



CARRIER PERSPECTIVE ON PHARMACEUTICAL LOGISTICS

www.BoyleTransport.com



TRUCKING EMPLOYS OVER 7 MILLION PROFESSIONALS. THAT'S THREE TIMES THE POPULATION OF LOS ANGELES.



REGULATORY GUIDANCE





SUPPLY CHAIN PARTICIPANTS SHOULD ENSURE

"SUPPLY CHAIN INTEGRITY" & "GOOD DISTRIBUTION PRACTICES"



CARRIER OBLIGATIONS





- Quality management system
- Root cause analyses, corrective action
- Investigate temperature excursions



- Extensive documentation of protocols
- Annual audits by shippers

SUPPLY CHAIN INTEGRITY





In-transit

visibility



Plannee

ALERT out of route

- Company fleet and professional drivers teams
- No brokering or independent contractors
- 5 minute GPS updates (most carriers \rightarrow hourly)
- Tractor & trailer tracking with door sensors
- Wired & wireless emergency buttons
- Company-issued smart phones
- Geo-fenced route monitoring
- 24/7 Ops Center support

On-road protocols



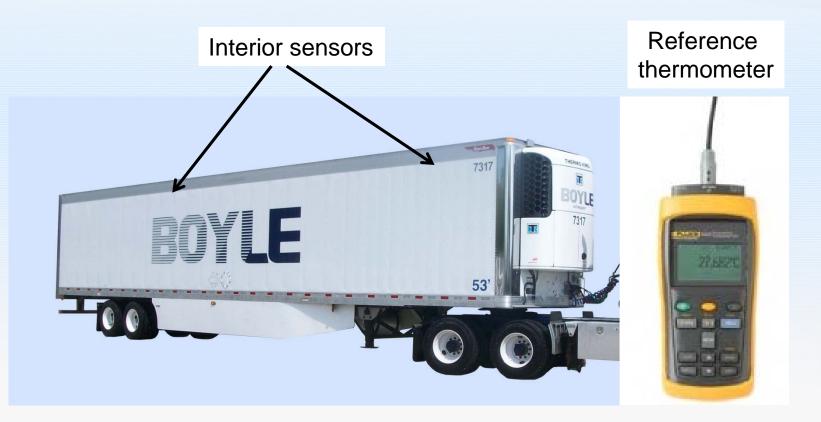
Personnel



- Constant surveillance & attendance
- Expedited, exclusive use service
- Robust locks & seals
- Limited stops/layovers
- Extensive background checks
- Security awareness training
- Closed loop of those who "need to know"

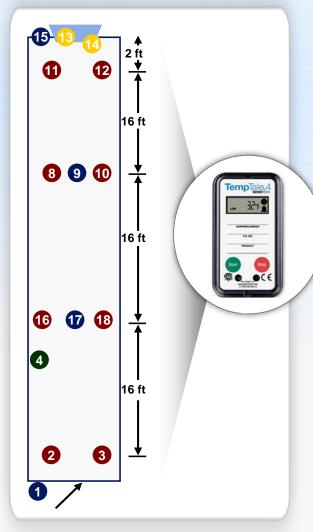
CALIBRATE SENSORS REGULARLY





THERMAL MAPPING, VALIDATION





Thermometer locations

- 30 data loggers placed in trailer
- Temp unit run for 24 hr period
- Data downloaded, analyzed
- 30 page study & report
- Proves thermal efficiency is equally distributed

IN-TRANSIT TEMPERATURE MONITORING







- Redundant monitoring (incab & 24/7 Ops Center)
- Real time excursion alerts
- Instantly viewable on web by authorized parties
- Downloadable to PDF

Onboard Printer



- Paper receipt
- Passive recorder
- Retention depends on dockworker
- Paper jams

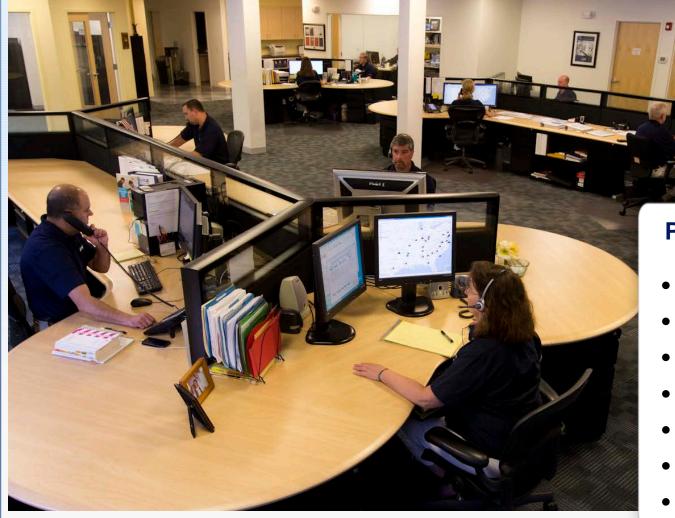


Data Logger

- Downloadable by consignee
- Passive recorder
- Must be programmed
- Excursion info too late
- Complicated handling

24/7 STAFFING AND EXCEPTION MANAGEMENT





Proactive alerts

- Late ETA
- Route geo-fence
- Temp out of range
- Temp not reporting
- Position not updating
- Trailer doors open
- Trailer disconnect

CUSTOMER ACCESS TO INFORMATION





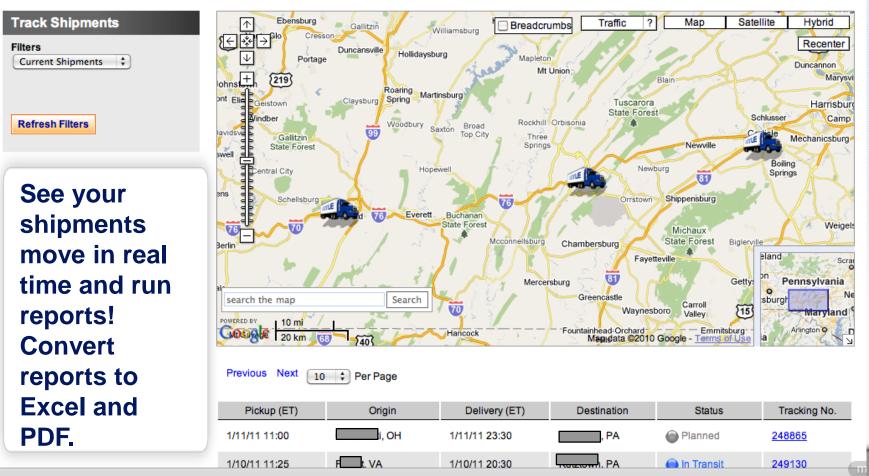
Customer Portal

Welcome, dmarcillo Sign Out

Admin | Help

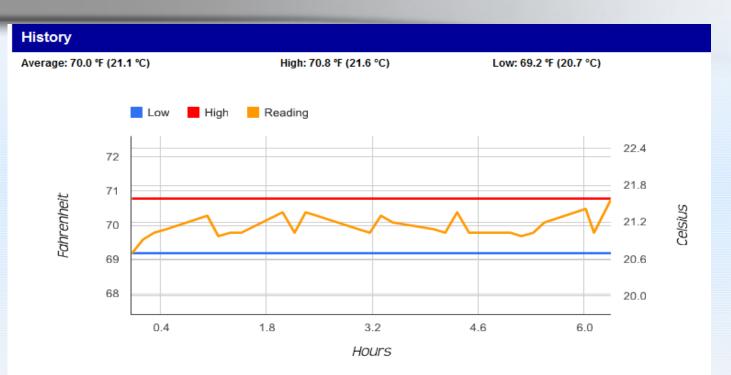
Current Shipments

Current Shipments are shipments that have been picked up, planned or delivered within 24 hours.



SHIPMENT TEMPERATURE HISTORY

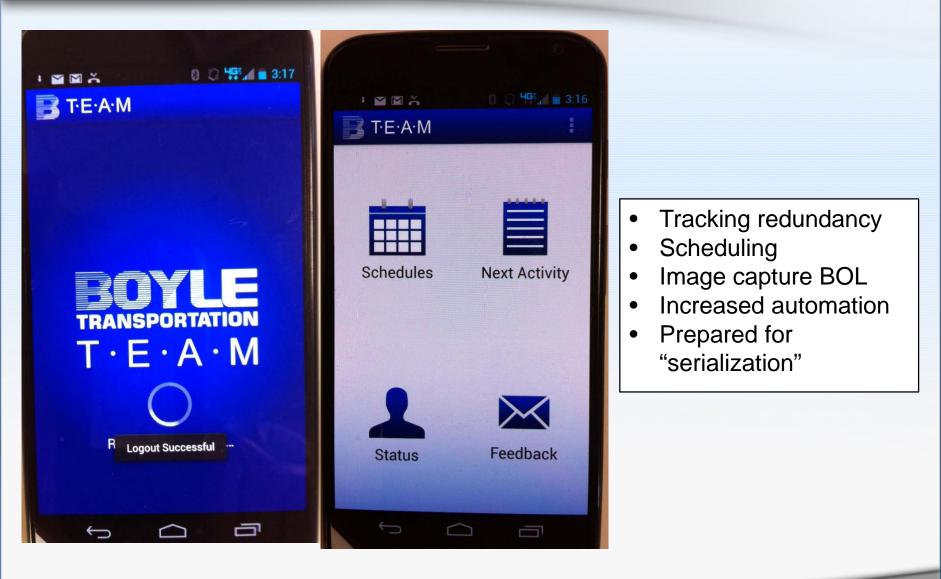




Date Time ET	Activity Type	Location	Message Detail
2/27/12 08:18	Order Accepted		new order created
2/27/12 09:51	Arrived at Pick Up Location	least, VA	
2/27/12 10:35	trailer tracking	1.7M NW of Energy,VA	Door Close
2/27/12 10:41	Order Picked Up	VA	
2/27/12 10:42	Temperature reading	1.8M NW of Example ,VA	69.2 °F (20.7 °C)
2/27/12 10:57	Temperature reading	2.6M NE of Cont ,VA	69.6 °F (20.9 °C)
2/27/12 11:12	Temperature reading	2.4M SE of Madison Heights,VA	69.8 ºF (21.0 °C)
2/27/12 11:27	Temperature reading	1.6M SE of Clifford,VA	69.9 °F (21.1 °C)
2/27/12 11:42	Temperature reading	2.3M NE of Lovingston,VA	70.3 ºF (21.3 ºC)

GPS-ENABLED SMARTPHONES & PROPRIETARY APP





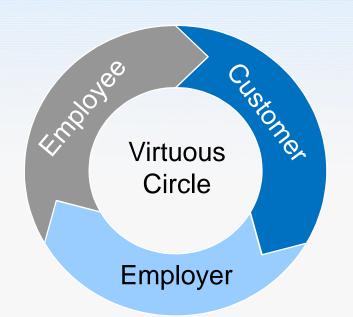
INVEST IN PEOPLE & THEY WILL PERFORM





Practices

Strict qualifications & training
Guaranteed wages & benefits
Actively recruit military veterans
Align incentives with customer





Results

- ✓ 9% turnover vs. industry average 100%
- Superior safety & security
- ✓ Greater reliability & expertise
 - "Patriotic Employer" award from DoD