Fleet health

Know if service is required and forecast upcoming maintenance.

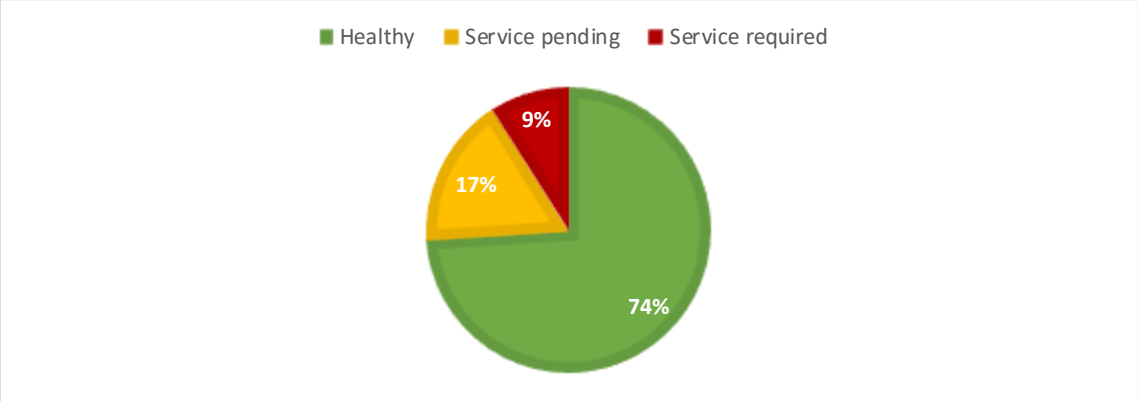

Figure 1 Percent of fleet health

- 2 gas detection cartridges need replacement *(see Calibration review, p. 5)*
- 1 device needs service *(see Recommended maintenance, p. 2)*
- 6 devices are overdue for calibration *(see Calibration review, p. 5)*
- 15 devices are due for calibration within the next 30 days *(see Calibration review, p. 5)*
- 3 locations beacons require battery replacement. *(see Asset utilization, p. 7)*
- 74 devices in ideal working order.

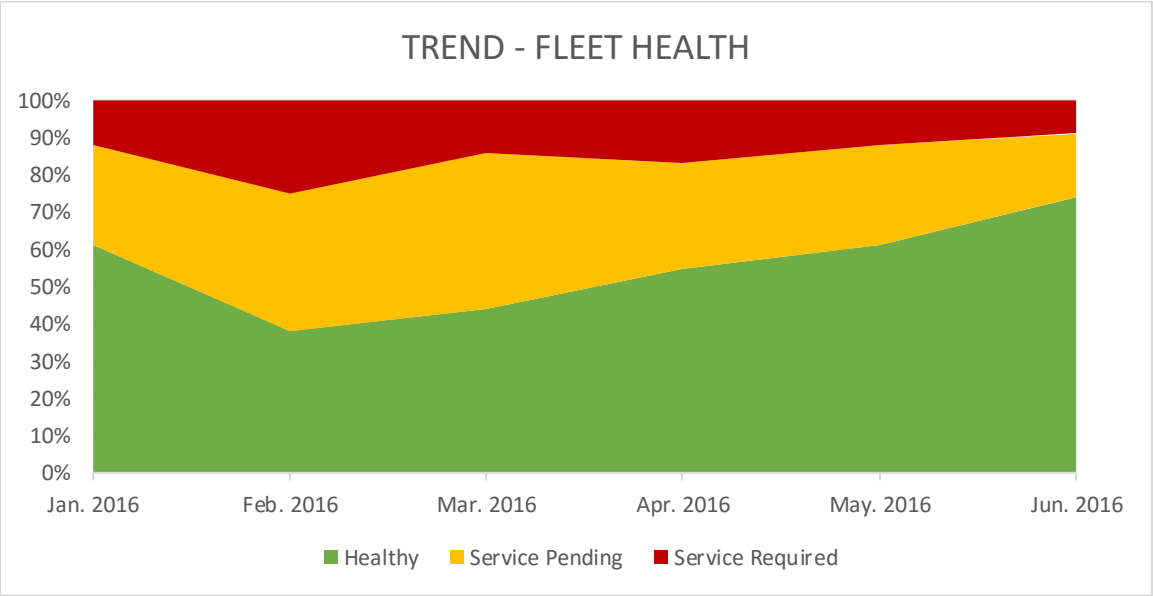

Figure 2 Fleet health over time

Recommended maintenance

Be in control of what needs replacement.

Device type	*User or name*	*Device ID*	*Issue*	*Resolution*
G7 Dock	Maintenance shack 2	4500134	Three consecutive calibration failures	Your gas bottle may be empty. If this is not the case the dock my require service.
Cartridge	Susan Jones	3340100	O2 sensor failed manual calibration more than twice.	Blackline will send you a new sensor cartridge.
G7c	Matt Walker	4500933	Sound failed on alarm test more than twice	The speaker or microphone may be dirty or covered on this device.
G7x	Joe Hicks	4500601	Hardware error reported (245)	This device requires technical service. Contact your distributor or Blackline.
G7 Bridge	N/A	9700144	Record of abnormal battery drain. Device reports going from 100% to 20% in less than 2 hours.	This device requires technical service. Contact your distributor or Blackline.
Beacon	2nd floor hallway	1000088	Replace batteries. Last reported as low.	Purchase 2 standard D-cell batteries. Visit to support.blacklinesafety.com for replacement assistance.
Beacon	Chemical storage	1000041	Replace batteries. Last reported as low.	Purchase 2 standard D-cell batteries. Visit to support.blacklinesafety.com for replacement assistance.
Beacon	HQ West offices	1000043	Replace batteries. Last reported as low.	Purchase 2 standard D-cell batteries. Visit to support.blacklinesafety.com for replacement assistance.

Table 1 Device maintenance issues and resolution recommendations

Device usage

Discover G7 usage for device users.

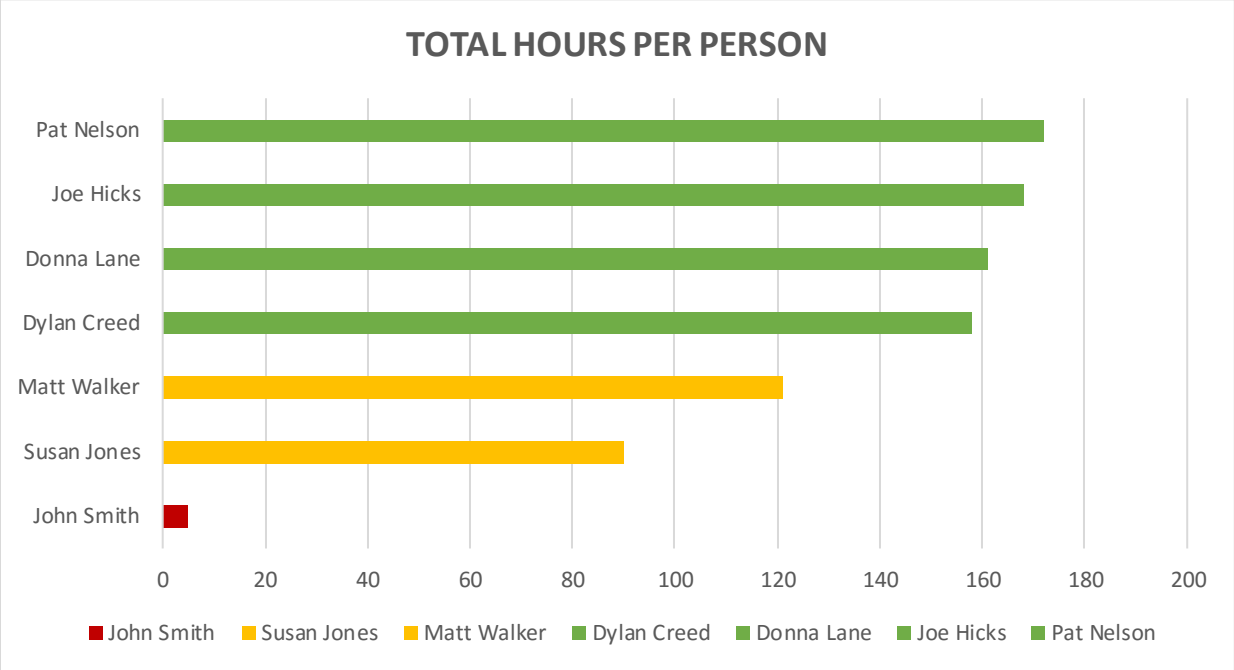

Figure 3 Device usage in hours per device user

Device user	*Device ID*	*Total hrs.*	*Low battery shutdown*	*Lost connection*	*Bump*	*Calibration*
John Smith	4500673	5			●	●
Susan Jones	4500134	90	1		●	●
Matt Walker	4500933	121		2	●	●
Dylan Creed	4501784	158		6	●	●
Donna Lane	4500655	161			●	●
Joe Hicks	4500601	168			●	●
Pat Nelson	4500683	172			●	●

Table 2 Device usage breakdown

Total hours: The total number of hours the devices has been operational this period.
Low battery: Number of low battery automatic log offs.
Lost connection: Number of times the device registered a network lost situation this period.
In Bump: ● < 3 days out of 5 [<66%], ● < 4 days out of 5 [66-79%], ● > 4 days out of 5 [>80%]
In Calibration: ● < 3 days out of 5 [<66%], ● < 4 days out of 5 [66-79%], ● > 4 days out of 5 [>80%]

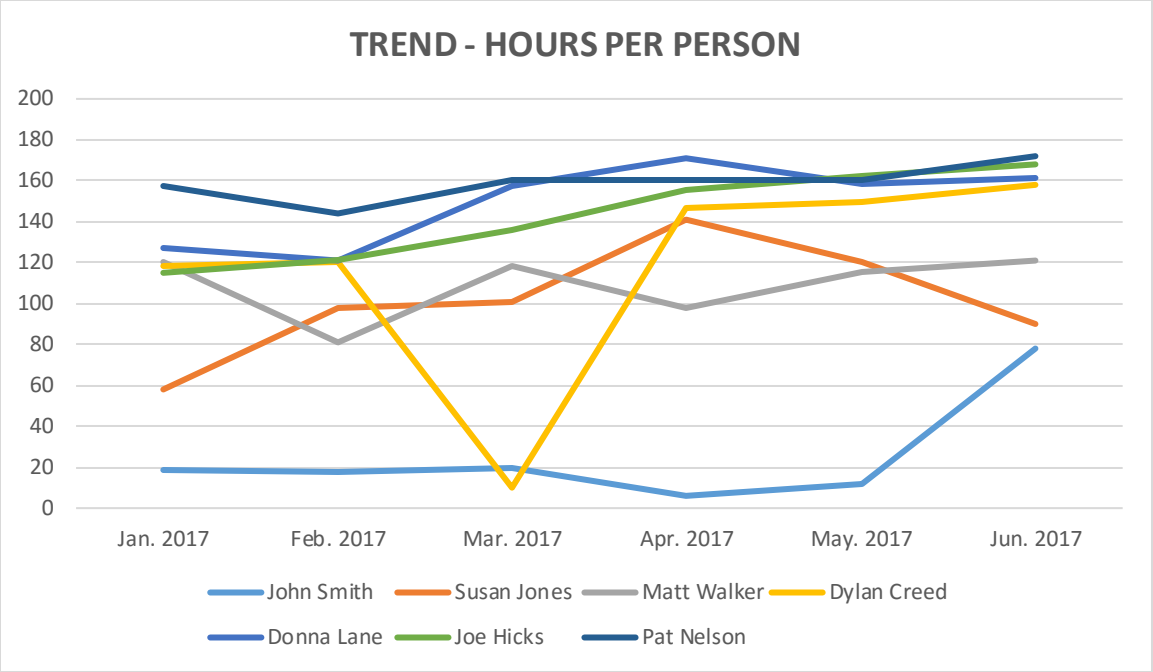

Figure 4 Trend of device usage (in hours) per device user over 6 months

Calibration review

Discover which devices are non-compliant and prepare for upcoming calibration cycles.

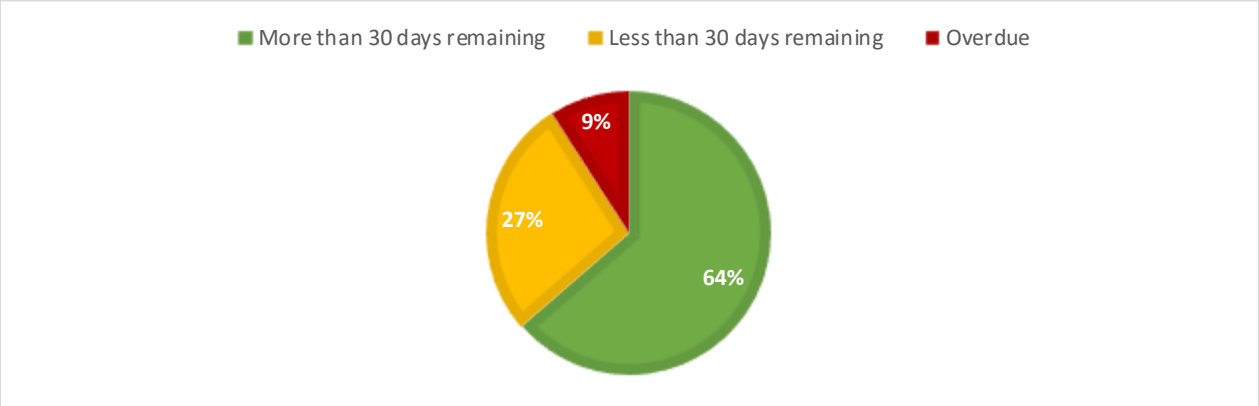

Figure 5 Configuration status of devices

Device user	*Device ID*	*Interval*	*Remaining*	*Due date*	*Cartridge*
John Smith	4500673	60	-3	2016-09-30	H2S
Susan Jones	4500134	60	-3	2016-09-30	H2S
Matt Walker	4500933	60	12	2016-10-13	H2S, O2, CO, LEL
Dylan Creed	4501784	60	12	2016-10-13	H2S, O2, CO, LEL
Donna Lane	4500655	60	47	2016-12-08	H2S, O2, CO, LEL
Joe Hicks	4500601	60	47	2016-12-08	H2S, O2, CO, LEL
Pat Nelson	4500683	60	47	2016-12-08	H2S, O2, CO, LEL

Table 3 Detailed configuration status for each individual device user

Interval: Configuration settings stating the number of days permissible between calibrations
Remaining: The number of days remaining before the next calibration is due. Negative days represent the number of days overdue. RED < 3 days out of 5 [<66%], YELLOW < 4 days out of 5 [66-79%], GREEN > 4 days out of 5 [>80%]
Date due: The calendar date that calibration is due.
Cartridge: The sensor arrangement on the gas detection device.

Failed Calibrations

Discover which devices have failed calibrations this period and their cause.

Device user	*Device ID*	*Sensors*	*Failure mode*
Susan Jones	4500134	H2S	O2 sensor failed in dock
Matt Walker	4500933	H2S, O2, CO, LEL	CO failed manual calibration

Table 4 Failed Calibration breakdown

Bump test review

Discover which devices are non-compliant.

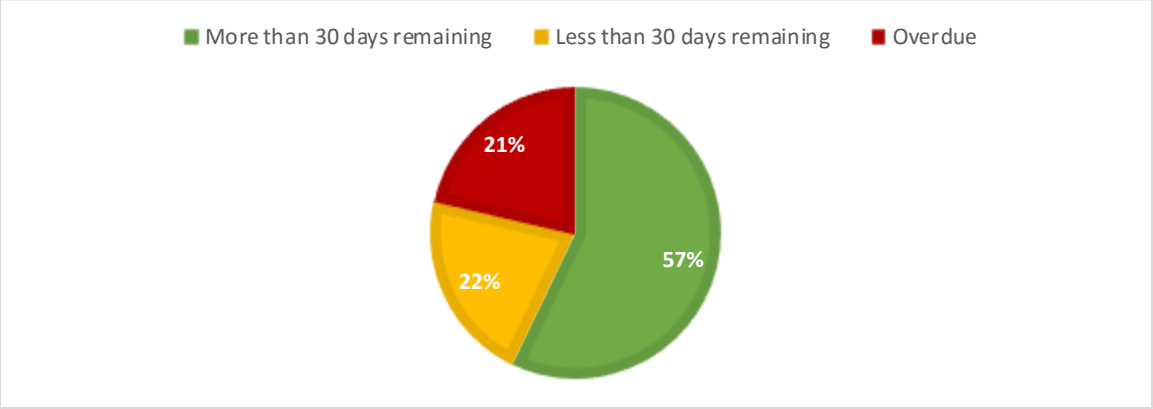

Figure 6 Bump test status of devices

Device user	*Device ID*	*Interval*	*Remaining*	*Due date*	*Cartridge*
John Smith	4500673	7	-8	2016-09-30	H2S
Susan Jones	4500134	7	-6	2016-09-30	H2S
Matt Walker	4500933	7	-3	2016-10-13	H2S, O2, CO, LEL
Dylan Creed	4501784	7	1	2016-10-13	H2S, O2, CO, LEL
Donna Lane	4500655	7	1	2016-12-08	H2S, O2, CO, LEL
Joe Hicks	4500601	7	1	2016-12-08	H2S, O2, CO, LEL
Pat Nelson	4500683	7	6	2016-12-08	H2S, O2, CO, LEL

Table 5 Detailed bump test description for each individual device user

Interval: Configuration settings stating the number of days permissible between bump tests

Remaining: The number of days remaining before the next bump test is due. Negative days represent the number of days overdue. RED < 3 days out of 5 [<66%], YELLOW < 4 days out of 5 [66-79%], GREEN > 4 days out of 5 [>80%]

Date due: The calendar date that bump test is due.

Cartridge: The sensor arrangement on the gas detection device.

Failed Bump tests

Discover which devices have failed bump tests this period and their cause.

Device user	*Device ID*	*Sensors*	*Failure mode*
John Smith	4500673	H2S	Failed sound test, mic or speaker issue
Pat Nelson	4500683	H2S, O2, CO, LEL	Failed sound test, mic or speaker issue
Donna Lane	4500655	H2S, O2, CO, LEL	H2S did not detect gas

Table 6 Failed bump test breakdown

Asset utilization

Know which of your assets are getting the most value and which can be optimized.

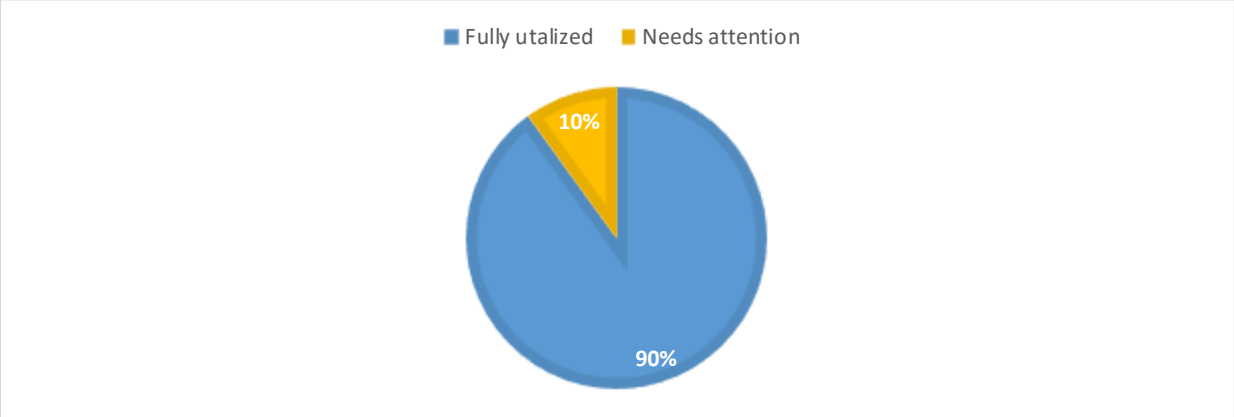

Figure 7 Asset breakdown

Docks

Name	*Device ID*	*Configuration*	*Calibrations this period*	*Bumps this period*	*Connectivity*
Maintenance Shack 2	4500134	H2S, CO2, LEL, O2	0	0	Yes
Maintenance Shack 1	4500091	H2S	15	44	No
HQ West	4500170	H2S, CO2, LEL, O2	31	74	Yes
Maintenance truck	4500188	H2S	43	91	Yes

Table 7 Dock usage breakdown

Bridges

Name	*Device ID*	*Hours of operation*	*Max linked devices*	*Low battery shutdowns*	*Network timeouts*
John's tuck	9700977	108	0	2	0
Maintenance truck	9700730	765	5	0	1
n/a	9700144	1,244	1	0	0

Table 8 Bridge usage breakdown

Beacons

Name	*Device ID*	*Reported locations*	*Last reported date*	*Battery*
West office	1000377	655	2017-02-23	Low
East office	1000103	0	2016-06-24	Good
Fab shop	1000345	2,456	2017-02-23	Good

Table 9 Beacon usage breakdown

Alert reporting

Know who has had an alert and how it was resolved.

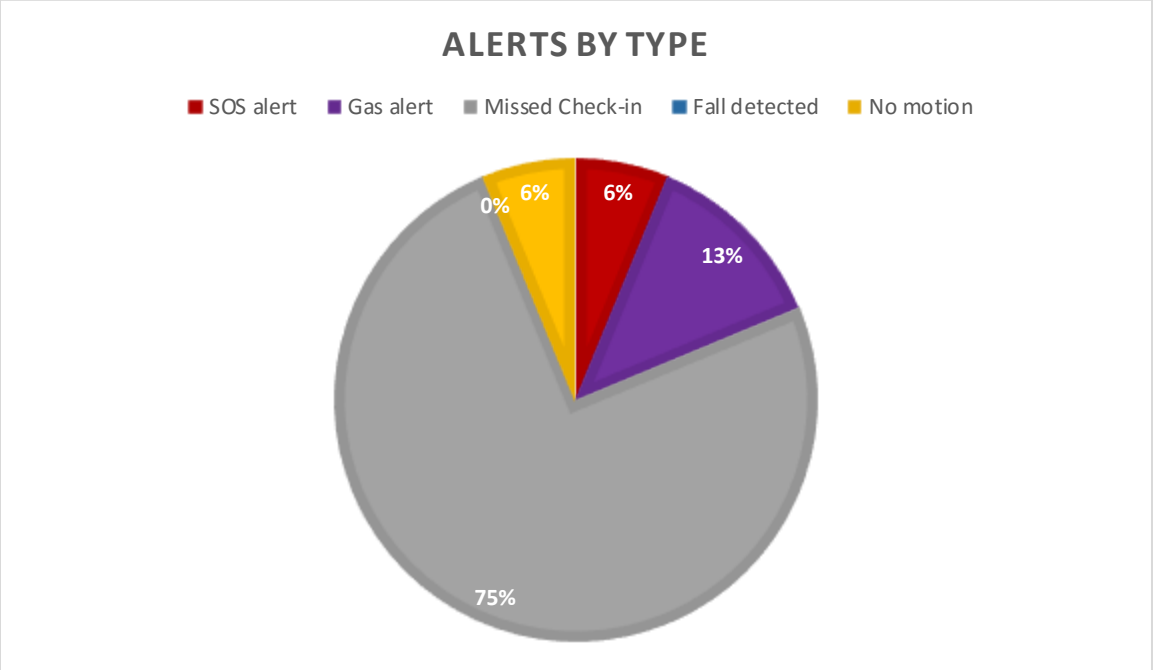

Figure 8 Alert breakdown by type

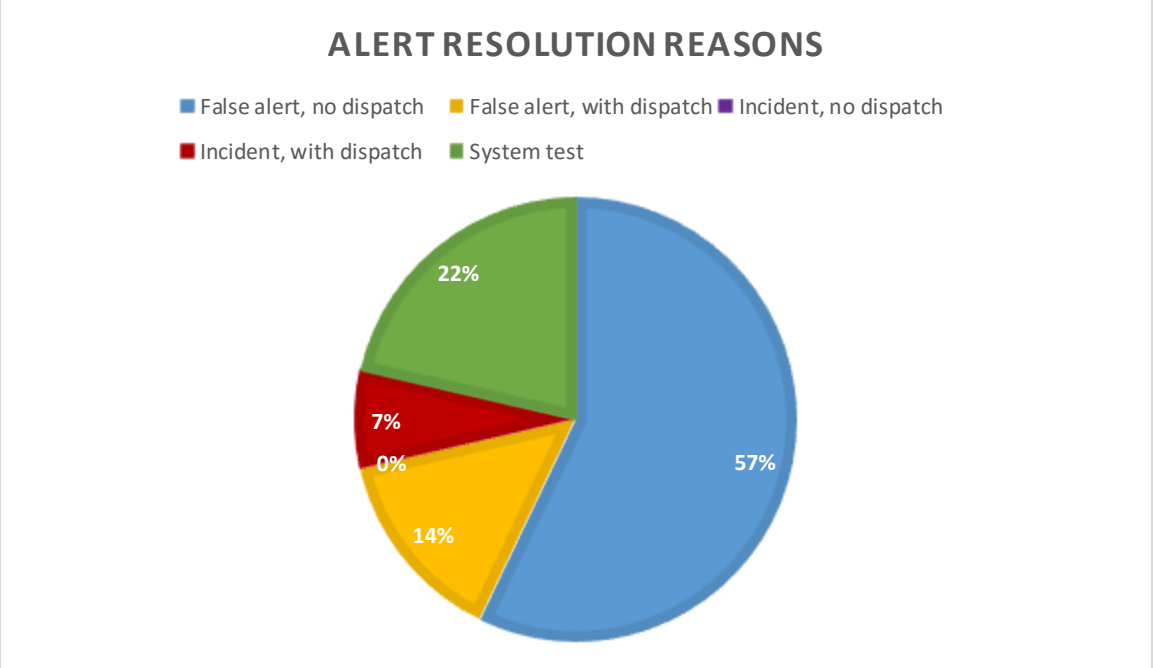

Figure 9 Alert resolution breakdown

Alert breakdown

Drill down to review what happened and what improvements can be made.

Device User	*Device ID*	*Alert type*	*Resolution*	*Dispatch*	*Resolution time*
Matt Walker	4500933	High gas – H2S	False alert	No dispatch	3 min.
Matt Walker	4500933	High gas – H2S	False alert	No dispatch	3 min.
Joe Hicks	4500601	High gas – H2S	False alert	No dispatch	6 min.
Dylan Creed	4501784	No motion	Incident	Dispatch	7 min.
Donna Lane	4500655	Missed check-in	False alert	Dispatch	10 min.
Donna Lane	4500655	Missed check-in	False alert	No dispatch	60 min.
Donna Lane	4500655	Missed check-in	False alert	No dispatch	8 min.
Susan Jones	4500134	Missed check-in	Incident	Dispatch	4 min.

Table 10 Alert breakdown for individual device users

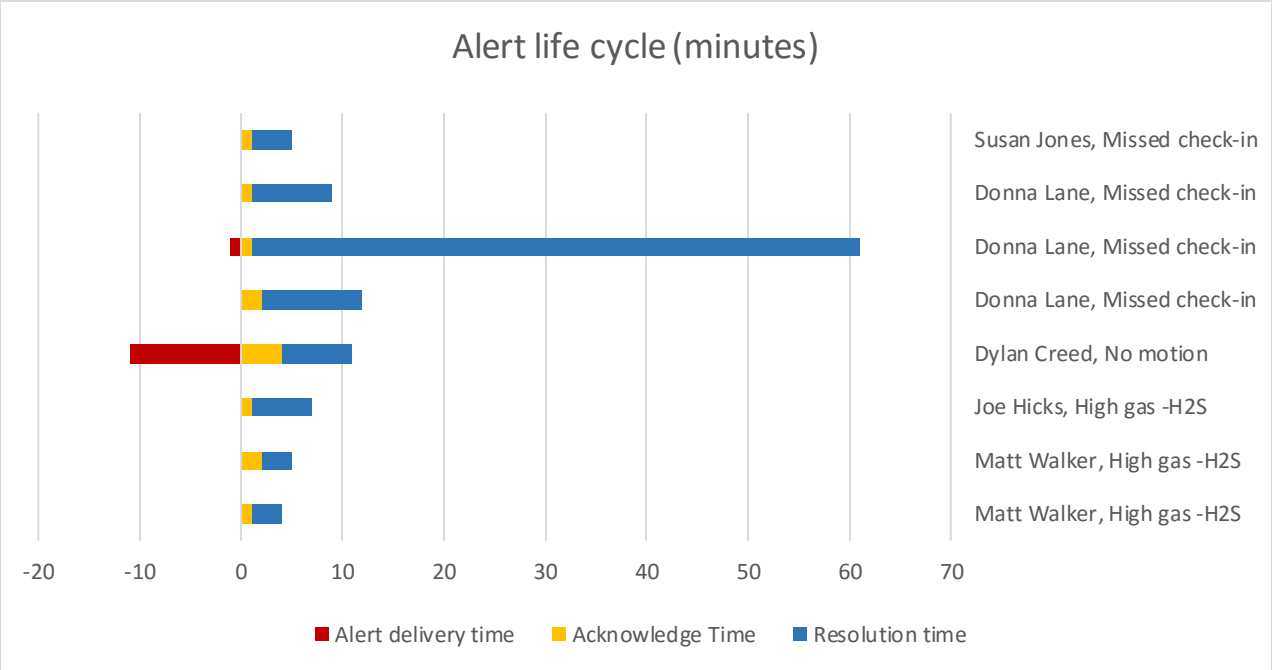

Figure 10 Alert life cycle in minutes

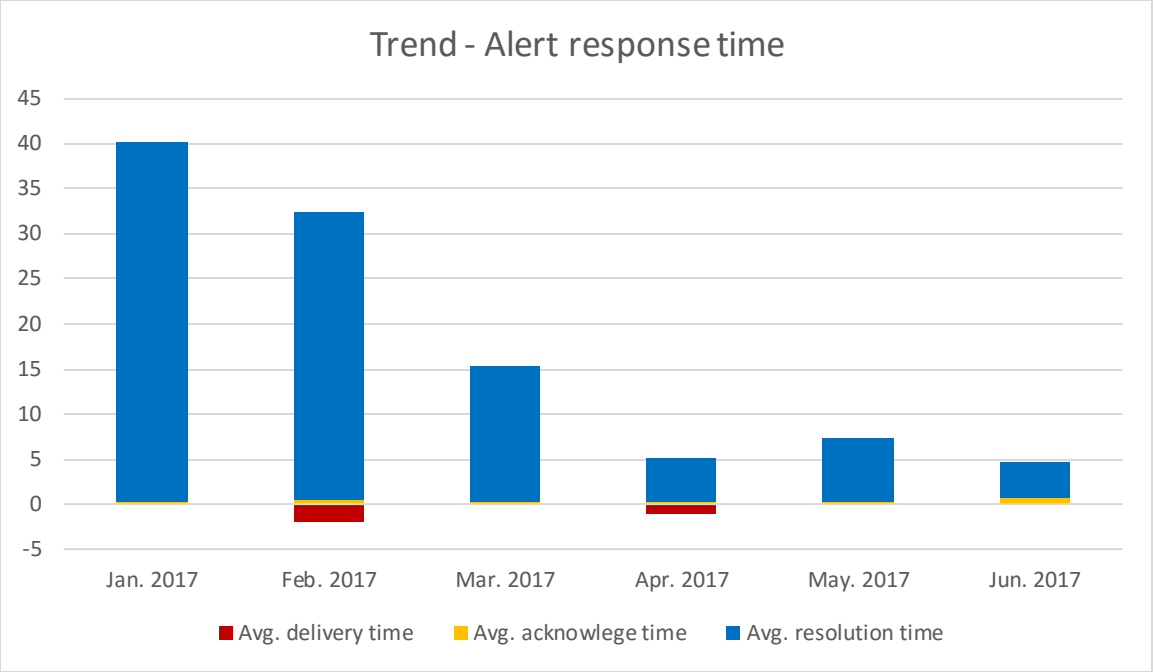

Figure 11 Alert response time breakdown

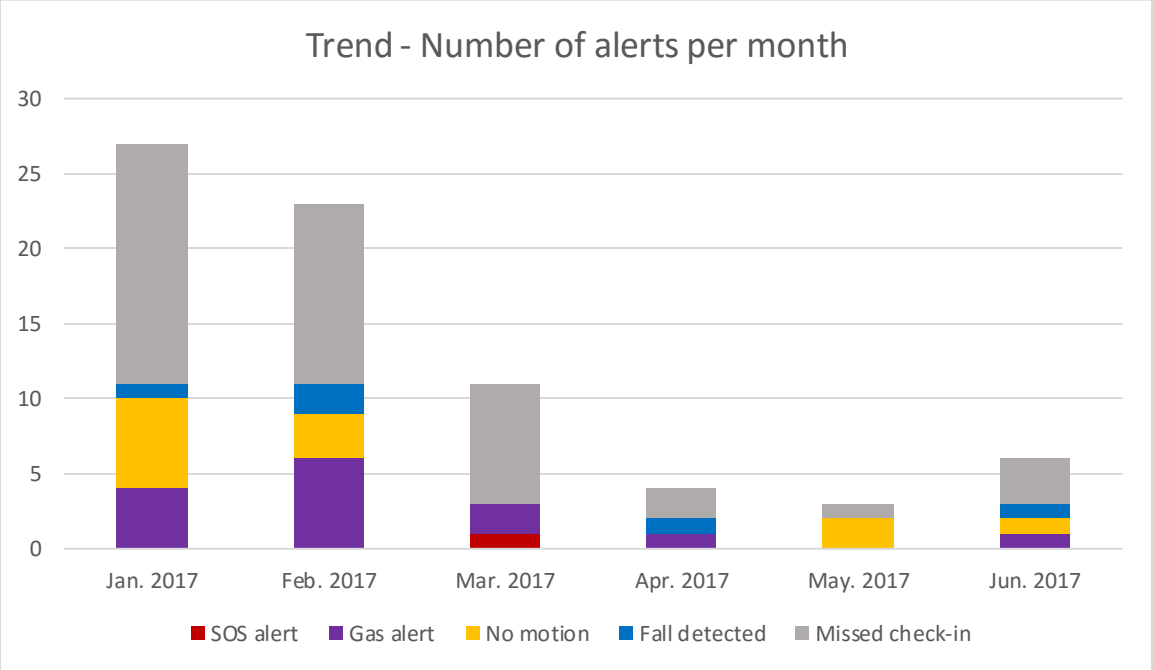

Figure 12 Monthly alert breakdown

Gas event map

Know where gas events occur to shed light on potential hazards

Figure 13 Gas events broken down by location