escavox

QUALITY PRODUCE HAS A VOICE!

Fruit Growers Tasmania

Presentation

2022

Founded:
2018, Sydney Australia

Clients:
90+

Categories :
Meats, Fruit, Vegetables, Protein, Processed Foods

Service Model:
Software, Hardware, Analytics & Data as a service

Technology :
Open API, modular architecture, device agnostic

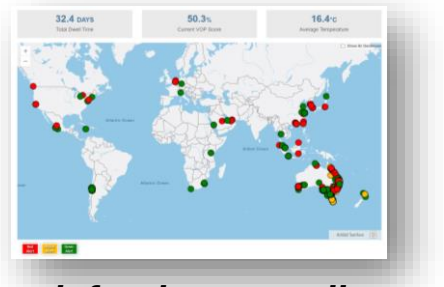
Commercial model:
Per data point, per trip, subscription

Differentiators
Independent

escavox

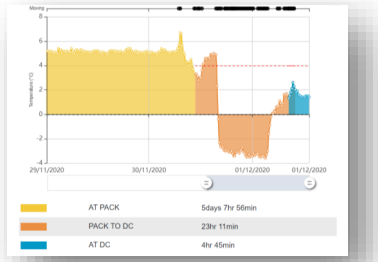
USING DATA TO ERADICATE WASTE IN FOOD SUPPLY CHAINS

"What is happening to my product?"



Fresh food moves all over the world; its quality is affected by its journey…

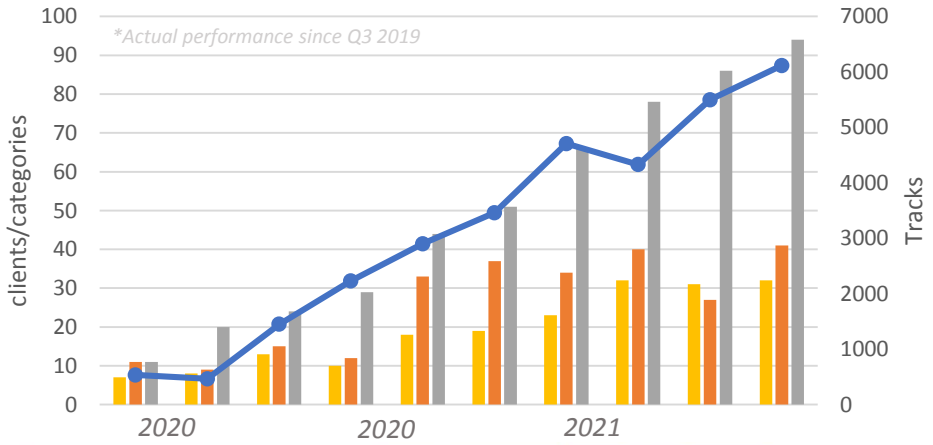
"What is the impact on the product?"



…Escavox automatically tells you where, when and what impact has occurred…

"How do I Improve?"

…allowing you to make the best decisions for your customers.



https://youtu.be/2XrABBP1RU4

Listen to our customers

Producer

Norco, NCMC Foods, Hussey & Co, Thomas Foods, The Midfield Group, JBS, Stockyard, Stanbroke, Premium Fresh Tasmania, Mort & Co, Marland Mushrooms, GreenSkin Avocados, Filament Coffee, LaManna Premier Group, Mulgowie Farming Company, Reid Fruits

Carrier

OFLOAD, Maersk, purfresh, Beam

Distributor

costa well grown, Projection, Fresh Produce Group, Evolution, Driscoll's Only the Finest Berries, Mackays Marketing, Hilton

Retailer

coles, Woolworths, ALDI

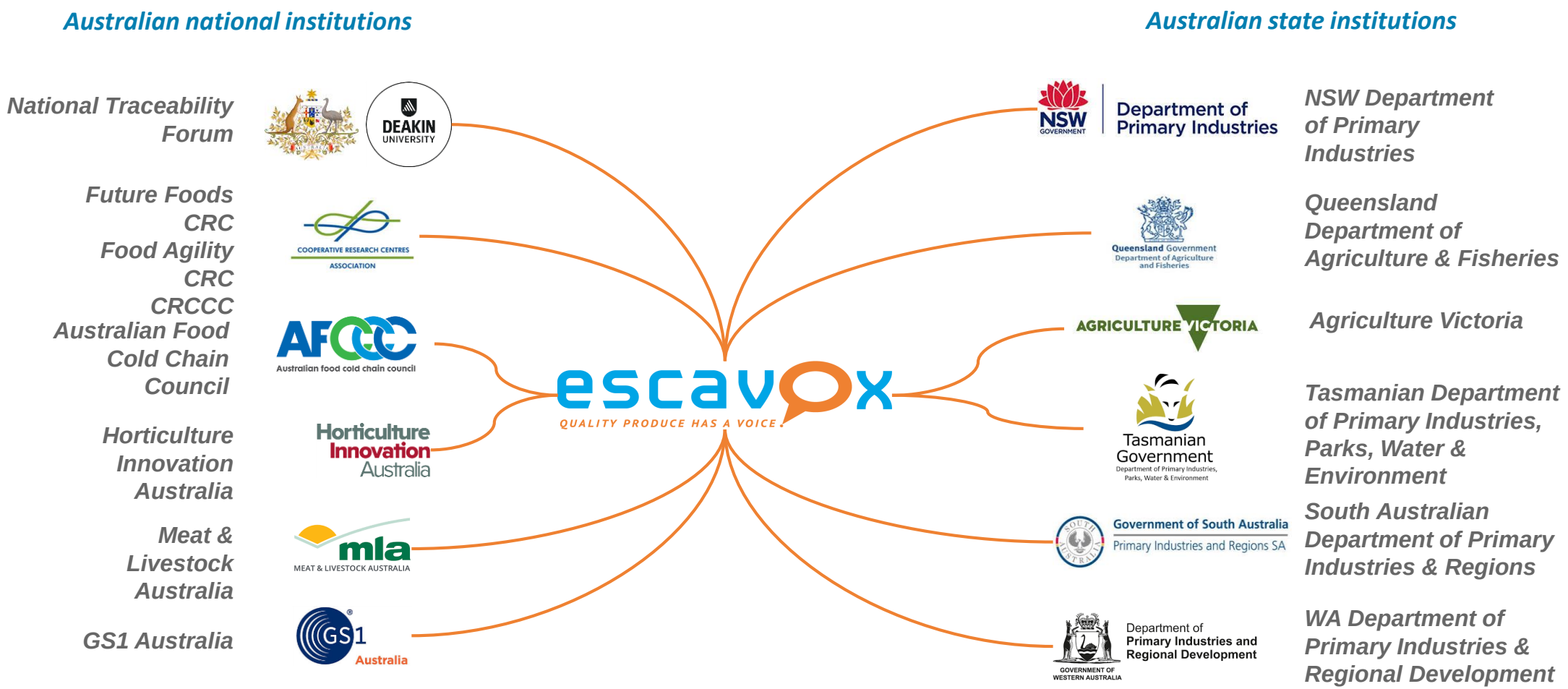
Partner

ORRA, PACT, EVRYTHNG, Opal., reserva Food System, mla Meat & Livestock Australia, University of Tasmania, aglive

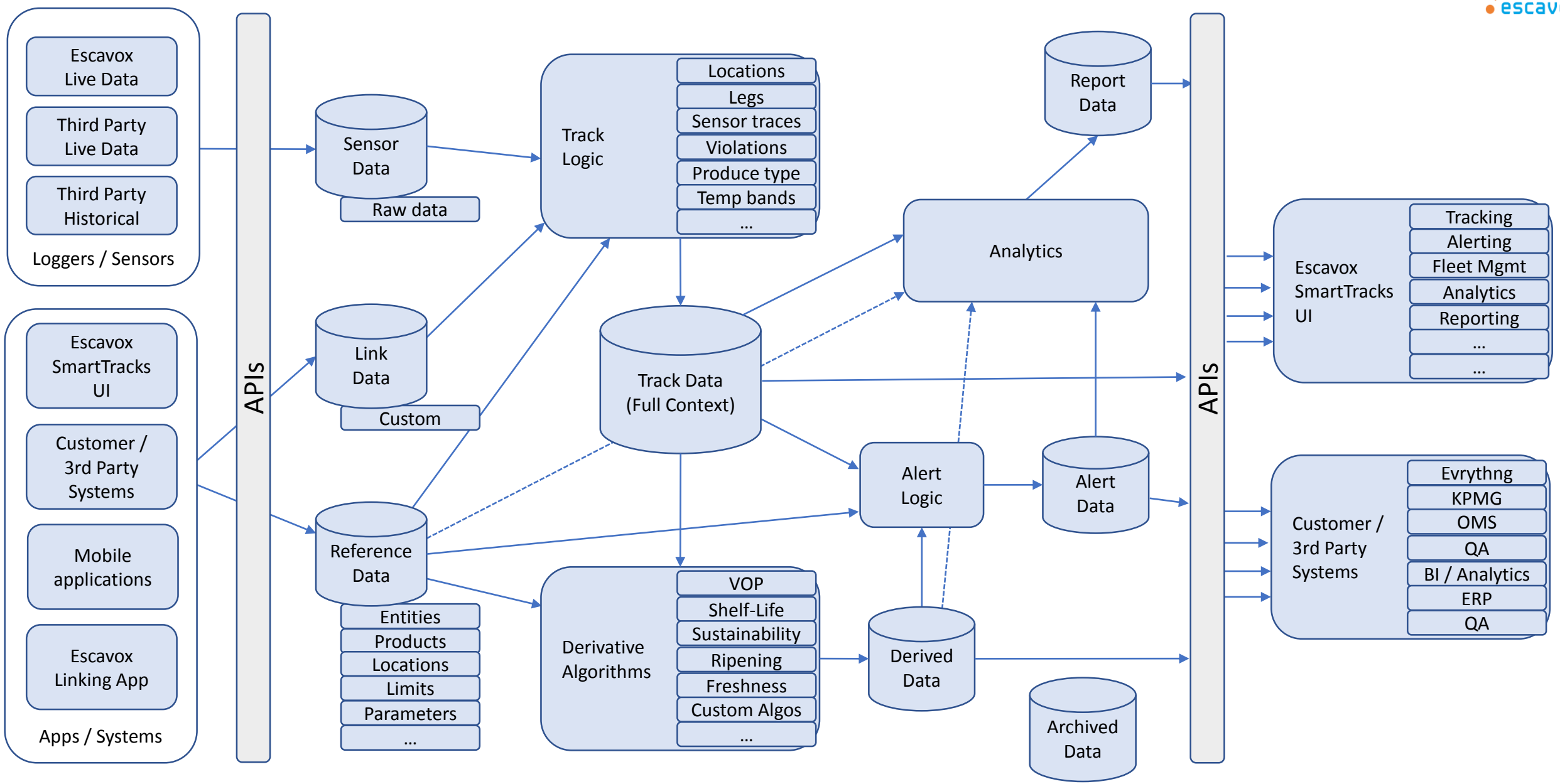
- ***Trusted***
- ***Independent***
- ***Domestic***
- ***International***
- ***Transparent***
- ***Fully automated***
- ***Unique***

We’re actively engaged with the industry.

Every participant of the supply chain works within the same framework of **regulation, industry bodies and service providers**.



Simplified Data Flow



Analyse freshness outcomes at Carrier, DC and Store level

Understand who is performing well and where failures occur
The same analytics can be done for primary, secondary and stores

Data shown here is from time of receiving at DC through to product on shelf in store (or when tracker is removed)

Analyse Freshness on arrival as well as overall control within your secondary legs and stores

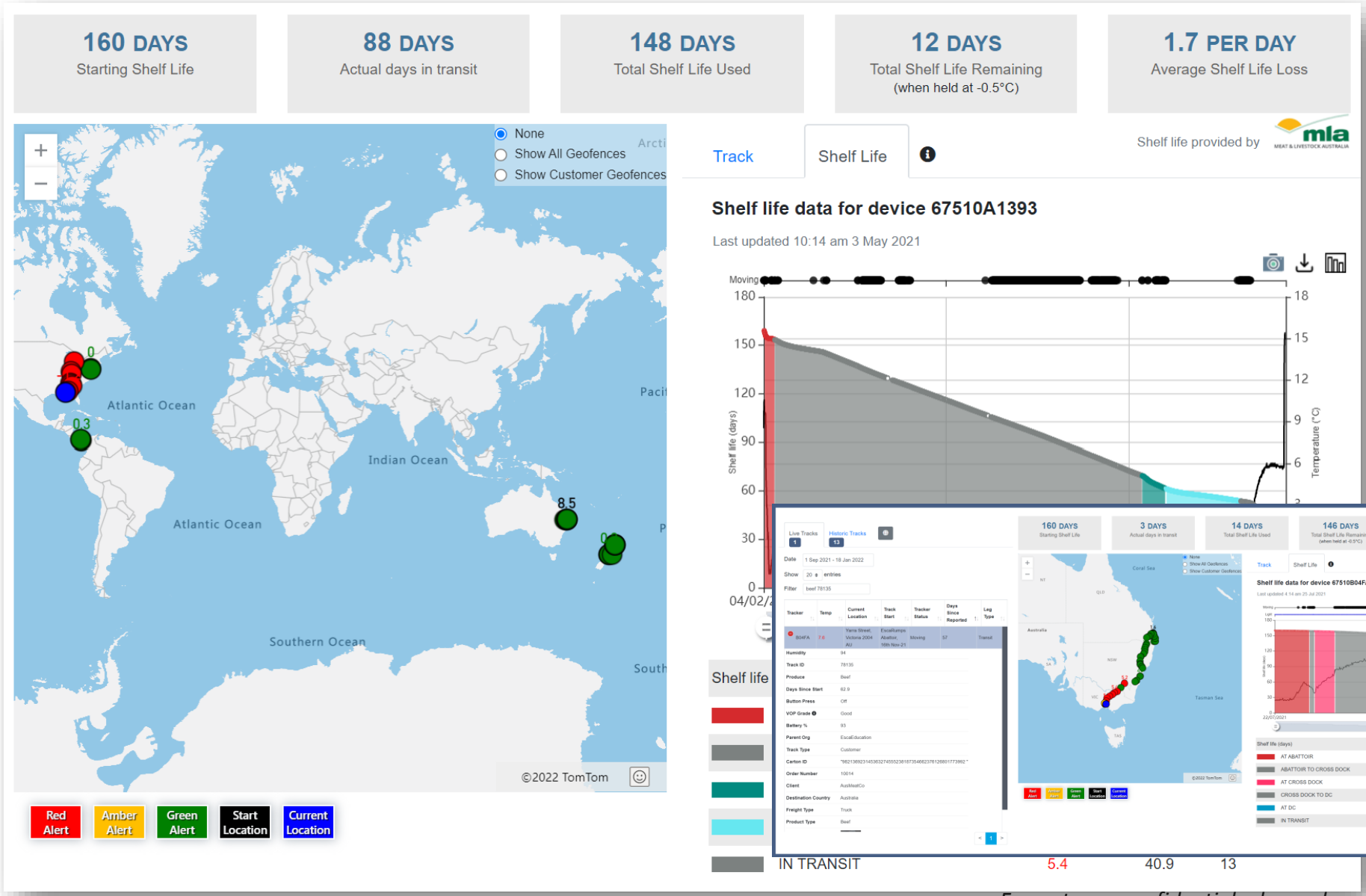
Who has the biggest issues? Drill down to identify where and when

VOP, freshness and shelf life

VOP is the Voice of Product – if it could talk, what could it tell you? It's a % score of time spent in appropriate temperature and gives a measure of likely freshness. Sub category level

Shelf life is more specific and uses complex decay and growth algorithms to deduce supply chain impacts on actual remaining shelf life

This has implications for export shipments, storage, promotions, and managing stock on hand



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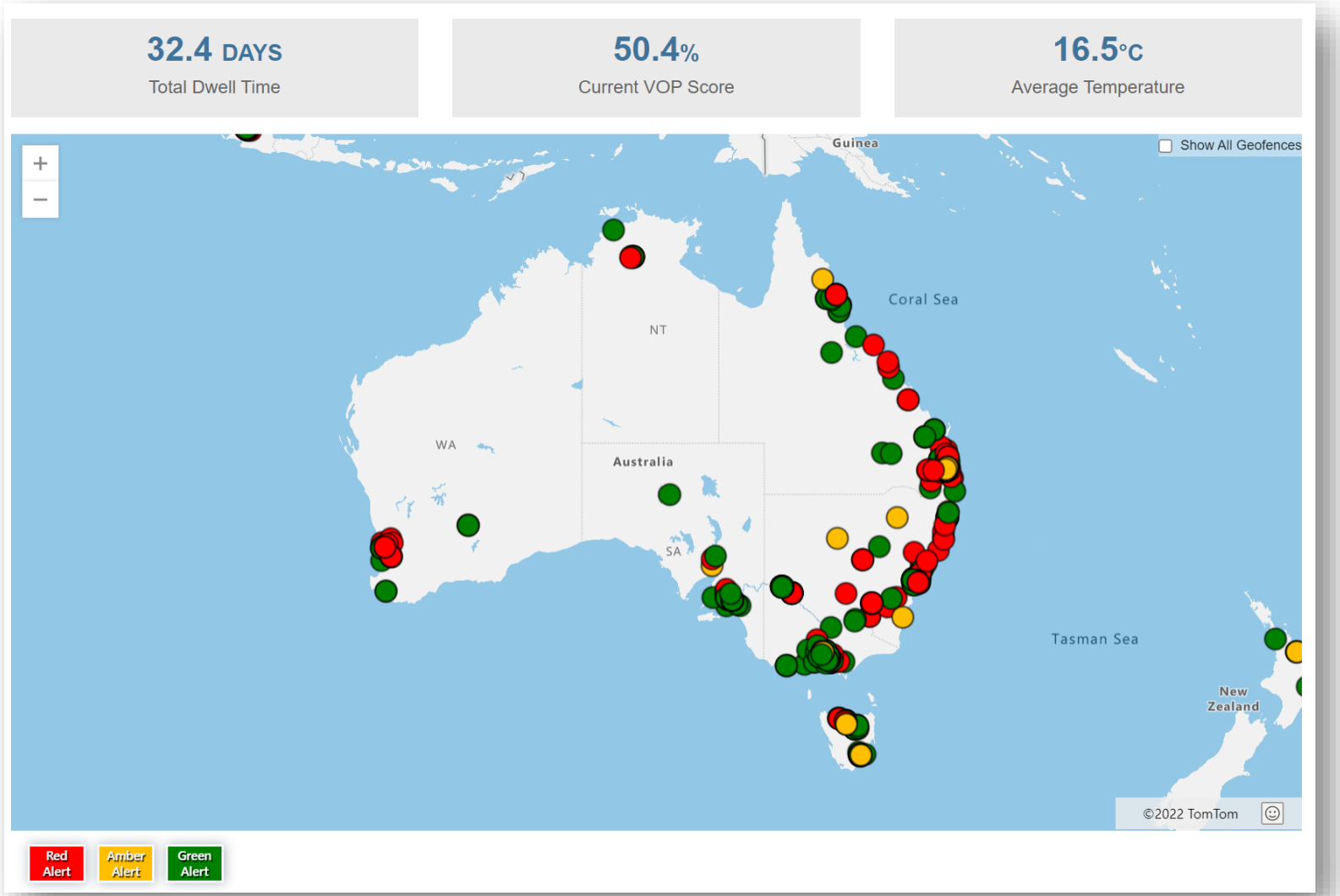
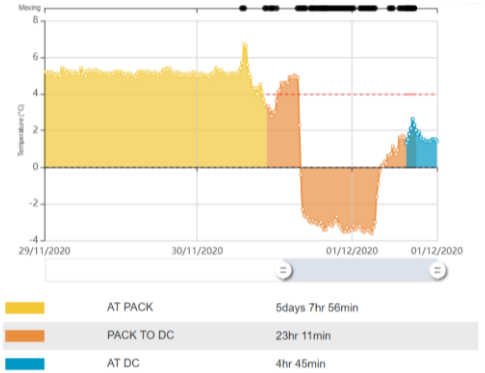
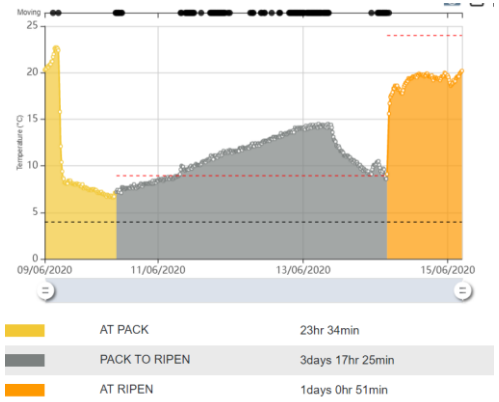
Monitor fresh impacts in real time





Stop frozen loads



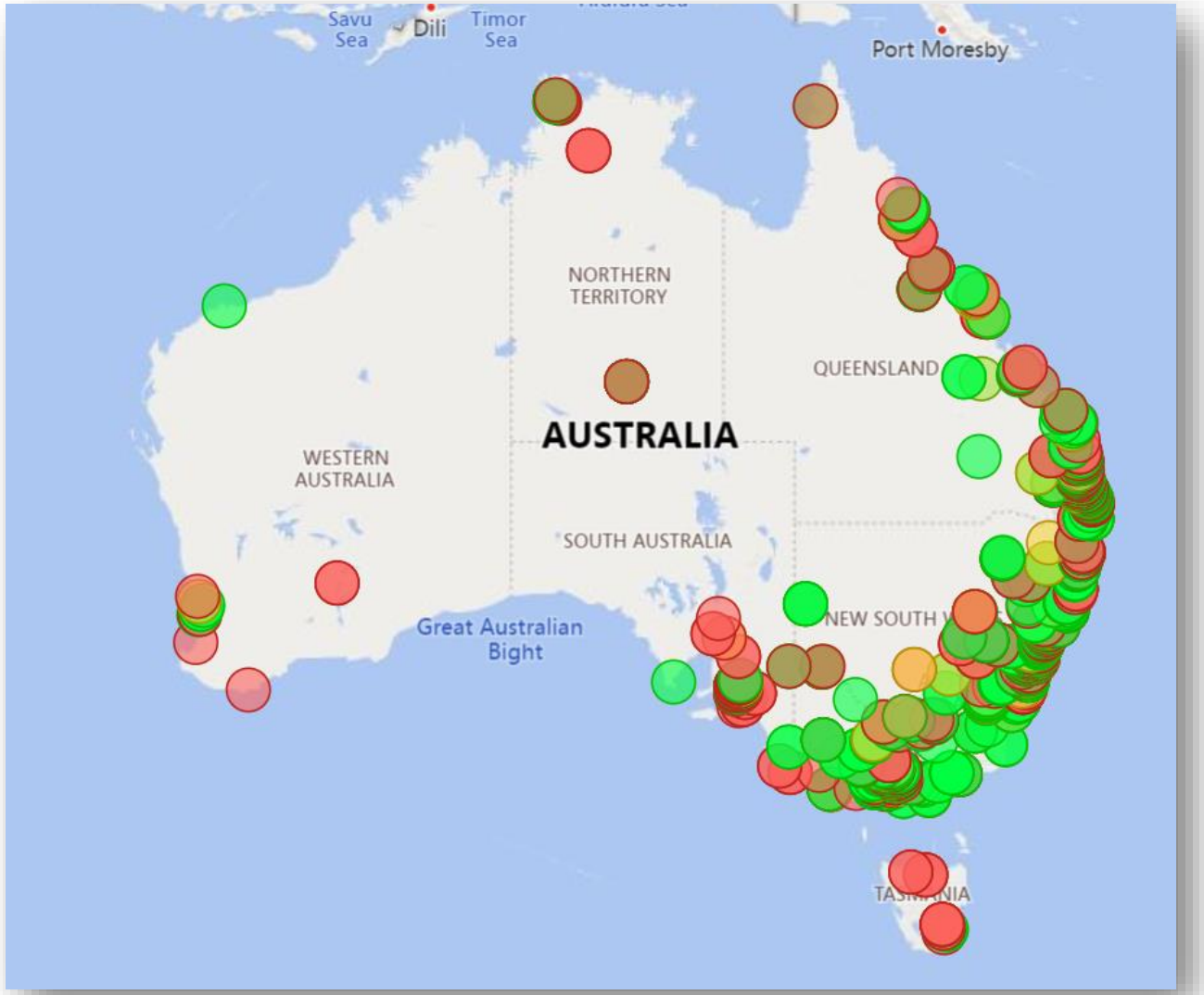
Stop warming loads

Formats are confidential, please do not distribute

Which routes have good temperature compliance, which don't?

Analytics similar to those proposed to DCs, as well as virtual heatmaps of average temperature performance in stores.

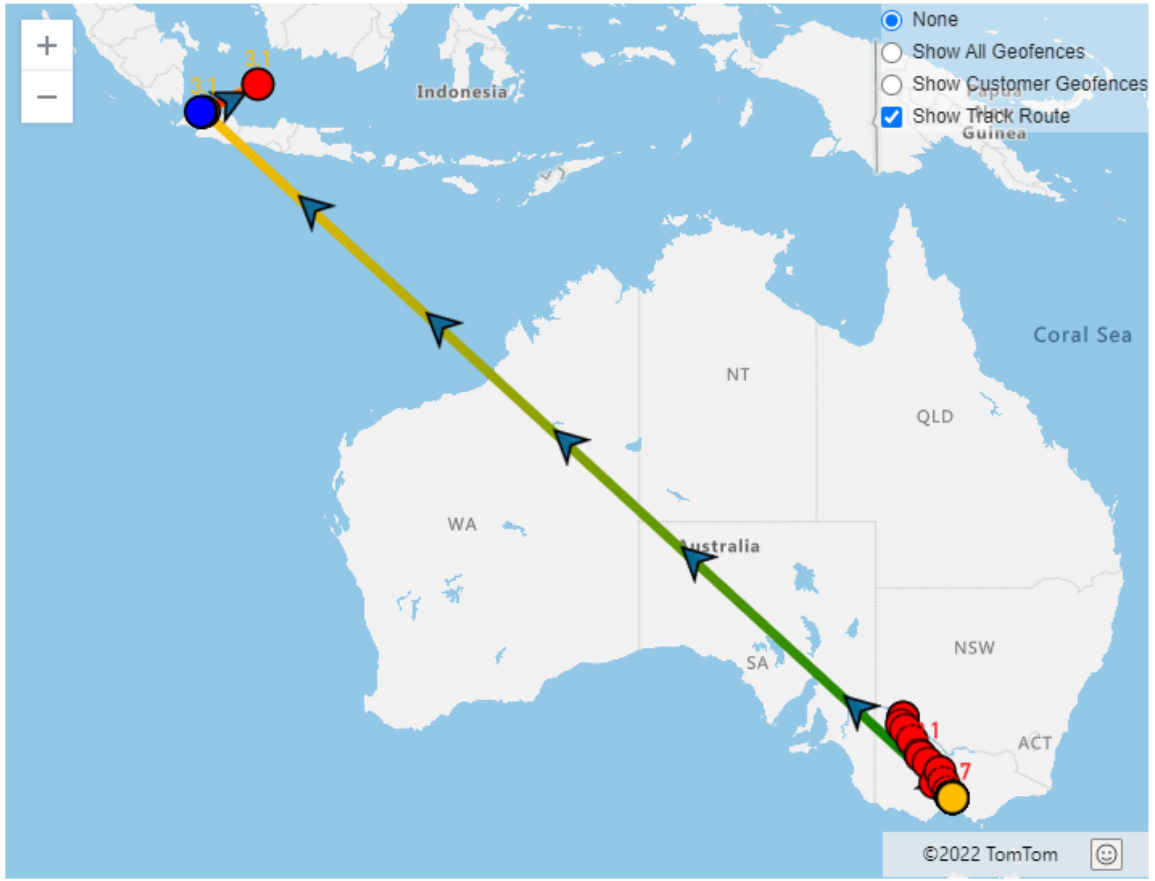
Poor performing stores could receive produce with lower initial Freshness Indicators in order to maximise the probability of a sale

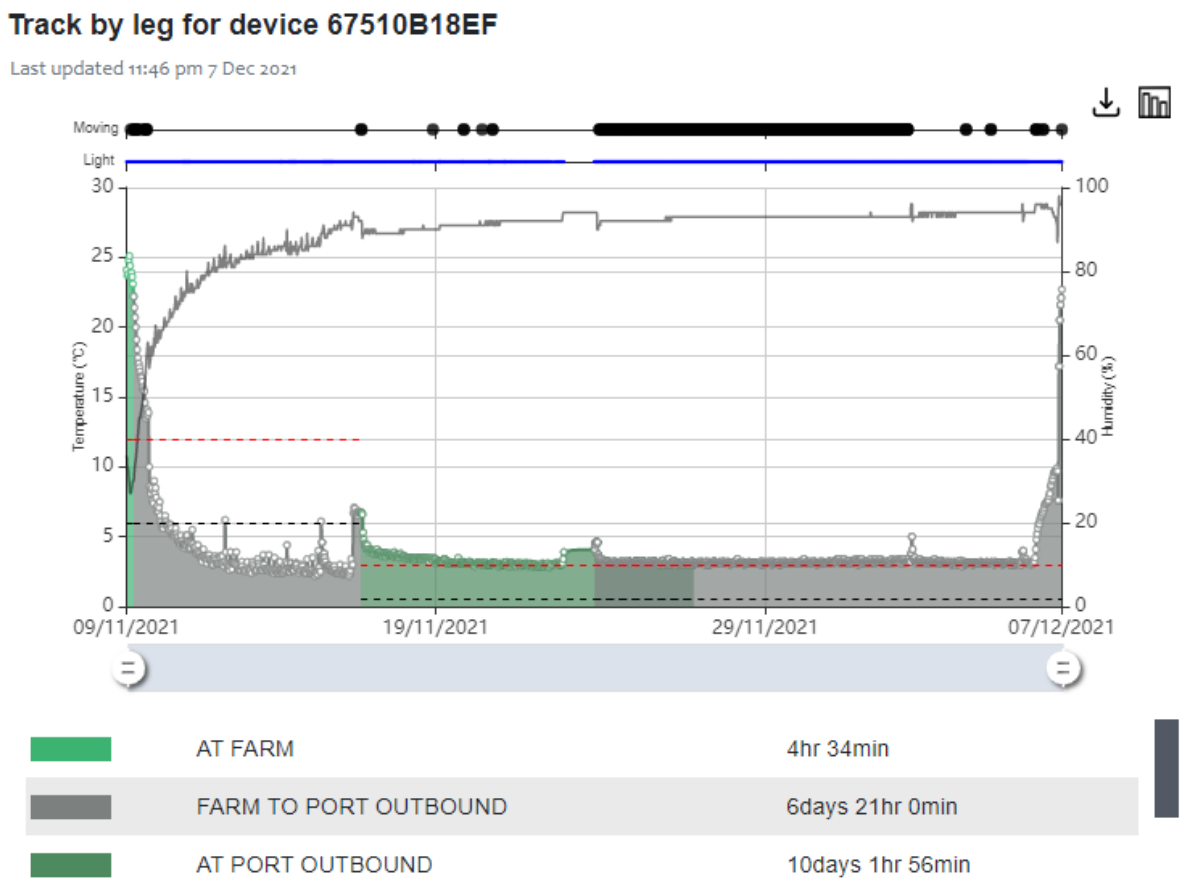


Data is indicative only, formats are confidential, please do not distribute

The journey and what it shows…

28.4 DAYS	10.2%	3.7°C
Total Dwell Time	Current VOP Score	Average Temperature

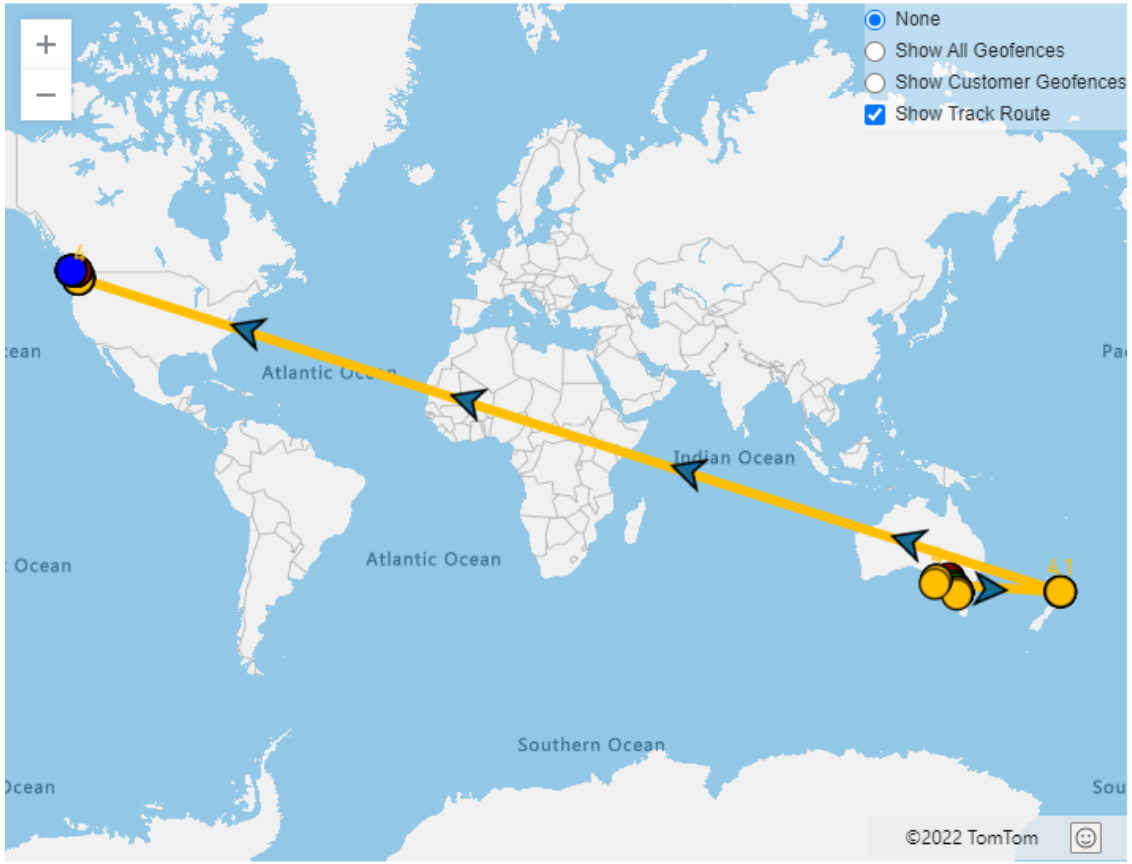


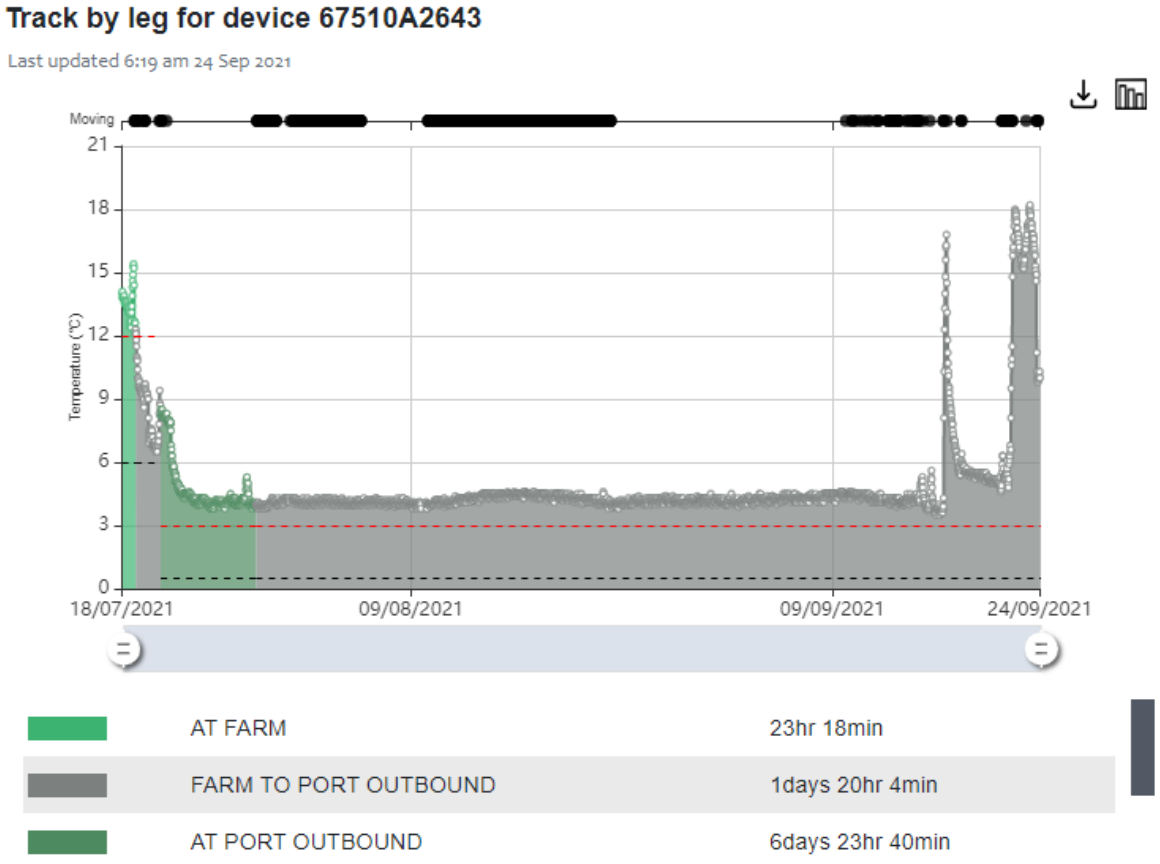


This is a track into Jakarta

The journey and what it shows…

67.5 DAYS	2.7%	5.0°C
Total Dwell Time	Current VOP Score	Average Temperature

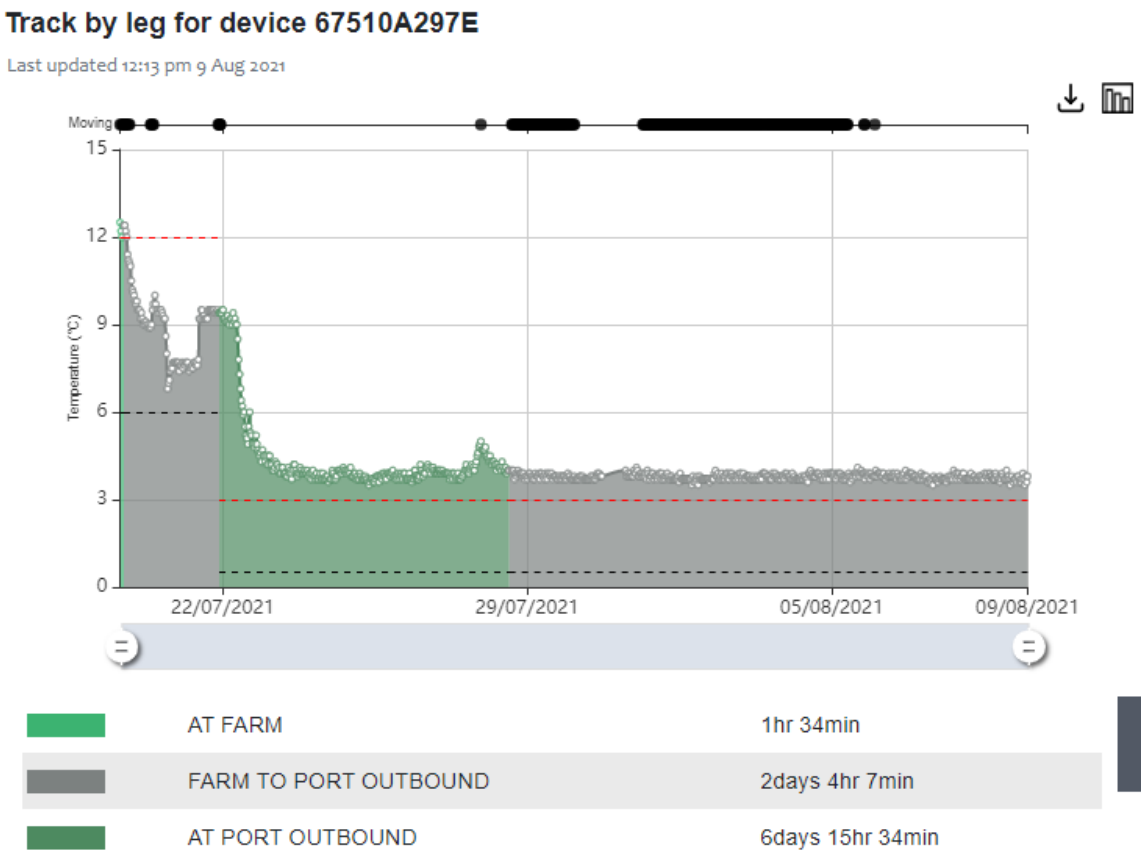




This is a track into Vancouver via NZ and Washington (US)

The journey and what it shows…

20.9 DAYS	10.3%	4.6°C
Total Dwell Time	Current VOP Score	Average Temperature



This is a track into NZ via Adelaide

Recent Pilot project?

106 Tracks throughout Australia tracked either to DC, wholesale agent, or to Store

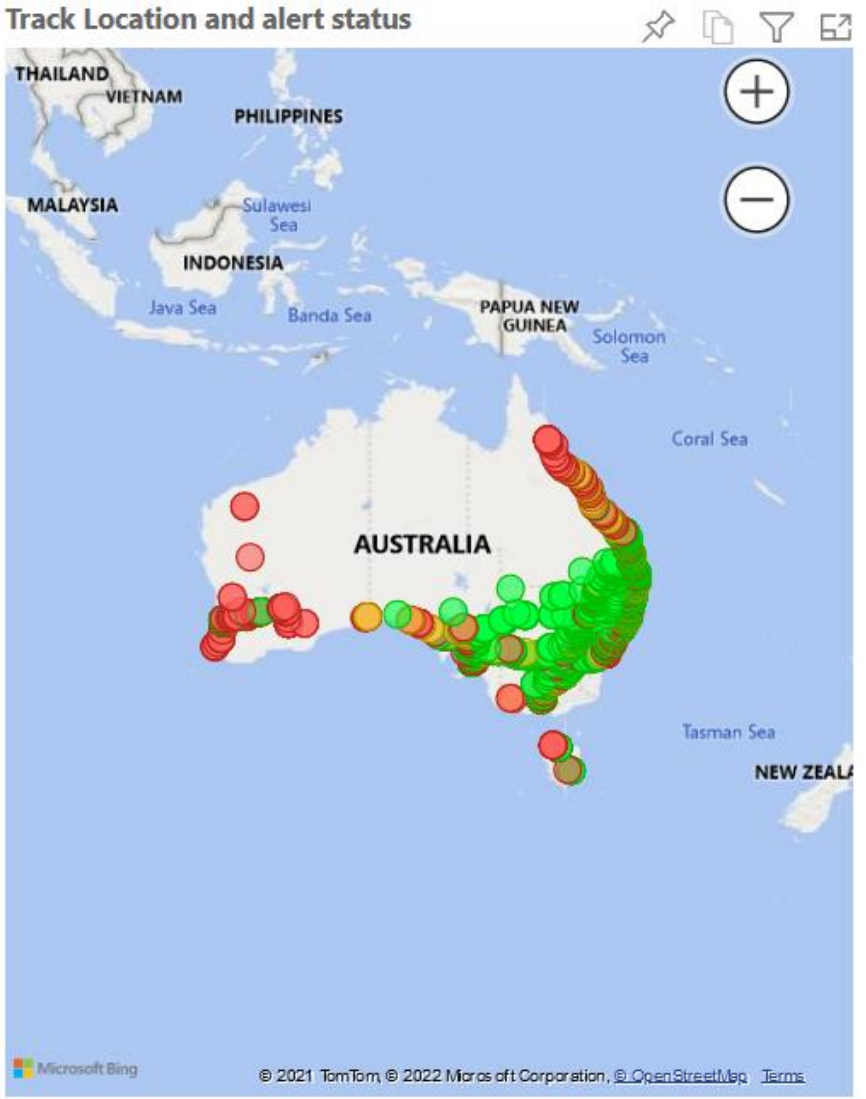
Tracks spent an average of **22.8 hrs out of temperature**

100 tracks spent more than **2 hrs in the red temp zone**

The *VOP Grade* % of time spent within the green temperature band:

- Perfect 100%
- Excellent 90-99%
- Good 80-89%
- Fair 70-79%
- Poor 60-69%
- Bad < 60%

58% Overall Score (VOP)	
15.4 Average Temp (°C)	**4.4** Average Dwell (Days)
2.9 Temp Std Dev (°C)	**2.6** Dwell Std Dev (Days)



Temperature Bands

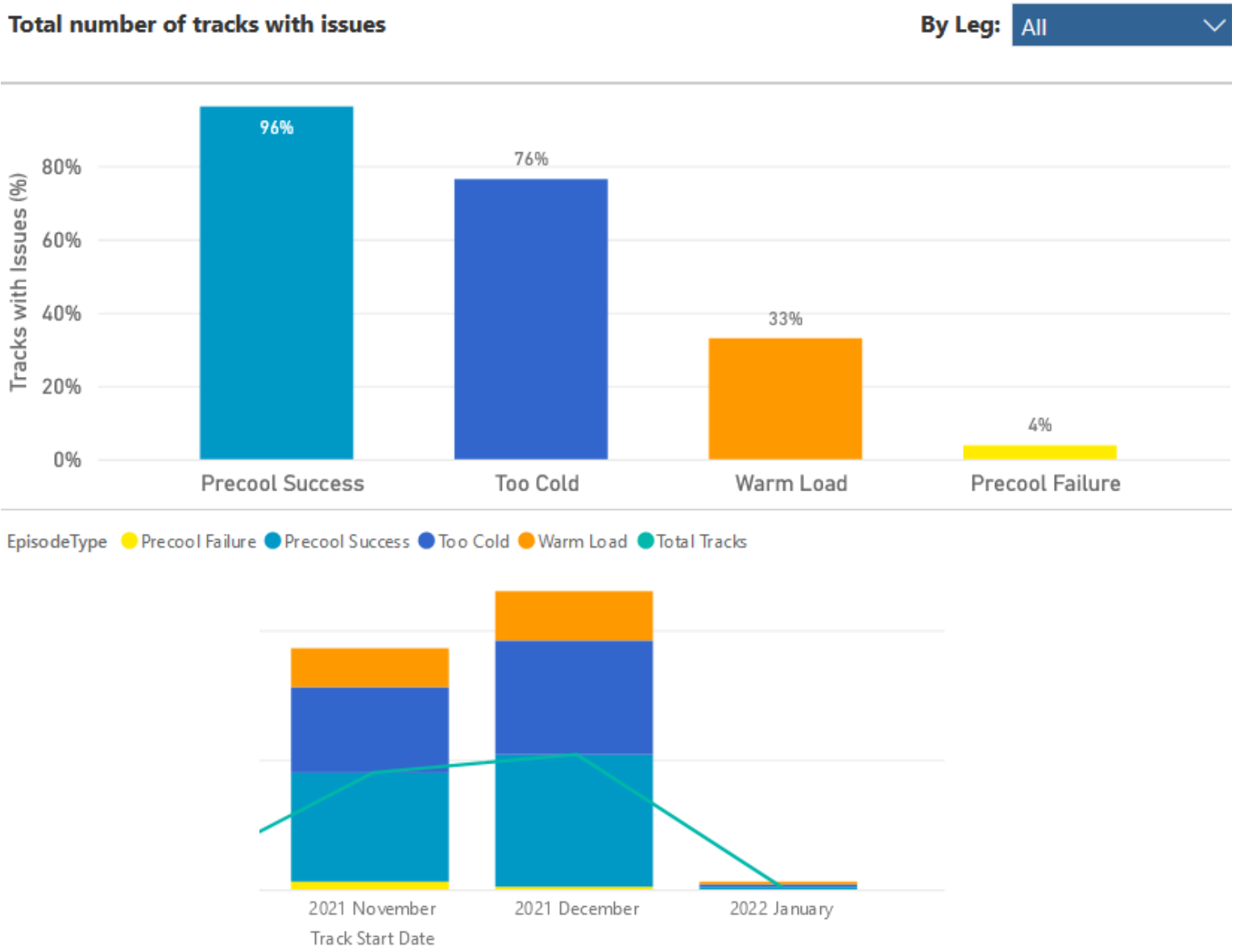
Green = 12 - 20°C

Amber = 11 - 21°C

Track Issues

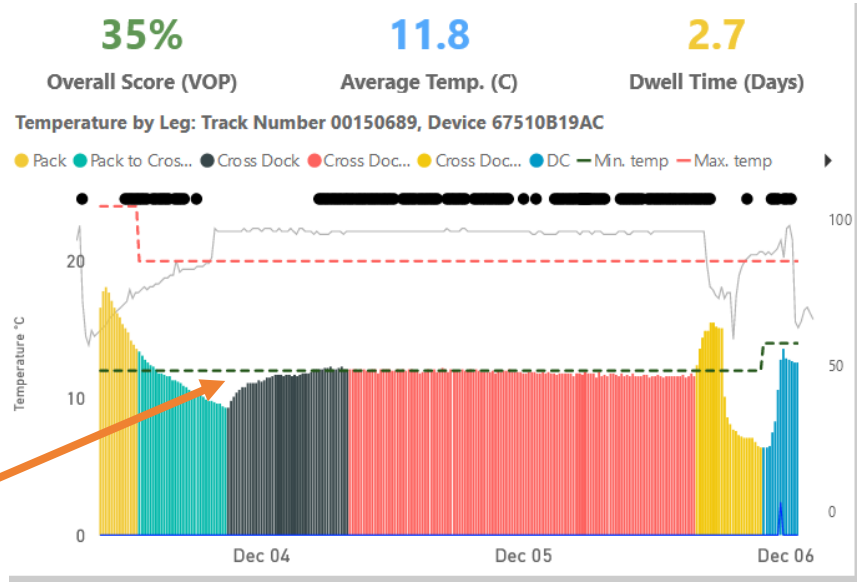
Almost all tracks were precooled successfully, only **4% did not meet precool temperature** specifications prior to loading.

Most tracks were **too cold (76%).**



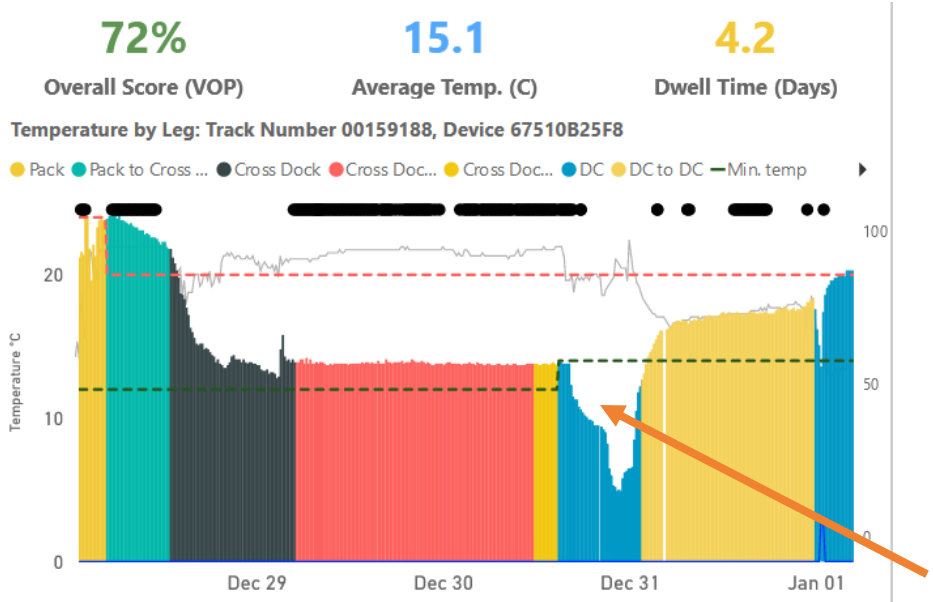
"Too cold"

Transit too cold. 30% of transit legs are too cold.



Leg Name	Avg. Temp. (C)	Std. Dev. of Temp. (C)	Desired Temp Ranges	Time in Temp (%)	Dwell (days)
Pack	15.9	1.4	12.0--24.0	100%	0.1
Pack to Cross...	11.0	1.1	12.0--20.0	22%	0.3
Cross Dock	11.6	0.6	12.0--20.0	23%	0.4
Cross Dock t...	11.9	0.2	12.0--20.0	34%	1.3
Cross Dock 2	11.6	3.7	12.0--20.0	56%	0.3
Total	**11.8**	**1.8**	**12.1--20.2**	**35%**	**2.7**

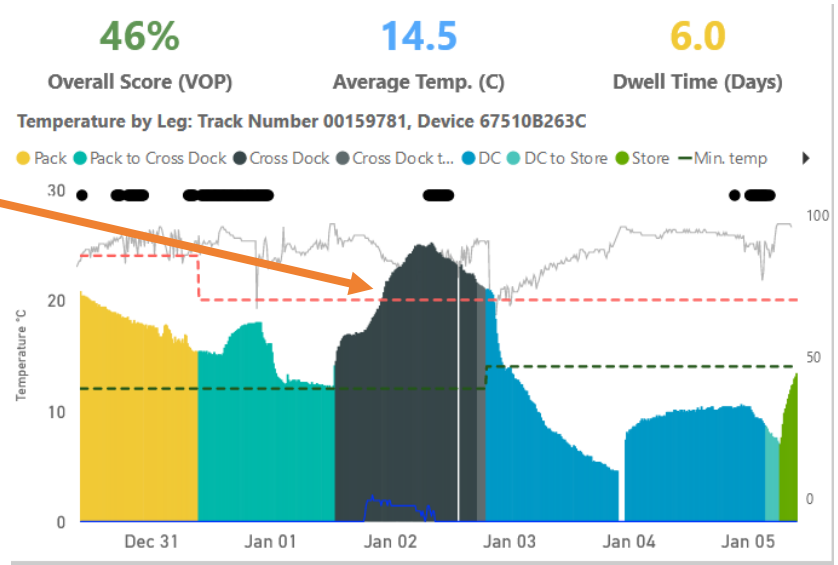
Initial DC too cold. Almost all DC legs were too cold at some point.



Leg Name	Avg. Temp. (C)	Std. Dev. of Temp. (C)	Desired Temp Ranges	Time in Temp (%)	Dwell (days)
Cross Dock	15.0	2.1	12.0--20.0	94%	0.7
Cross Dock t...	13.8	0.1	12.0--20.0	100%	1.3
Cross Dock 2	13.8	0.1	12.0--20.0	100%	0.1
DC	11.2	4.9	14.0--20.0	17%	1.6
DC to DC	16.9	1.1	14.0--20.0	94%	0.9
Total	**15.1**	**4.1**	**12.8--20.1**	**72%**	**4.2**

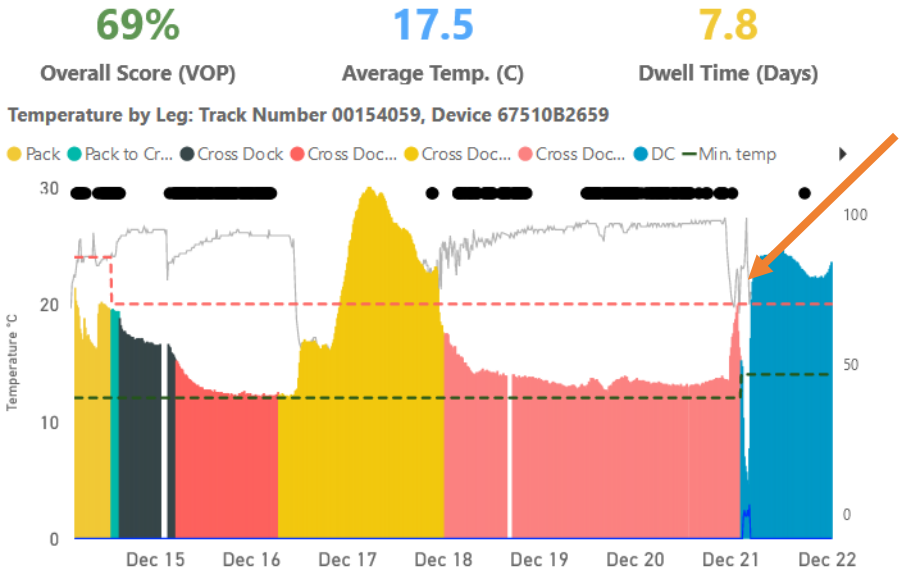
"Too Hot"

Transit too hot.
25% of transit legs were too hot



Leg Name	Avg. Temp. (C)	Std. Dev. of Temp. (C)	Desired Temp Ranges	Time in Temp (%)	Dwell (days)
Pack	18.0	1.4	12.0--24.0	100%	1.0
Pack to Cross...	14.7	2.1	12.0--20.0	100%	1.2
Cross Dock	20.9	3.3	12.0--20.0	40%	1.2
Cross Dock t...	21.2	0.2	12.0--20.0	0%	0.1
DC	9.7	3.1	14.0--20.0	4%	2.3
Total	**14.5**	**5.3**	**12.9--20.6**	**46%**	**6.0**

DC too hot.
5% of DC legs were too hot



Initially temperature was too cold at the DC, then the temperature was too hot.

Leg Name	Avg. Temp. (C)	Std. Dev. of Temp. (C)	Desired Temp Ranges	Time in Temp (%)	Dwell (days)
Pack	18.5	1.5	12.0--24.0	100%	0.4
Pack to Cross...	19.5	0.1	12.0--20.0	100%	0.0
Cross Dock	16.9	0.6	12.0--20.0	100%	0.6
Cross Dock t...	12.7	0.7	12.0--20.0	100%	1.1
Cross Dock 2	21.9	5.8	12.0--20.0	40%	1.7
Total	**17.5**	**5.2**	**12.4--20.2**	**69%**	**7.8**

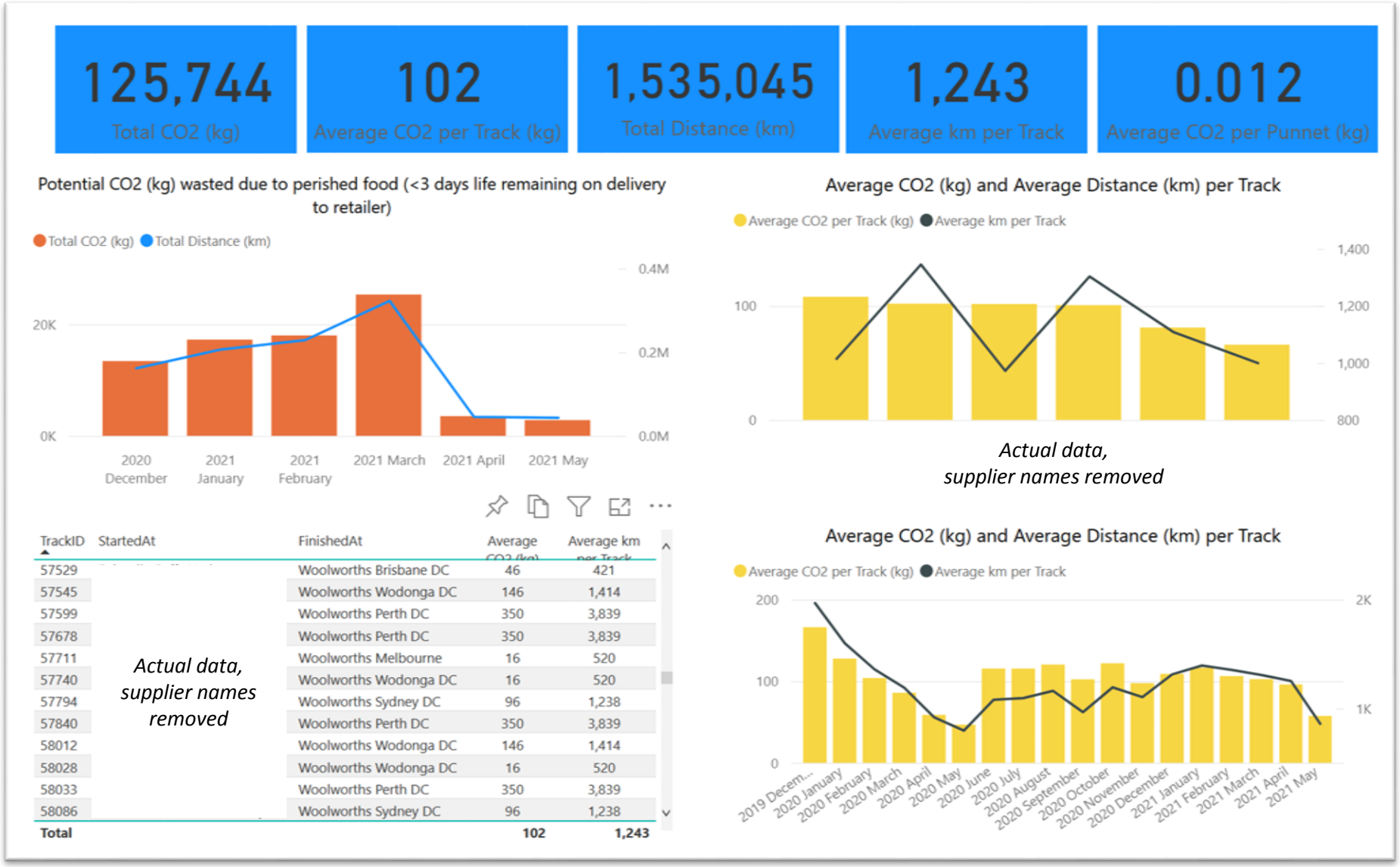
Quantify CO2 emitted from supply chains and food waste

Journeys from pack house to DC are converted into CO2 emitted based on transportation type, distance travelled, weight of goods and produce type.

Data can be shown by supplier, DC, region, timeframe and can be total or at a unit level

On farm data can be included to give full end to end C02 footprint

Use data to make different decisions that minimise emissions or food waste



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CO_2 emissions and food miles per track

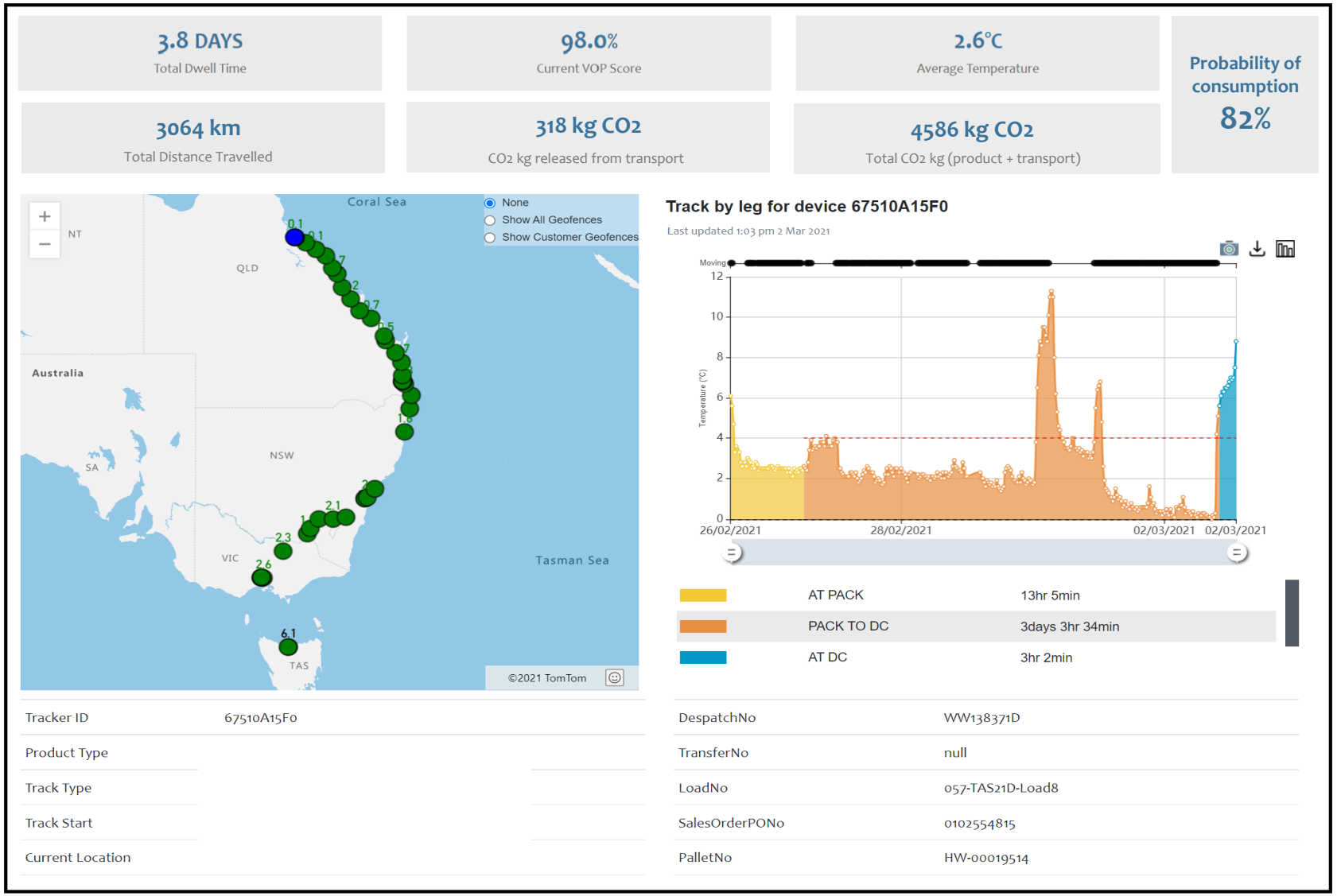
Food miles are calculated from the location route given by the track

Supply chain CO_2 from truck, ship, plane and refrigeration

CO_2 is measured at 'load' level, but can be reduced to unit level eg punnet

Total CO_2 includes the standard emissions from growing 1kg of beef (of course there will be individual differences)

Probability of consumption is deduced from damage in supply chain. Temperature issues take several days to physically show in the produce and the customer is often the first to see the damage resulting in a poor experience and likely disposal of produce



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The Blue Box tracker

Designed and built for the fresh food industry by Escavox

- ✓ Real time data – anywhere in the world
- ✓ Time, temperature and location (temperatures -20C to +65C, humidity and light)
- ✓ Uses global cellular network, no need for gateways or USB download
- ✓ Always on – no need to turn on off, with a battery life of 120+ days
- ✓ Trackers arrive pre-set – just add one to the carton and it starts automatically
- ✓ Senses conditions every 15 mins and uploads data every 30 minutes
- ✓ Linked to web-based software, giving visibility of the supply chain and simple dashboards for decision making.
- ✓ See what leg of the journey your product is travelling
- ✓ Fully integrated alerting service – configurable to meet your specific needs

(Mango track used as example)

Achieved benefits from tracking with Escavox

Average cold chain improvement = 20%

- Increased Revenue
- Increased Margin
- Increased Reputation
- Increased control of your supply chain
- Improved relationships

- Reduced Rejections
- Reduced loss of quality and shelf life
- Reduced global waste and loss

Ask about our case studies

Homework for you to do……..

What I would ask you to do is the following:

- Check how many rejections have you had over the past 12 months, no matter how big or small?
- What is the average cost per pallet that you supply?
- What was the cost impact to your business?
- What have you done if anything differently as a result of product issues?
- Have you seen an increase in your supply due to others having been rejected?
- Do you export and if so:
  - To where?
  - How? (air or sea or both)
  - Roughly what volumes?
  - Roughly what value per shipment?

Homework - answers

Questions	Answers
How many rejections have you had over the past 12 months, no matter how big or small?	
What is the average cost per pallet that you supply?	
What was the cost impact to your business?	
What have you done if anything differently as a result of product issues?	
Have you seen an increase in your supply due to others having been rejected?	
Do you export and if so: (please tick)	
- Air	
- Sea	
- Both	
Where do you export to?	
Indicative Volumes: (pallets)	
- Week	
- Month	
- Year	
Indicative Value per shipment	

Testimonial & Publication

”…..we identified an issue with our trucking company & are seeking compensation.
We are using this tracking data to highlight the issue occurred during transit.
It is due to the valuable data identified in this track that the wider site is now using the loggers for high value shipments.
…..the information captured has allowed us to prevent a damaged shipment departing the country to our customer.
Really appreciate your help on these tracks”

The simple maths…

The average pallet of produce is **$1700.00**
The average FTL load of produce is **$37400.00**
With only 3 trackers (@ $85.00 per tracker) per FTL load.
Based on the average FTL load this equates to **146** FTL loads tracked.
It takes only **1** load saved to pay for the other **145** tracked.
How many more will you save?

What you also gain is reputational advantage, retailer and consumer confidence, how much value do you place on that?

Contact details

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