

The Guide to Oil and Gas Security

MOBOTIX AG



MOBOTIX
Beyond Human Vision

Introduction to Oil and Gas Security

Oil and gas security is the process of protecting your oil and gas facilities from unauthorized access, sabotage, or other criminal activity.

This can include using surveillance cameras to monitor activity around the facility, installing security fencing and gates, and using motion detectors and other sensors to detect intruders.

Benefits of Investing in Security Systems

Investing in security solutions helps you to protect the people and assets that are crucial to your business. It can also help you to become more efficient and make better use of your resources.



Ensure comprehensive security at all levels

- Secure your perimeter
- Reduce vandalism & criminal activity
- Deter theft and pilferage
- Track people, vehicles & deliveries for more efficient management



Save and earn cash

- Unlock operational efficiencies
- Reduce wastage & keep track of everything that happens on site with 24/7 monitoring
- Improve business resiliency through minimized downtime due to security breaches or equipment failure.



Protect the environment

- Monitor mission-critical systems
- Ensure environmental compliance
- Reduce carbon emissions by monitoring HVAC systems.



Reinforce your quality and your image

- Increase customer satisfaction with improved safety
- Improve staff morale with safe, secure work environments that are free from harassment or bullying.



Simplify your life and that of your employees

- Improve safety for workers across your site
- Ensure continuity of service by monitoring critical systems.



Chapter One: Security at All Levels

There are many different aspects to oil and gas security, and it is important to protect your facility at all levels.

Using **AI-powered video cameras and analytics**, you can secure your perimeter, reduce vandalism and criminal activity, deter theft and pilferage, and track people, vehicles, and deliveries for more efficient management.

Securing Your Site: The Perimeter

The perimeter of your site is the first line of defense against unauthorized access, and it is crucial to ensure that it is secure.

You can do this by installing a perimeter fence or gate and using surveillance cameras to monitor activity around the facility.

The cameras should be placed in strategic locations so that they can cover as much of the site as possible.

It is also important to ensure that the cameras are of a high quality and can capture clear images in all lighting conditions.

The video data should be processed by an AI-powered video analytics system to detect any suspicious activity.

The Important Assets You Need to Protect At Your Site

There are many different assets that need to be protected at an oil and gas facility, from the people who work there to the equipment and infrastructure.

Some of the most important assets include:

- The plant and machinery
- The pipelines
- The storage tanks
- The control room
- The office buildings

It is therefore essential to have a comprehensive security system in place that can protect all of these assets.



Securing Your Network: Cybersecurity

In addition to securing your physical site, it is also important to secure your network and protect your data from cyberattacks.

It's important to look at the cybersecurity initiatives of your camera manufacturer as many systems require a centralized concept that is easier to hack. MOBOTIX has a decentralized concept that allows our cameras to be cybersecure on your network.

The cameras can also be used to track employee activity, ensuring that they are not accessing sensitive information without authorization.

How Can Cybersecurity Help Your Site?

- It will help your system become more secure against outside threats

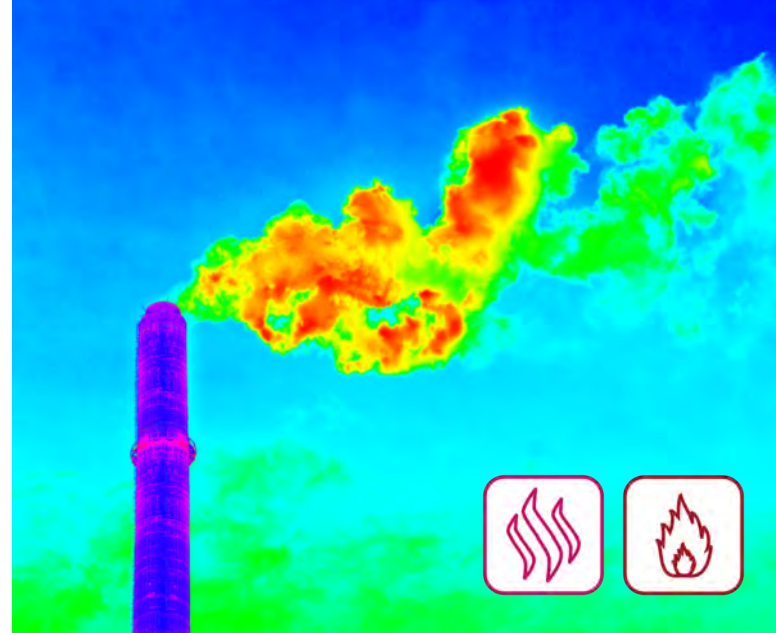
- It makes it easier to monitor any attempts at breaching your network or systems – this is a great way to check whether the systems you have in place are working.
- It will monitor all the devices that connect to your network, such as sensors or IoT cameras, and make sure that they remain protected.

At MOBOTIX, one of the things we do is to make sure that all our devices are secure. We also want to give you some real benefits so that it makes sense for your business to invest in security measures.

Our decentralized architecture is designed to give you increased security because it takes many different components and makes them into one system.

Secondly, our encryption ensures that only the right people can always access your data. It means others can't get in without permission. Finally, each of our devices is made with special care to make sure that they are secure.





Securing Your Assets: Reduce Vandalism and Criminal Activity

Vandalism and criminal activity can be a serious problem at oil and gas facilities, and it can be costly to repair the damage that is caused.

You can reduce the risk of vandalism and criminal activity by installing surveillance cameras around the site.

The cameras should be monitored by an AI-powered video analytics system so that any suspicious activity can be detected and investigated.

The system can also be used to track the movements of people and vehicles around the site, helping to identify any potential threats.

How Can Surveillance Cameras Help Reduce Crime?

- They can help to deter criminal activity by providing a visible deterrent
- They can help to track criminal activity and identify the perpetrators
- They can help to improve security overall by providing live footage of the site
- They can help to reduce the cost of vandalism and crime

MOBOTIX cameras are designed for security applications and can be used to secure your oil and gas facility.

Our cameras provide high-quality images in all lighting conditions, and our video analytics system can detect any suspicious activity.

Securing Your Site: Early Fire Detection and Protection

Fire can be a serious threat to an oil and gas facility, and it can cause extensive damage to the site.

You can reduce the risk of a fire by installing surveillance cameras that are equipped with thermal imaging.

The cameras can be used to detect any potential fires early, allowing you to act even before the fire spread.

How Can Thermal Imaging Cameras Help Protect Your Site?

- They can help to detect fires early, allowing you to act before the fire spread
- They can help to identify the source of a fire
- They can help to track the movements of people and vehicles around the site
- They can help to improve security overall by providing live footage of the site
- They enable monitoring of areas while maintaining privacy (faces are not visible in thermal mode)



Chapter Two: Process Optimization

The video analytics capabilities of AI-powered cameras can be used to optimize your processes at oil and gas facilities.

Optimize Your Process: Monitoring of Production Steps

The cameras can be used to track the movements of people and vehicles around the site, helping to identify any bottlenecks or areas where the process can be improved.

The system can also be used to monitor the performance of machines and equipment, helping you to identify any issues before they cause a problem.

How Can AI-Powered Cameras Help Optimize Your Processes?

- They can help to track the movements of people and vehicles around the site, helping to identify any bottlenecks or areas where the process can be improved
- They can help to monitor the performance of machines and equipment, helping you to identify any issues before they cause a problem
- They can help to improve overall efficiency by providing real-time analytics of the production process

Optimize Your Process: Remote Maintenance of Machines

The video analytics capabilities of AI-powered cameras can be used to monitor the performance of machines and equipment at oil and gas facilities.

This information can be used to identify any issues with the machine and help you to troubleshoot them before they cause a problem.

The system can also be used to monitor the temperature of the machine, helping you to keep them in the optimal range.

How Can AI-Powered Cameras Help Monitor Machines and Equipment?

- They can help to monitor the performance of machines and equipment, helping you to identify any issues before they cause a problem
- They can help to improve overall efficiency by providing real-time analytics of the production process
- They can help to maintain machines by monitoring their temperature and humidity levels.



Chapter Three: Special Environments

AI-powered video analytics can be used to protect sensitive areas at oil and gas installations.

Extreme Temperatures: Protection from Dust, Heat and Cold

Because most of your assets will be located outside, it's critical to know how they will function in extreme weather conditions.

This may assist you with maintenance issues, for example. When developing a video surveillance system, you should ensure that your cameras can endure heat and cold because these are two of the most severe environmental elements they will have to deal with.

Cameras that can function in extreme weather conditions:

- Have a dust- and waterproof housing to protect them from the elements
- Operate in temperatures from -22 degrees Fahrenheit to 158 degrees Fahrenheit
- Can withstand high levels of humidity

Cameras that can function in extreme weather conditions:

Oil and gas installations are often located in humid environments, which can cause corrosion and condensation on cameras and other equipment.

To prevent corrosion, oil and gas facilities should invest in cameras that have an IP67 weather resistance rating. This rating means that the camera can be submerged in water for up to 30 minutes and will still function properly.

Extreme Temperatures: Protection from Dust, Heat and Cold

In addition to environmental factors, oil and gas installations are also at risk of damage from natural disasters such as hurricanes and earthquakes.

MOBOTIX cameras come with a durable case and a stainless-steel frame. They offer a high level of resistance to rain, dust and floods, as well as a wide operating temperature range.

Chapter Four: Getting More Out of Your Cameras

To get the most out of your video surveillance system, it's important to use the data that is collected by the cameras in an intelligent way.

This means using video analytics to extract meaningful information from the footage and turning it into actionable insights.

The benefits of using video analytics include:

- The ability to track movements of people and vehicles
- The ability to identify and track objects
- The ability to detect abnormal behavior
- The ability to monitor areas for safety and security purposes

Customized Data Reporting

One of the advantages of using AI-powered video analytics is that you can customize the data that is reported to you.

This means that you can get reports that are specific to your needs and requirements.

The data that can be reported includes:

- The number of people who entered or left a certain area
- The number of vehicles that entered or left a certain area
- The direction people or vehicles were traveling in
- The speed of people or vehicles
- The time-of-day people or vehicles were traveling
- The type of object that was detected
- The location of the object

Faster Reactions to Security Threats

The video analytics process can be used to detect security threats in real-time and send alerts to the appropriate personnel.

This means that you can react to security threats faster and potentially prevent them from causing damage.

MOBOTIX cameras provide live video streaming which can be used for immediate reactions to events.

Data Protection

One of the concerns that companies have about using video analytics is the issue of data protection.

However, MOBOTIX has a comprehensive data protection policy in place which ensures that all data is stored and processed in compliance with the latest regulations.

Efficient Workflow

The use of video analytics can also help to improve the efficiency of your business processes.

For example, you can use the data collected by the cameras to improve traffic flow or to identify bottlenecks.

You can also use the data to optimize staffing levels and schedules.

MOBOTIX offers several features that can help to improve workflow including:

- The ability to record and store video footage for later analysis
- The ability to access live video footage from any location
- The ability to integrate with other systems such as access control
- The ability to create customized dashboards that show the status of your system at a glance
- The ability to receive alerts when there is a problem





Chapter Five: Putting It All Together

By now, you should know the benefits of using MOBOTIX cameras. You also should be familiar with their different characteristics and how they can help your company.

There are **nine key AI apps** that MOBOTIX recommends for Oil and Gas Facilities.

- **MxAnalytics AI** - Reliable, object-based counting and behavior detection.
- **MxActivitySensor AI** - Reliable object-based motion detection independent of weather and brightness interference.
- **Irisity IRIS Core Analytics Intrusion** - The specialized application reliably detects intrusions, even if the people or vehicles only cover a small part of the field of vision.
- **AI-Intrusion PRO** - Shows intruders crossing one or a sequence of virtual lines. Multiple lines increase system reliability.
- **AI-Heat** - Identifies frequently visited areas (hot spots) and less frequented areas (dead areas) based on the length of time people spend there.
- **AI-Fire** - Early detection of flames indoors and outdoors (e.g. vehicles, containers).
- **AI-Smoke** - Smoke detection inside and outside. For all optical image sensors.
- **AI-Loitering** - Detects suspicious behavior of people who remain in certain areas for an extended period of time.
- **Visage Face Recognition** - Face recognition using stored image data. With 97% success probability with access control applications.

If you're looking for more information on MOBOTIX cameras or any of the other products that we have available, you can learn more about them by contacting us.

You can also **request a product demonstration** from one of our sales representatives. They will be able to tell you everything that you need to know about MOBOTIX and what it can do for your business.



Contact us
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CONTACT US

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Intelligent Video Security Solutions Made in Germany

MOBOTIX offers a comprehensive range of solutions for all aspects of video-based security systems. We develop high-quality, decentralized, energy-efficient systems that mean our customers save money on every MOBOTIX system installed.

Our motto **Beyond Human Vision** is also our mission: MOBOTIX is fully committed to making itself the most reliable company it can be, one that protects people and property by using intelligent, cyber-secure video technology to go beyond human vision.



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