a7c1-4f4b-b5a7-571c9536ed1a	-27.51527024832160	152.98362511875400	Hargreaves Ave, Chelmer QLD 4068, Au ralia	1 isbane Cit					2023-07-10T21:53:32+00:00	https://squid.visionhq.io/admin/
1c952f41-03b2-4c87-bb03-3186de552e1b	-27.5150146484375	152.9815216064450	Hargreaves Ave. Chelmer QLD 4068, Aslante St., Chelmer QLD 4 Australia	tuae					2023-07-10T21:15:03+00:00	https://squid.visionhq.io/admin/
0f892b72-0a4c-41d0-b84f-1ab7b3a9a43c	-27.513690948486300	152.97650146484400	ry Rd at Milipera, stop 51, Cheimer QLD 4066, Australia							https://squid.visionhq.io/admin/
1610c4f7-9783-439b-8af1-5577de583796	-27.509580612182600	152.97254943847700	onour Ave, Chelmer QL 2068, Australi	attad	addr	nee	o/fron	n Goog	0:03:30+00:00	https://squid.visionhq.io/admin/
0878b039-422b-4902-8ec8-907971736032	-27.509038570337000	152.9708129223440	lanlan St, Chelmer QLD 4448, Australia	alleu	auui	555			0:000	https://squid.visionhq.io/admin/
02b901cd-9c93-4bb5-9ce3-2be68c0f0a47	-27.516220092773400	152.98426818847700	Hargreaves Ave, Chelmer QLD 4068, Australia				Chelmer 4068	2023-07-11T04:06:14+00:00	2023-07-10T21:53:51+00:00	https://squid.visionhq.io/admin/
0b06a0c7-f3e6-4a52-855b-105d21f41f1a	-27.510445522077900	152.97129929065700	ictoria Ave, Chelmer Ql 68, Australi						2023-07-11T00:05:12+00:00	https://squid.visionhq.io/admin/
176678ef-caa0-48fd-9c57-767fe49e35d0	-27.513612747192400	152.96923828125	Chelmer St W, Chelmer QLD 4068, Australia						2023-07-10T23:52:29+00:00	https://squid.visionhq.io/admin/
2cd7aea4-a8dd-4540-87aa-6f97da9cfe36	-27.50171283725650	152.971473634243	nney Rd, Indooroopilly QLD 4068, Austral						2023-07-11T00:35:16+00:00	https://squid.visionhq.io/admin/
0a47d7fb-371a-4b9e-8899-4386f2a52aed	-27.520818524062600	152.98712155781700	ng St, Graceville QLD 4 Australia State						2023-07-10T22:09:41+00:00	https://squid.visionhq.io/admin/
0cd400f3-7b89-4017-9f78-4ba6c2de7135	-27.509212036966300	152.97113317181400	ictoria Ave, Chelmer QLD 4068, Australia						2023-07-11T00:12:55+00:00	https://squid.visionhq.io/admin/
142e0f27-b120-4632-8b02-e930246fd339	-27.51464273060930	152.98293511721900	Hargreaves Ave, Chelmer QLD 4068, Av	E shane City					2023-07-10T21:42:32+00:00	https://squid.visionhq.io/admin/
301a3bce-c391-432b-bf96-a18c9ad3fe5c	-27.518184701912100	152.98377986066000	Hargreaves Ave. Chelmer QLD 4038. Au SUDU	E e City					2023-07-10T22:54:01+00:00	https://squid.visionhq.io/admin/
0b9b035e-27fd-4361-b474-670cc2bce6b8	-27.512264270335400	152.97248834744100			Honour Avenue				2023-07-11T00:10:13+00:00	https://squid.visionhq.io/admin/
1cbaa2b5-76c3-43ce-ba2a-27cb982f807d	-27.55304530961440	152.91629024315600	ynton St, Middle Park OD 074, Austra	Tima 1	of da	tac	tion		2023-07-11T21:02:20+ <mark>00:00</mark>	https://squid.visionhq.io/admin/
2977fd7d-4faf-4602-a538-3175372e365a	-27.553478255868000	152.92004386894400	umac St, Middle Park Q 4074, Austra	TIIIIC (JI UC	LGC			2023-07-11T21:15:44+00:00	https://squid.visionhq.io/admin/
0c084a73-f6ba-44b4-b388-afc0648ede04	-27.555691923629100	152.91879822004700	Virilda St, Middle Park QLD 4074, Australia						2023-07-11T21:18:21+00:00	https://squid.visionhq.io/admin/
13853735-f3ca-444c-b7e7-dd9998f760f0	-27.55487442947920	152.91941069997800	umac St, Middle Park QLD 4074, Australia	Brisbane City	Sumac Street	Queensland	Middle Park 4074	2023-07-11T21:33:28+00:00	2023-07-11T21:33:12+00:00	https://squid.visionhq.io/admin/
016680de-3f05-469b-af35-11e3766a4a1d	-27.54750539548700	152.91786189191000	rbel Cl, Westlake QLD 4074, Australia	Brisbane City	Barbel Close	Queensland	Westlake 4074	2023-07-11T21:59:14+00:00	2023-07-11T21:59:00+00:00	https://squid.visionhq.io/admin/
296e1d45-c24c-4aa8-b546-1ca5a58b1034	-27.545580407604600	152.92000573128500	Westlake Dr, Westlake QLD 4074, Australia	Brisbane City	Westlake Drive	Queensland	Westlake 4074	2023-07-11T22:13:37+00:00	2023-07-11T22:12:58+00:00	https://squid.visionhq.io/admin/
2692eac6-9d58-48a0-9cae-f431b62bc889	-27.545555136166500	152.919845553115	Westlake Dr, Westlake QLD 4074, Australia	Brisbane City	Westlake Drive	Queensland	Westlake 4074	2023-07-11T22:13:54+00:00	2023-07-11T22:13:14+00:00	https://squid.visionhq.io/admin/
18bb8ae4-55a6-4a39-9922-add215cf55b0	-27.550709419883800	152.91350293904500	matia CI, Westlake QLD 4074, Australia	Brisbane City	Lomatia Close	Queensland	Westlake 4074	2023-07-11T22:27:52+00:00	2023-07-11T22:27:37+00:00	https://squid.visionhq.io/admin/
22629010-ce3c-4f05-9bab-5b50dcf807fa	-27.547587412409500	152.91622155346000	lenong St, Westlake QLD 4074, Australia	Brisbane City	Penong Street	Queensland	Westlake 4074	2023-07-11T22:49:38+00:00	2023-07-11T22:49:09+00:00	https://squid.visionhq.io/admin/
1ac46509-f679-4e57-b420-a4d951e16f65	-27.544491786975400	152.91040032170700	Westlake Dr, Westlake QLD 4074, Australia	Brisbane City	Westlake Drive	Queensland	Westlake 4074	2023-07-11T23:10:26+00:00	2023-07-11T23:09:39+00:00	https://squid.visionhq.io/admin.
2292f441-28fe-4444-9ce2-ba3b4463ba11	-27.545734425075400	152.90879820473500	illfield PI, Westlake QLD 4074, Australia	Brisbane City	Bellfield Place	Queensland	Westlake 4074	2023-07-11T23:21:13+00:00	2023-07-11T23:20:53+00:00	https://squid.visionhq.io/admin/
0f215720-ca64-4fad-9974-d5d96a4b15f8	-27.54562759399410	152.9055938720700	enindee Ct, Westlake QLD 4074, Australia	Brisbane City	Menindee Court	Queensland	Westlake 4074	2023-07-11T23:32:14+00:00	2023-07-11T23:31:57+00:00	https://squid.visionhq.io/admin/
16cf4903-3c14-404b-a369-9bb324cfae1d	-27.545927047729500	152.90487670898400	Vendouree Cres, Westlake QLD 4074, Australia	Brisbane City	Wendouree Crescent	Queensland	Westlake 4074	2023-07-11T23:33:45+00:00	2023-07-11T23:32:47+00:00	https://squid.visionhq.io/admin/
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258a720a-8572-4511-bcf3-fc5de871a03a	-27.546483993530300	152.90768432617200	laboora Cres, Westlake QLD 4074, Australia	Brisbane City	Kaboora Crescent	Queensland	Westlake 4074	2023-07-11T23:34:41+00:00	2023-07-11T23:34:23+00:00	https://squid.visionhq.io/admin/
0bdcdc1a-ca18-4107-866a-a247dc9160a6		152.92250061035200	Westlake Dr. Westlake QLD 4074, Australia	Brisbane City	Westlake Drive	0	Westlake 4074	2023-07-12T00:12:52+00:00		https://squid.visionhq.io/admin/



Education Letter Creation





Field Validation (~79%)

Date: 13 July <u>2023</u> **Time:** 12:59 - 13:09

Location: 2-71 Fenwick Crescent, Algester QLD 4115

12/42

Bins had contamination

38/48



Field Validation (~85%)

Date: 9 February <u>2024</u> **Time:** 10:13 - 10:43

Location: Launceston St - Althea St, Salisbury QLD 4107

110/133

Houses had bins out

13/110

Bins had contamination

30/35



Field Validation (~90%)

Date: 25 July <u>2024</u> **Time:** 06:28 - 06:53

Location: Dirkala St - Lorinya St, Mansfield QLD 4122

19/80

Bins had contamination





Field Validation (~90%)

Date: 28 April <u>2025</u> **Time:** 10:11 - 10:49

Location: Martindale St - Roebig St, Aspley QLD 4034

97/111

Houses had bins out

19/97

Bins had contamination

27/30

