SafeLine

Your partner in lift safety

SafeLine LYRA Case Study

Key insights and takeaways 2018-2023

Our most insightful customer cases, demonstrating the impact SafeLine LYRA has had on customer business for over 4000 lifts.

Overview

How SafeLine's innovative and smart hardware can potentially transform lift maintenance, reduce costs, and increase customer service.

In an era of rapid digitalisation, the global demand for connected lifts and data is on the rise. But how can lift maintenance companies leverage these advancements to enhance proactive maintenance and elevate the daily reliability of lifts?

Studies have revealed that on-site callouts for elevator maintenance can be alarmingly high, ranging from 20-25%. For an engineer responsible for maintaining 100 lifts, each experiencing an average of four callouts per year, it means that one out of every four callouts are attributed to "working-on-arrival" issues. This translates to roughly 11% of lost working hours annually, amounting to approximately 200 unproductive hours. In the worst-case scenario, it leads to a dissatisfied customer.

While smart lifts have been available as a solution to this challenge for years, they come with significant drawbacks – high costs, time-consuming installation, and long-term sustainability concerns. The need of the hour is a smarter, more efficient solution that enables lift maintenance companies to stay ahead of the curve and avoid becoming tethered to outdated business practices.

SafeLine LYRA emerges as the independent and groundbreaking hardware solution from SafeLine, capable of turning conventional lifts into smart ones without any need for lift remodeling. What sets LYRA apart is its compatibility with all types and brands of lifts, regardless of their age or condition. With LYRA, SafeLine offers its customers a proactive maintenance solution that not only differentiates them from their competitors but also holds the potential to reduce costs and streamline troubleshooting of lift equipment.

Results (2018-2023)

4785
Connected lifts

867 000
Average starts per day

374
Average new alarms per day

Conclusion

In the following Case Study, we found that by identifying issues and faults at an early stage, maintenance companies were able to schedule maintenance checks and rectify minor problems, often before they impacted the lift's functionality.

SafeLine LYRA's intelligent built-in algorithms played a crucial role in this success story. Combined with the hardware's innovative cost-effectiveness, it proved to be a versatile solution applicable to a wide range of lifts. The results included significant cost savings on repairs and enhanced customer satisfaction for maintenance companies. This was achieved by minimizing lift downtime and inconvenience.

Moreover, LYRA's capabilities extended beyond known issues, as it had the ability to uncover entirely unforeseen problems, effectively averting future costs and malfunctions. Without LYRA's proactive monitoring, these potential issues might have remained undetected, with the lift staying disconnected from its full preventive and diagnostic potential.

Elevate your maintenance services to the next level

Catch issues early to schedule timely maintenance checks and avoid costly repairs

Enhance customer satisfaction with proactive maintenance and stand out in the market


3F
3F
2F
1F
B1

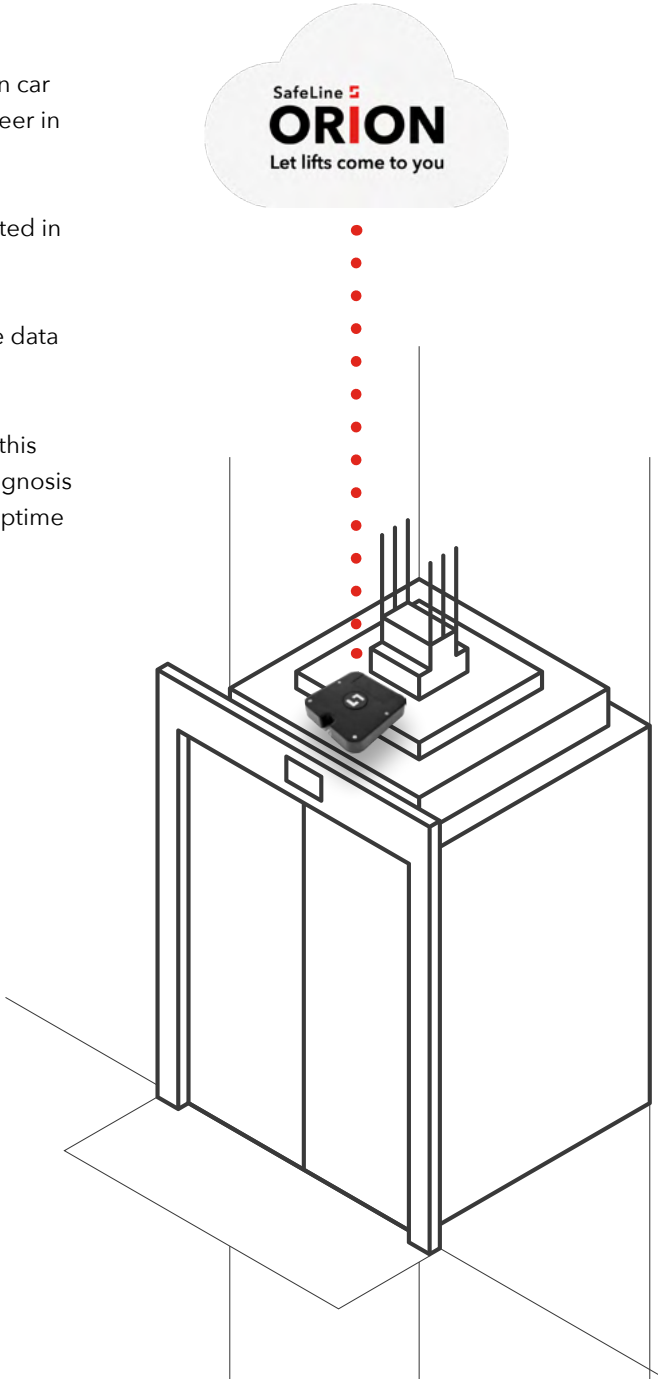
How it works

1. LYRA is installed on car roof by a lift engineer in less than 1 hour.

2. An account is created in ORION for the lift.

3. LYRA feeds unique data into ORION.

4. Lift engineers use this data to make a diagnosis and increase the uptime of your lifts.



The solution

SafeLine products used for this Case Study

SafeLine **LYRA**

The innovative hardware turning regular lifts into smart lifts.

SafeLine LYRA is a groundbreaking hardware solution that converts traditional lifts into intelligent, proactive systems. This compact and lightweight device can be easily applied to any lift, providing seamless integration without requiring a direct connection to the lift control system. LYRA operates as a fully independent solution, relying on a 4G connection for wireless data transmission.

SafeLine LYRA technical features

Door detection:
LYRA's advanced door tracking system monitors door openings to identify potential issues before they develop into significant problems. It achieves this by analyzing the ratio of door openings to lift journeys, flagging any unusual door patterns or vibrations.

Standstill detection:
LYRA's standstill detection technology utilizes a unique algorithm that issues warnings when no lift journeys are detected, indicating a potential fault. This algorithm improves its accuracy over time by using historical data.

Vibration detection:
LYRA's vibration detection functionality alerts users to sudden increases in vibration levels at specific heights within the lift shaft. This feature helps identify and promptly address unusual vibrations, ensuring the safety and reliability of the lift.

Main device

Power supply:	5 VDC USB mini B
Current consumption:	Average 350 mA, Peak 650 mA
Size (HxWxD):	118 x 118 x 23 mm
Weight:	210g
Interfaces:	4G LTE, BLE
LTE Bands:	B1 (2100), B3 (1800), B7 (2600), B8 (900)
Antenna:	Integrated (external antenna optional)
IP Code:	IP20
Operating temperature:	-10°C – +60°C
Air Humidity:	30% - 90% RH
Min. speed:	0,4 m/s
Built-in sensors:	Accelerometer, magnetometer, thermometer
External sensors:	Max 4 door sensors (USB-A)
Installation time:	>20 min

Door sensor

Size (HxWxD):	118 x 118 x 23 mm
Weight:	210g
Cable length:	2000 mm
Connector:	USB Type A male plug
Jacket material:	PVC
Operating temperature:	+5 C° – +40 C°
Air humidity:	30% – 90% RH
IP Code:	IP65
Built-in sensors:	Accelerometer, magnetometer

The solution

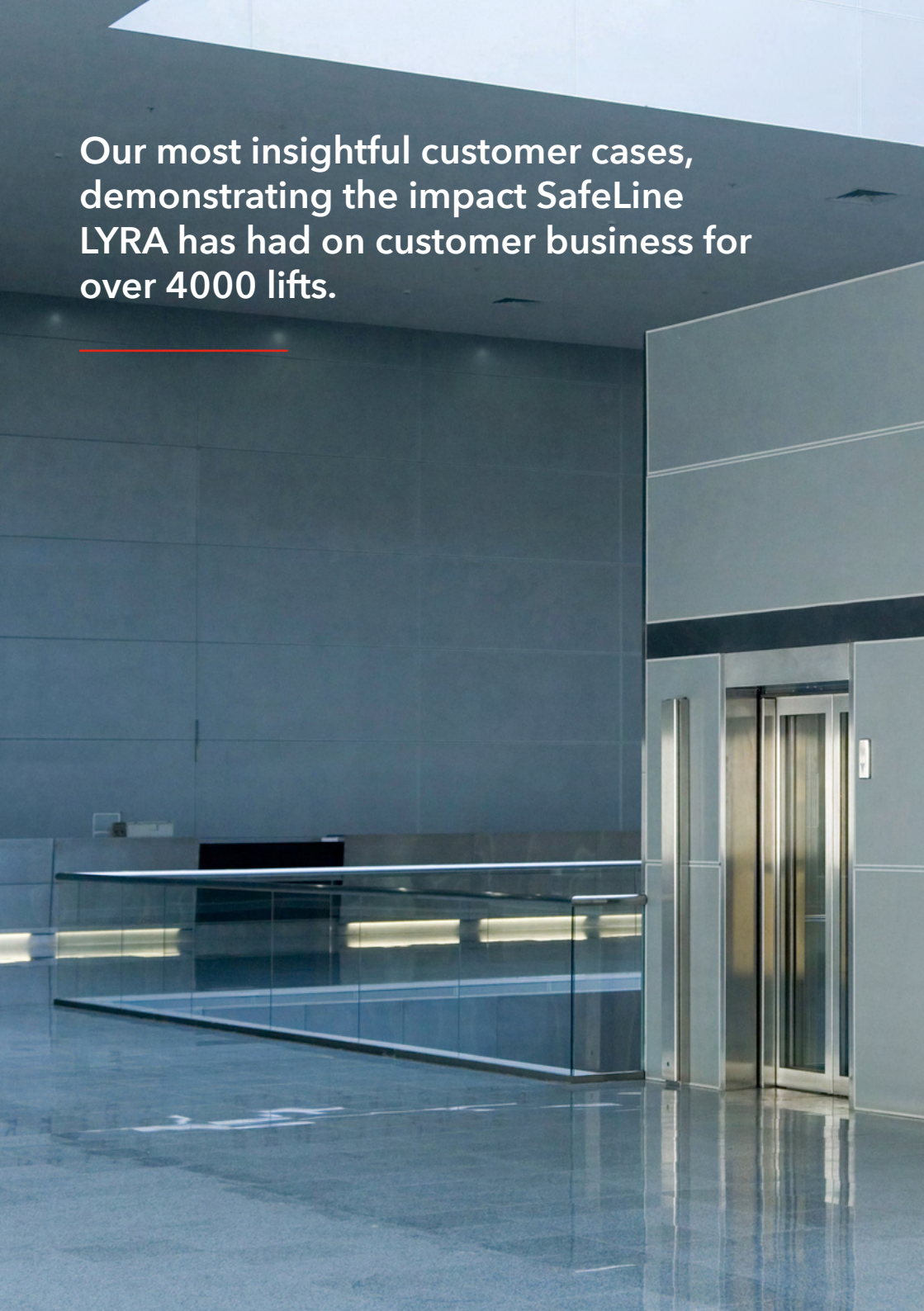
SafeLine products used for this Case Study

SafeLine **ORION**

The online platform gathering all your connected SafeLine devices – letting lifts come to you.

With ORION, SafeLine is gathering an entire galaxy of products onto one accessible online platform – bringing you the connected future of lift safety. See the current status of all your online SafeLine devices and easily share with your customers what actions are being taken on-site – wherever you are, anytime.

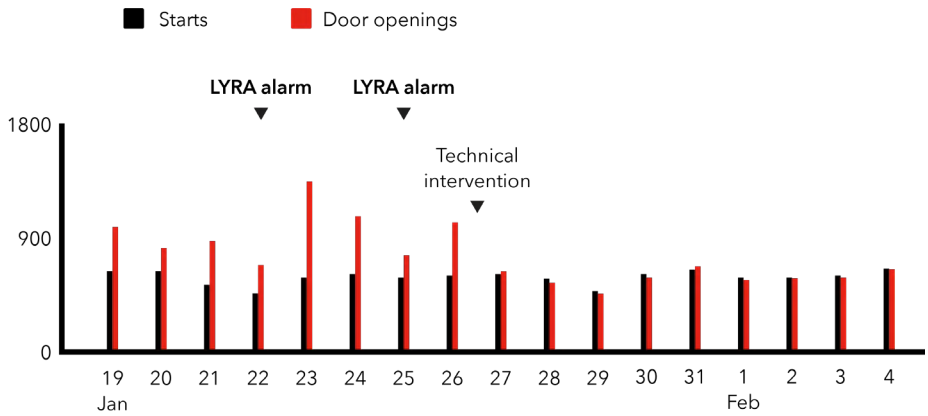
The intuitive ORION interface provides you with a unique day-to-day overview of all your connected lifts' condition – serving as key to proactive maintenance of your lifts and providing you with unique lift statistics and data. With ORION, it's easy to analyse the usage of your lifts and all its connected SafeLine equipment – always staying on top of what is happening with your lifts right now.



Our most insightful customer cases, demonstrating the impact SafeLine LYRA has had on customer business for over 4000 lifts.

Excessive amount of door openings detected by LYRA

Location: **Public lift, London** Previous knowledge of problem: **No**



Situation

An excessive amount of door openings compared to the number of travels, indicating a fault with the lift doors on floor 1 and 6.

Solution

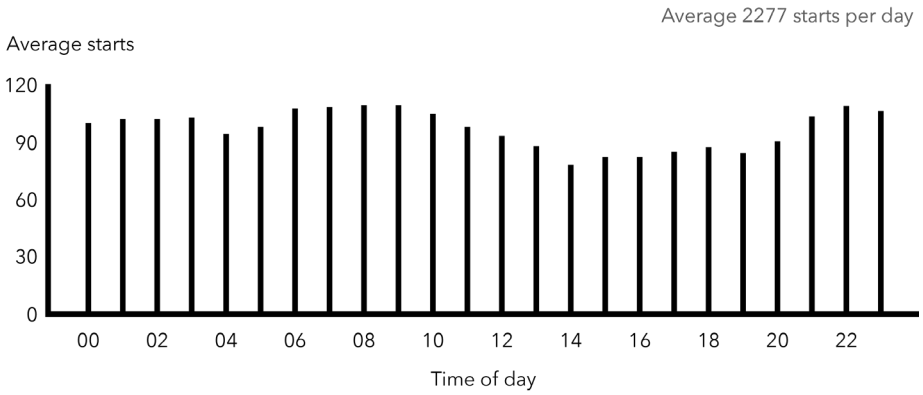
After being warned in SafeLine ORION, a lift engineer was dispatched on-site and discovered an intermittent fault with the landing door contact. By measuring and comparing the last 200 travels and the last 20 travels to the floors, we can clearly see an increase highlighted in the graph. Once the repair was complete, we could see immediately that the door openings returned to a normal state compared to travels.

Results

Without an installed SafeLine LYRA, this fault may have taken weeks to be discovered.

Excessive amount of starts detected by LYRA

Location: **Public lift, London** Previous knowledge of problem: **Yes**



Situation

LYRA detected that a lift was making an excessive amount of starts each day, almost 100 per hour, no matter the time of day.

Solution

Upon further investigation it was discovered the lift had been left in permanent test run mode since its installation three years ago, causing excessive wear on parts and reducing the lift's lifespan by almost 50%, leading to frequent breakdowns.

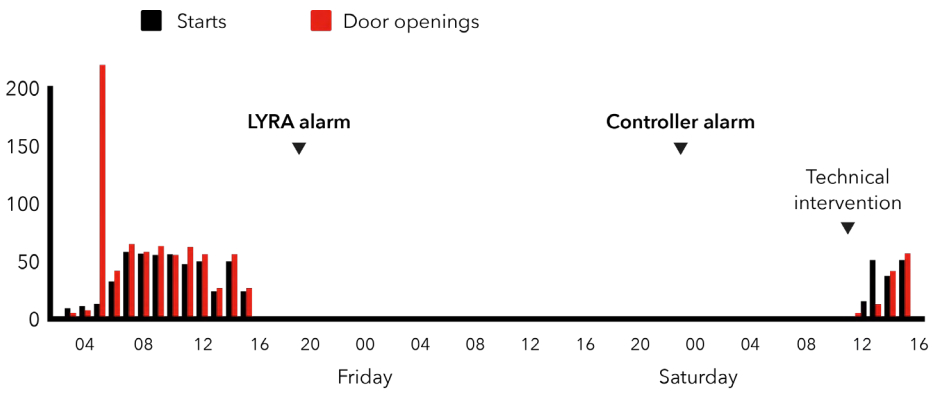
Results

After solving the issue, the number of travels significantly decreased, highlighting the importance of LYRA in detecting such faults and preventing further damage to lifts.

By detecting and addressing these issues early on, LYRA helped to prevent unnecessary costs and improve overall customer satisfaction.

Standstill detected by LYRA

Location: **Car group in office building, London**
Previous knowledge of problem: **No**



Situation

LYRA detected an abnormality in the number of travels on a Thursday and alerted the customer about this. Unfortunately, this was not communicated to the technician. On Friday at 23:00, the controller reported the fault.

Solution

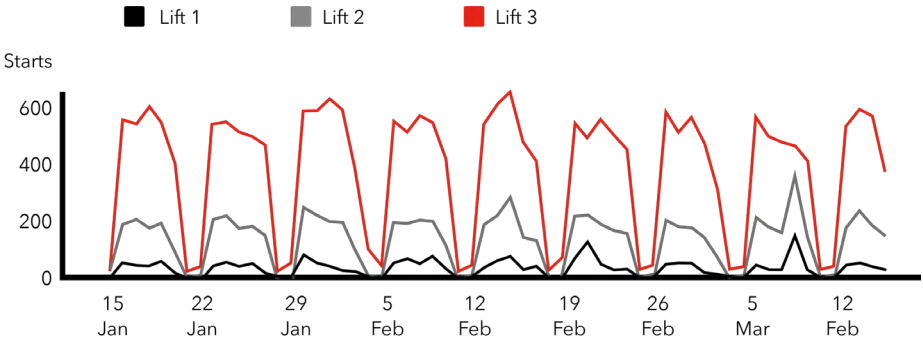
Upon investigation, this turned out to be a simple lock fault. Once the fault was investigated, it had become a Saturday, meaning an increased cost of service, compared to if the issue had been handled on a weekday.

Results

LYRA warned about this problem 28 hours before the controller did. If it had been attended to, the matter would have been resolved on a weekday instead of the weekend, reducing the price of emergency maintenance in half.

Built-in error in car group detected by LYRA

Location: **Car group in office building, Stockholm**
Previous knowledge of problem: **No**



Situation

LYRA detected a lift in a car group were taking five times as many travels as the other lifts in the same group.

Solution

Upon investigation, it turns out the car group had a built-in error in the controller, causing the out of proportion amount of travels for one of the lifts and a much higher wear and tear.

Results

Unfortunately, in this case the problem could not be remedied as it turned out to be a hardware issue from the lift manufacturer. However, it did lead to an investigation by the property owner to ensure the same mistake would not be made again to their remaining lift fleet and made the lift manufacturer aware of the issue.

Even worse, being part of a car group, this problem wasn't isolated to the singular problematic lift. The remaining under-used two lifts needed the be prematurely exchanged because of the significant wear and tear to the one.

SafeLine LYRA Case Study

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