

A large, dynamic splash of dark, glossy oil flows from the top left corner of the page, creating a sense of motion and highlighting the product's application.

ROW

EARLY DETECTION
SYSTEM FOR OIL
ON WATER





DI ROW

REMOTE OPTICAL WATCHER

Autonomous non-contact sensor for detection of oil on water. Highly accurate, easy to maintain, finds oil spills early so you can respond before things get out of hand.

24/7 OPERATION IN HARSH ENVIRONMENTS

Day or night, in arctic cold or scorching heat, ROW helps you pinpoint the polluter, take action, and avoid lasting damage.

ROW DETECTS:

motor oils, turbine oils, vegetable oils, fuel oils,
marine diesel oils, crude oils, heating oils,
gas oils, jet fuels, lube oils,
hydraulic oils, motor oils,
mineral oils

LONG LIFE, LOW MAINTENANCE

Robust IP68-certified hermetic design and 5-year LED-lifetime. Low power consumption of < 2W allows remote operation off the grid (with optional solar panels and battery).

PRESSURIZED FOR YOUR PROTECTION

Pressurized with inert nitrogen, ROW has been built to be a neutral observer.

SOLD GLOBALLY, SERVICED LOCALLY

We can ship the product anywhere in the world, safe in the knowledge that it will work. On-site service is provided by our local partners, ensuring timely and competent care for your ROW system.

CUSTOMIZATION

Solar-powered radio or DC serial connection, we'll put together the right package for your needs.

HOW IT WORKS

THE SCIENCE

To detect oil slicks as thin as a single micron from up to 10m above the water, ROW pulses a 365nm UV beam at the surface and excites any oil molecules in the target area. Using oil's native fluorescence, ROW picks up the signal from tell-tale substances and alerts the site operator. After more than 20 years developing remote-sensing systems, you can be sure LDI are the leaders in this technology.

FULL AUTONOMY

In most cases, ROW will operate on wired power and data lines. However, for full autonomy in hard-to-reach locations, optional solar panels and wireless setups are available.

INDUSTRY LEADING SENSITIVITY - 1 μ m

Advanced software algorithms are calibrated to detect oil down to single-micron layers and minimize false alarms.

SCALABLE SYSTEM

ROW networks can be deployed to monitor every critical point across multiple sites to provide a full overview of your facilities in real-time.

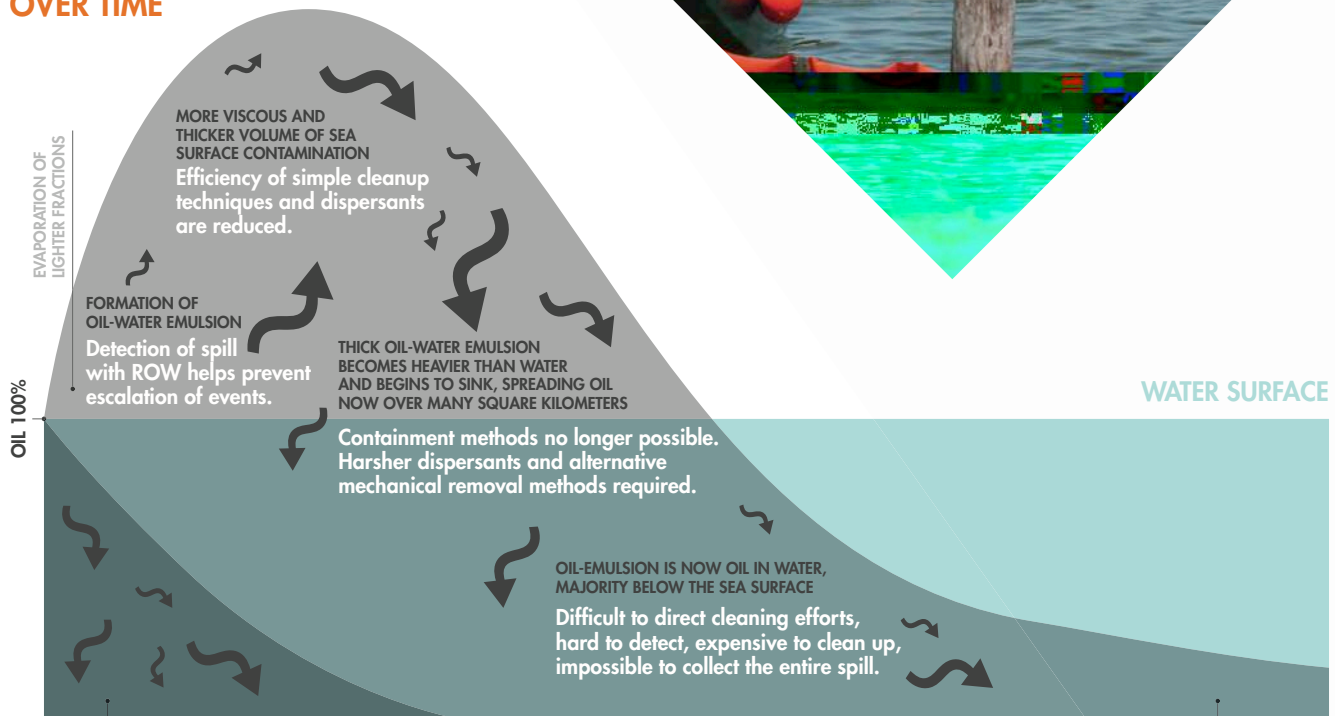


TIME IS OF THE ESSENCE

An hour could mean the difference between a simple scoop-up job and an ecological disaster. ROW detects oil spills earlier and more reliably than any manual system ever could.



FATE OF OIL IN WATER OVER TIME



REFINED FUELS

ROW helps you to spot the spill before it evaporates. Clean-up isn't the issue, it's finding the cause to prevent a repeat event.

CRUDES AND OTHER OILS

The volume of oil and water-in-oil emulsion remaining on the sea surface shown as a percentage of the original spill volume (100%). The behavior of a particular crude oil may differ from the general pattern depending on its properties and environmental conditions at the time of the spill.



ROW IS PERFECT FOR:

oil & petrochemical facilities, transport, logistics and maritime operations, power distribution and generation facilities, environmental monitoring of areas of ecological importance, water treatment facilities, remote onshore/offshore applications, mining, industrial applications, agriculture



UP TO 10m RANGE

means that ROW can be installed almost anywhere.



NO SUBSTITUTE

The day after a storm ROW will still be running and serving you while others fall by the wayside. If lost to the sea, it floats for easy recovery.



SAVE ENERGY, SAVE THE ENVIRONMENT

Vigilance uses up energy that could be used elsewhere. However, keen one's gaze, darkness and bad weather beats the human eye. Refocus your resources, leave oil-spill monitoring to ROW.



IDENTIFY, CORRECT, PROTECT

At high-traffic facilities such as ports, a quick spill response can help you identify the culprit and take action before evidence is lost and you are stuck with the fine.

INSTALL. MONITOR. RESPOND.



ROW Configurator software comes as standard to set alarm thresholds for your system. ROW Manager (optional, pictured above) runs alongside or instead of pre-existing security systems.

PHYSICAL INSTALLATION

Every site has its own unique demands. We'll work with your team or bring in our own to design and install the correct hardware for you. Contact us today and our specialists will develop a solution specifically for your needs.



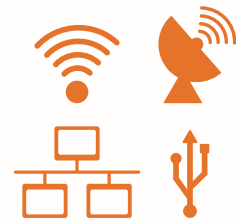
SYSTEM CALIBRATION

ROW can be configured to the standards of detection in your industry. Appropriate alarm levels are set dependent on your circumstances to cut false alarms to a minimum.



SYSTEM INTEGRATION

ROW is designed to work seamlessly with existing security networks. Hardwire it into your system via relay to PLCs or via a data connection to your control room.



MONITOR & RESPOND

Proprietary on-board software analyzes the signal to determine the presence of oil. When oil is detected, ROW alerts site personnel to take action and respond.



MAINTENANCE & SUPPORT

Hermetically sealed and IP68 certified, ROW is designed to run autonomously in the toughest of environments. Glassware is to be cleaned regularly, while self-diagnostics will let you know if ROW needs to be repressurized. Onsite support and maintenance will be provided by your local reseller, with LDI specialists on standby for any additional assistance.



Based in Estonia, **Laser Diagnostic Instruments** develops and makes sensing systems that analyze substances in real time. Combining photonics with software analysis, our products excel at detecting specific molecules in complex solutions.

LDI has been working on remote-sensing technologies since 1991. Our most sophisticated products are laser-based aircraft and ship-mounted systems (LiDAR) that can detect spills once oil has sunk beneath the surface. Demand for simpler, more flexible devices that would catch early surface spills in real-time led us to develop ROW.

"We use seven ROW sensors in order to discipline tanker crews against unauthorized fuel discharge & for real-time monitoring of our environmental situation. Installed on both sides of the river, they watch for oil spills when the human eye isn't enough."

Andris Purmalis,
Head of Security Freeport of Riga

We hold nine core technology patents and continue to innovate. We aim to ensure that industrial processes remain safe and risks to the environment are managed responsibly. Because remote sensing is our passion, you can count on us standing by your side for years to come.

