

Adopting New Technologies to Integrated Laboratory Logistics to Support Clinical Lab 2.0 and Deliver More Value to Physicians and Patients

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TRICORE REFERENCE LABORATORIES *Albuquerque, New Mexico*

TriCore Reference Laboratories

TriCore Vision

To be the leading laboratory focused on real time targeted patient intervention to improve population health in New Mexico and the Southwest region.

Services

67+ locations throughout New Mexico

24/7 courier coverage across New Mexico

45+ pathologists, scientists and clinicians

12 clinical specialties

99% patient satisfaction



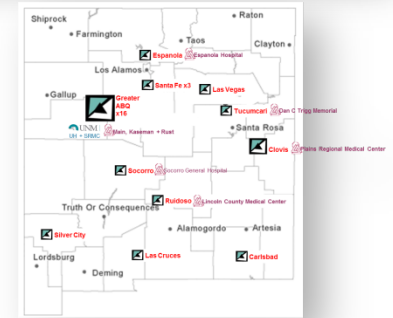
New Mexicans serving New Mexicans since 1998

Trusted community partner

Increased from 3 million to 10.5 million billable tests per year

Increased from 500 to 1,300+ employees

Increased from 75% to 98% of tests performed in-house



TriCore Historical Logistic Confines

Handhelds

1. Slow – took 2 minutes to upload information
2. Antiquated - no longer supported
3. Routes dropping off device
4. Had to use 2 way radios in addition to for dispatching

Vehicles

1. >40
2. High mileage – would reach 200,000 miles in 1 ½ - 3 years
 - a) Large state geographically with sparse population
3. Leasing vehicles not cost effective

Space

1. Parking lot – needed spaces for employee parking
2. Logistics area – needed space for lab expansion

TriCore and MedSpeed Partnership

MedSpeed formed a relationship with TriCore in 2016 to provide 24/7 transportation services for TriCore specimens in central and northern New Mexico.

Together we continue to find value through business process integration and converting data to information.

Forward Visibility Means different things to different people

Specimen Management

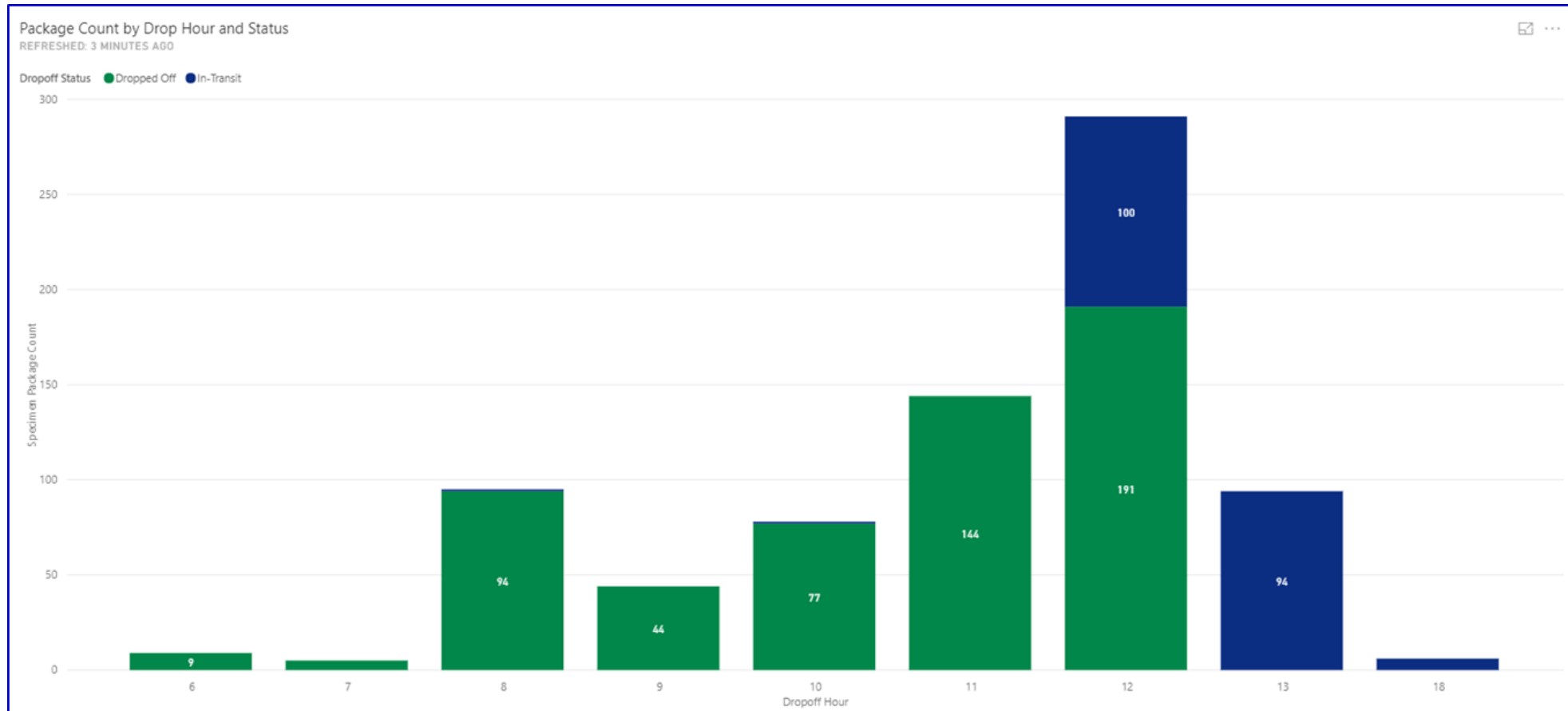
- Big Picture View
- Total Counts by Hours

Client Engagement

- Client Level View and
- Associated Item Level View

Expose the data and allow laboratory departments to consume information which provides the best value to them. One size does not fit all.

MedSpeed: Specimen Management



- Delivered and in-transit specimen bag counts by hour typically displayed on a large screen in specimen receiving or accessioning
- Quick visual for magnitude of specimen flow

MedSpeed: Client Engagement

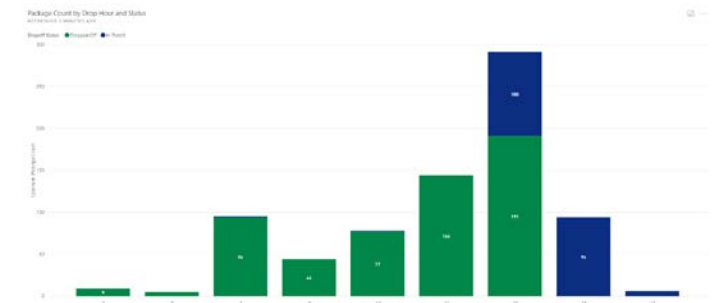
LocationName	dropstatus	Ho...	Trackingno	RouteTypeDesc	AccountNo
PMG Belen Urgent Care	In-Transit	13	505106990177057Z	Scheduled	9539
PMG Belen Urgent Care	In-Transit	13	505106990177058Z	Scheduled	9539
PMG Belen Urgent Care	In-Transit	13	505106990177067Z	Scheduled	9539
TriCore PCC Montgomery	In-Transit	12	358476	Scheduled	8800
TriCore PCC Montgomery	In-Transit	12	358482	Scheduled	8800
TriCore PCC Montgomery	In-Transit	12	358497	Scheduled	8800
TriCore PCC Montgomery	In-Transit	12	505106990176102Z	Scheduled	8800
TriCore PCC Montgomery	In-Transit	12	505106990176103Z	Scheduled	8800
TriCore PCC Montgomery	In-Transit	12	505106990176104Z	Scheduled	8800
Los Lunas Family Practice	In-Transit	13	505106990179648Z	Scheduled	8325
Los Lunas Family Practice	In-Transit	13	505106990179649Z	Scheduled	8325
ABQ Derm & Cutaneous S...	In-Transit	12	31270384	Scheduled	806
ABQ Derm & Cutaneous S...	In-Transit	12	505106990191372Z	Scheduled	806
ABQ Derm & Cutaneous S...	In-Transit	12	505106990191373Z	Scheduled	806
ABQ Derm & Cutaneous S...	In-Transit	12	505106990191374Z	Scheduled	806
TriCore PCC Encino	In-Transit	12	358154	Scheduled	801
TriCore PCC Encino	In-Transit	12	358158	Scheduled	801
TriCore PCC Encino	In-Transit	12	358274	Scheduled	801
TriCore PCC Encino	In-Transit	12	358496	Scheduled	801
TriCore PCC Encino	In-Transit	12	358503	Scheduled	801
TriCore PCC Encino	In-Transit	12	358516	Scheduled	801
TriCore PCC Encino	In-Transit	12	358522	Scheduled	801
TriCore PCC Encino	In-Transit	12	358524	Scheduled	801

Detail view based on client engagement data

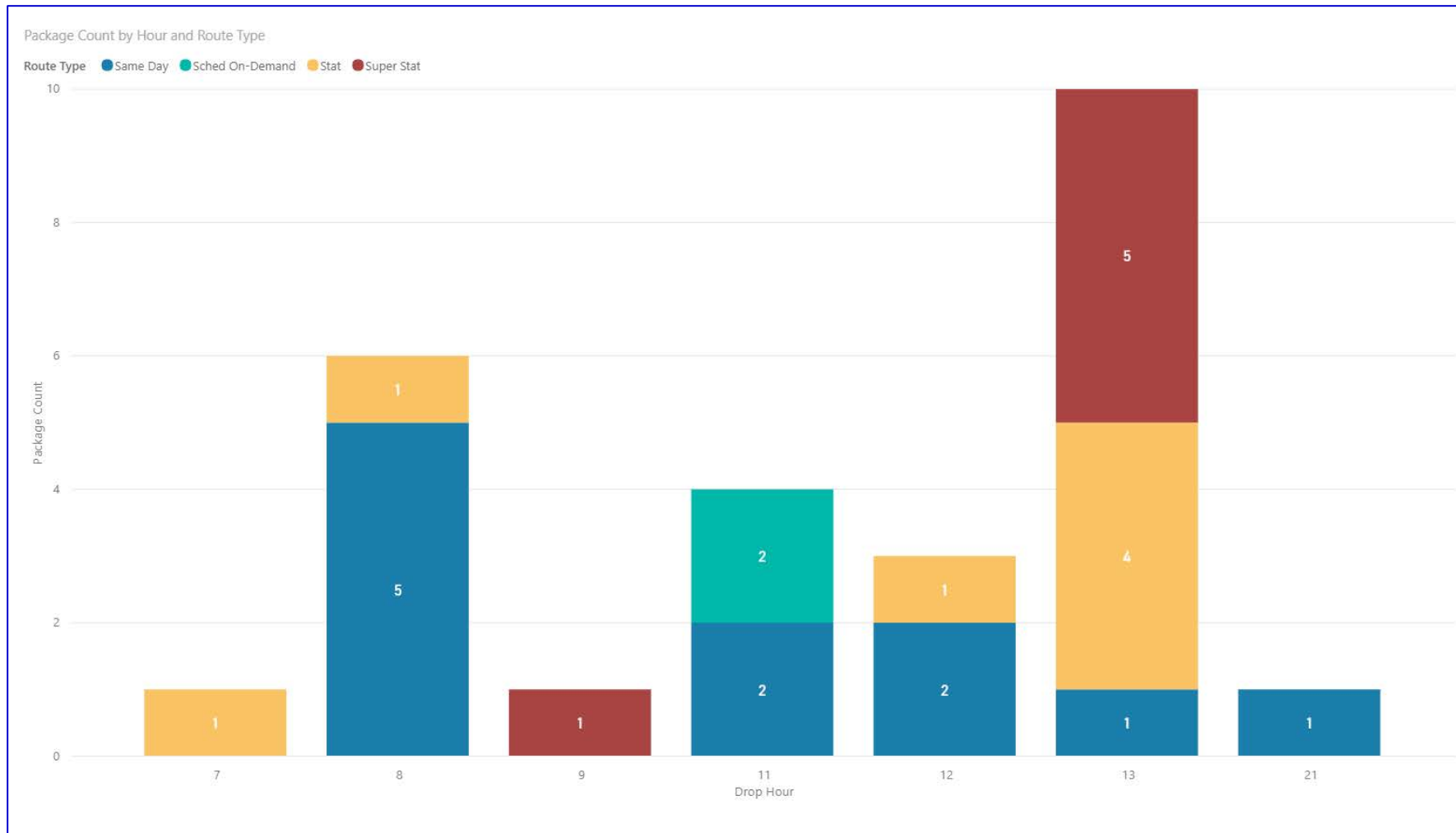
- Account number
- Location Name

Ability to answer the question ...

- Has the lab received my batch of specimens?

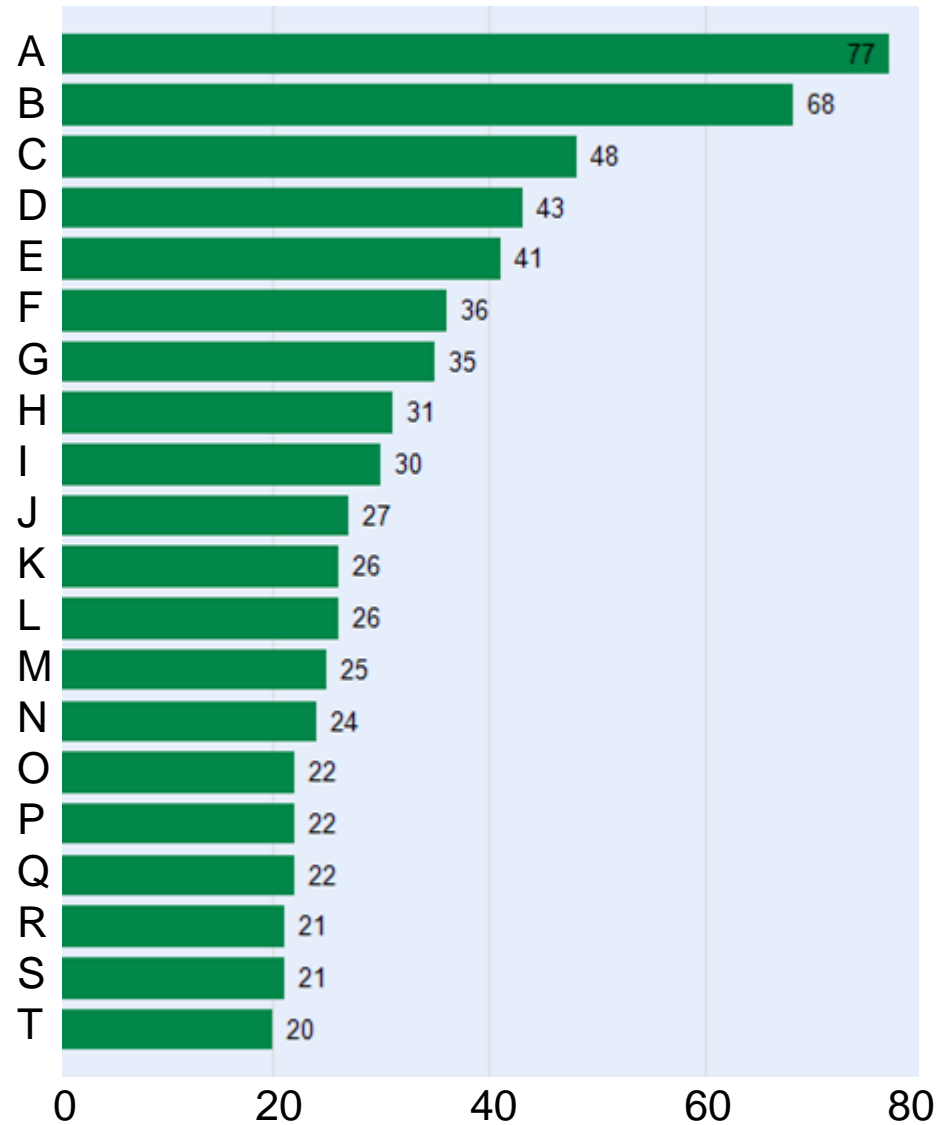


MedSpeed: STAT Activity



🔄 The on demand chart breakdown by service request

On Demand Sites by Job Count

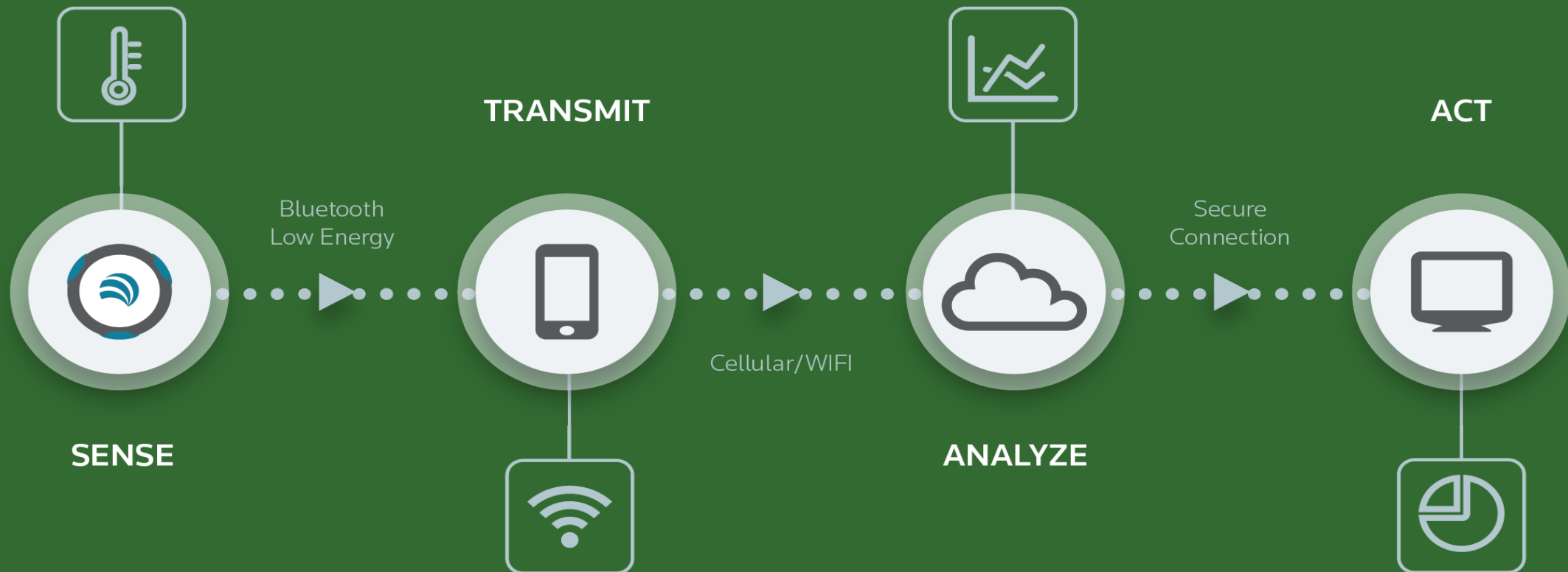


TriCore Cost Allocation

Department	Scheduled	WC/SD	SS/ST
<i>A</i>	51.70%	82.25%	65.53%
<i>B</i>	3.73%	7.19%	16.79%
<i>C</i>	36.08%	7.65%	9.16%
<i>D</i>	8.51%	2.90%	8.19%



Real-Time Monitoring Temperature & Location



T-Tracks Sensors

- Totes / Coolers
 - Temperature
 - Days to weeks of data
- Vehicles
 - Temperature
 - Location Beacon
- Room Level Location
 - Beacon
- Battery Life: Up to 3 Yrs
- NIST-Traceable Calibration



T-Tracks™ Courier Solution



Collection Site

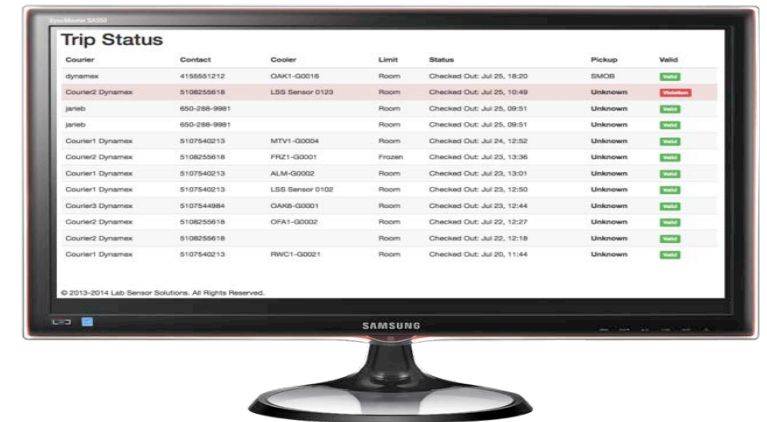
1. Temperature sensor in tote records and sends temperature information
2. Sensors in rooms send out beacon information
3. Phone receives and transmits information from both



4. Vehicle information together with tote information is sent by sensors



5. Android/iPhone app or access point captures information and sends to Cloud.



Courier	Contact	Cooler	Limit	Status	Pickup	Valid
dynamex	4155551212	OAK1-G0016	Room	Checked Out: Jul 25, 18:20	SMOB	Valid
Courier2 Dynamex	5108255618	LSS Sensor 0123	Room	Checked Out: Jul 25, 10:49	Unknown	Invalid
janetb	650-288-9981		Room	Checked Out: Jul 25, 08:51	Unknown	Valid
Courier1 Dynamex	5107540213	MTV1-G0004	Room	Checked Out: Jul 24, 12:52	Unknown	Valid
Courier2 Dynamex	5108255618	FRZ1-G0001	Frozen	Checked Out: Jul 23, 13:36	Unknown	Valid
Courier1 Dynamex	5107540213	ALM-G0002	Room	Checked Out: Jul 23, 13:01	Unknown	Valid
Courier1 Dynamex	5107540213	LSS Sensor 0102	Room	Checked Out: Jul 23, 12:50	Unknown	Valid
Courier3 Dynamex	5107544984	OAK6-G0001	Room	Checked Out: Jul 22, 12:44	Unknown	Valid
Courier2 Dynamex	5108255618	OFA1-G0002	Room	Checked Out: Jul 22, 12:27	Unknown	Valid
Courier2 Dynamex	5108255618		Room	Checked Out: Jul 22, 12:18	Unknown	Valid
Courier1 Dynamex	5107540213	RWC1-G0021	Room	Checked Out: Jul 20, 11:44	Unknown	Valid

6. Dashboard

- Immediate upload / feedback
- Alerts and Remediation
- Quick daily quality overview
- Uses existing cellular or WiFi

Vehicle Sensor Placement



Temperature Sensor Placement

Frozen Tote



Refrigerated Tote



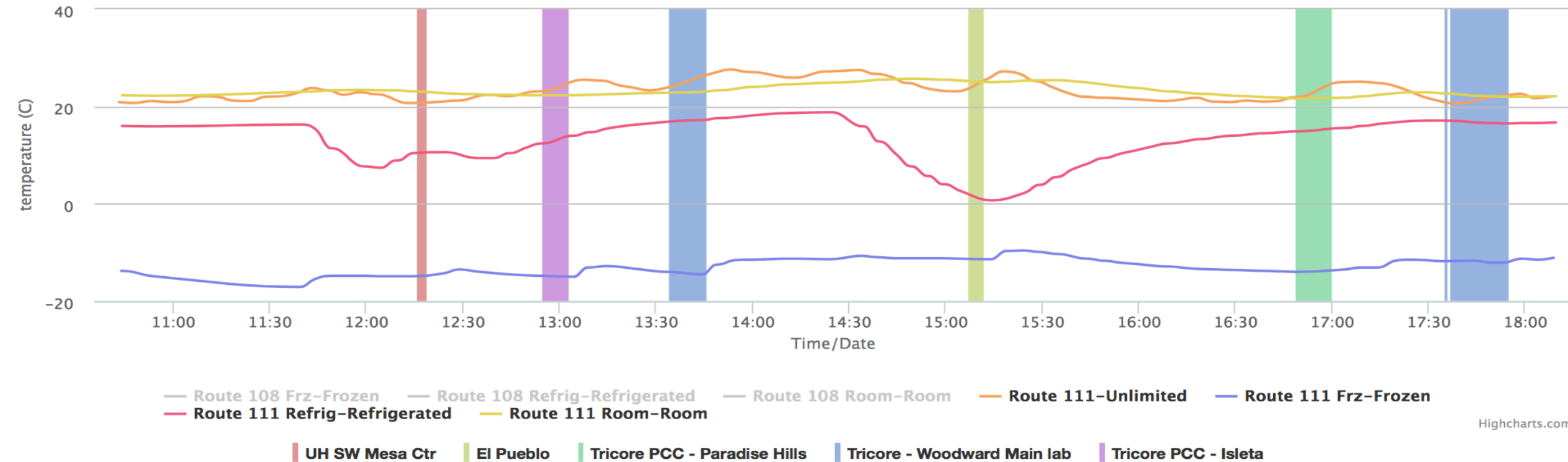
Location Sensor Placement



Typical Daily Baseline

Custom temperature Readings for tricore.r111

Click and drag in the plot area to zoom in



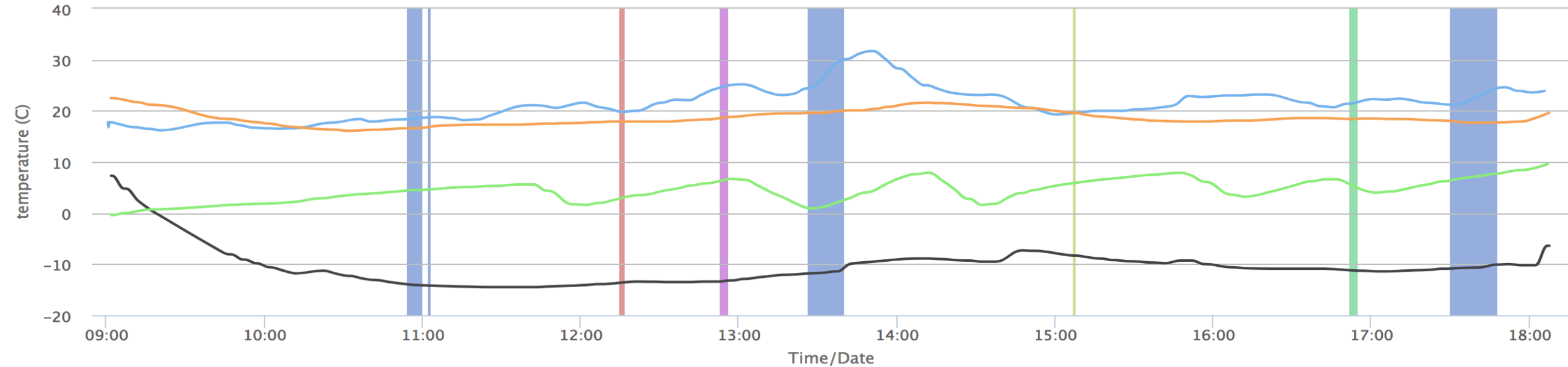
Process Changes Made

- Focus on Refrigerated Tote Temperature
- Steps to correct:
 - Keep dry ice in totes overnight (pre-cooling)
 - Remove dry ice and add gel packs prior leaving the central lab
 - Carry an extra tote of gel packs
 - With a little dry ice in the bottom
 - Recharge the totes during transit as needed

Typical Day After Correction

Custom temperature Readings for tricore.r111

Click and drag in the plot area to zoom in



Route 111-Unlimited Route 111 Frz-Frozen Route 111 Refrig-Refrigerated Route 111 Room-Room

UH SW Mesa Ctr El Pueblo Tricore PCC - Paradise Hills Tricore - Woodward Main lab Tricore PCC - Isleta

Future Considerations

1. Sample level tracking
2. Enhancements to MedSpeed's portal
3. Cost containment
4. Cost sharing
5. Alternative Transportation (ride sharing, Drones)

Q & A

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