“Shanghai has the largest number of elevators in the world, more than New York and London combined.”

Xu Zhen | General Manager of Sourcing

Quick Facts

▸ 6,000+ elevators monitored in real time, scaling up to 250,000
▸ Reduced insurance cost by 40%
▸ Elevator downtime reduced by 50%
▸ Accepts real-time data in many formats, from many different elevator manufacturers
▸ Quickly adapted application to meet COVID-19 needs
▸ Increased safety & security of elevator network

With Vantiq, INESA is able to monitor elevator diagnostics and track occupants to ensure the safety and security of buildings in their network. This real-time system also provides the agile development tools necessary to evolve applications in response to unforeseen events.

THE CHALLENGE

The constant flow of people in large cities like Shanghai can push emergency, health, and other public services to their breaking point. This is especially true when a crisis occurs, and governments/businesses are required to act quickly to ensure the safety and security of the public.

The city of Shanghai is committed to being prepared for a crisis such as a pandemic, terrorist attack, or natural disaster and this means having systems in place before disaster strikes. However, this is easier said than done due to the high costs associated with installing IoT sensors, developing systems to ingest and respond to the data, maintaining those systems/sensors, and updating them to keep up with ever-evolving needs. Having more elevators than New York and London combined,
the Shanghai government decided using already in-place sensors and infrastructure the best place to start.

Leading Chinese IT company, INESA, took on the challenge of equipping over 250,000 of Shanghai’s elevators with real-time technology to ensure the safety and security of both building assets and the people inside. To make this happen, INESA needed a platform that could handle the millions of potential events coming in per second from the many sensors on modern elevators and allow them to take real-time action on those events.

THE SOLUTION

To ensure the success of this project (and not take 5 years building it), Vantiq’s real-time event-driven application development platform was chosen by INESA to build their smart elevator monitoring system. The Vantiq Platform is uniquely qualified for this project because it enabled INESA to develop its system in record time with the following attributes:

- **Agile System Allows for Rapid Changes**
  
  Being able to augment and evolve systems in response to unforeseen events is crucial in today’s fast-paced world. Using traditional application development methods would prove to be a nightmare if a situation arises that needs immediate action to be taken. By developing on Vantiq and utilizing low-code development tools to abstract away vast amounts of code and simplify the underlying

- **Real-Time Data Processing**

  Taking real-time action on the potentially millions of events streaming in is mission-critical for INESA. It would be virtually impossible to take any meaningful or rapid action if it is required to consult with a database to make a decision. If an elevator has abnormal pressure levels it is important to be notified of this and be able to take immediate action instead of looking at data points after the fact to find out what went wrong.
“It has been great to get technical support from Vantiq and positive feedback from our clients.”

Xu Zhen | General Manager of Sourcing

THE RESULT

Able to adapt smart elevator application in response to Coronavirus
The Coronavirus has had a major impact on both business and daily life for nearly everyone around the world. In response to this pandemic, INESA is evolving their smart elevator application to track the usage of masks and detect fevers on elevators to contain the spread of the virus. This agility to quickly address COVID-19 would have been much more difficult and costly had INESA not chosen Vantiq to build their system.

Reduced elevator downtime and insurance costs
INESA’s clients saw immediate benefits to their bottom line as the result of moving to a real-time approach. This includes both a 50% reduction in elevator downtime and a 40% reduced cost of insurance.

Increased safety and security
By monitoring elevator system status in real time, it is much easier and faster to alert emergency personnel should a mechanical failure occur, or a threat is detected such as a person with a weapon in the building. Preventative maintenance can also be done with much finer granularity than before by bringing in powerful technologies like artificial intelligence and machine learning.

VANTIQ

Built on a modern reactive architecture, Vantiq is an agile development platform to build scalable, distributed, real-time applications. Founded in 2015 by Silicon Valley legends, Vantiq provides maximum agility for businesses to drive operational innovation and accelerate real-time business awareness. Learn More at www.vantiq.com