

# Three decades of DETECTION

**CBNW Deputy Editor David Oliver meets Katja Kiukas, Business Manager of CBRN Systems at Finnish company Environics**

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**Environics is a world leading supplier of CBRN detection devices and integrated solutions ranging from personal safety to national security. The company provides innovative solutions for the whole safeguarding society from civil defence and homeland security to the military.**

**CBNW:** When and how was the company created?

**KK:** Environics Oy has operated in the CBRN detection field for nearly 30 years. The story began with chemical detection products in the early 1980s, resulting from research and development in co-operation with the Finnish Defence Forces. The company was established in 1987.

Chemical detection still forms an important part of the annual business, but Environics has grown intensively as a provider for turnkey CBRN system solutions during the past ten years. The trend has been boosted with related system software and customised CBRN detector development. The R&D efforts have been rewarded, and nowadays products for protection of critical infrastructure, area monitoring, and land and naval vehicles play a significant role in Environics' CBRN business.

**CBNW:** How many staff do you employ? And how many of them are involved in production, and how many in R&D?

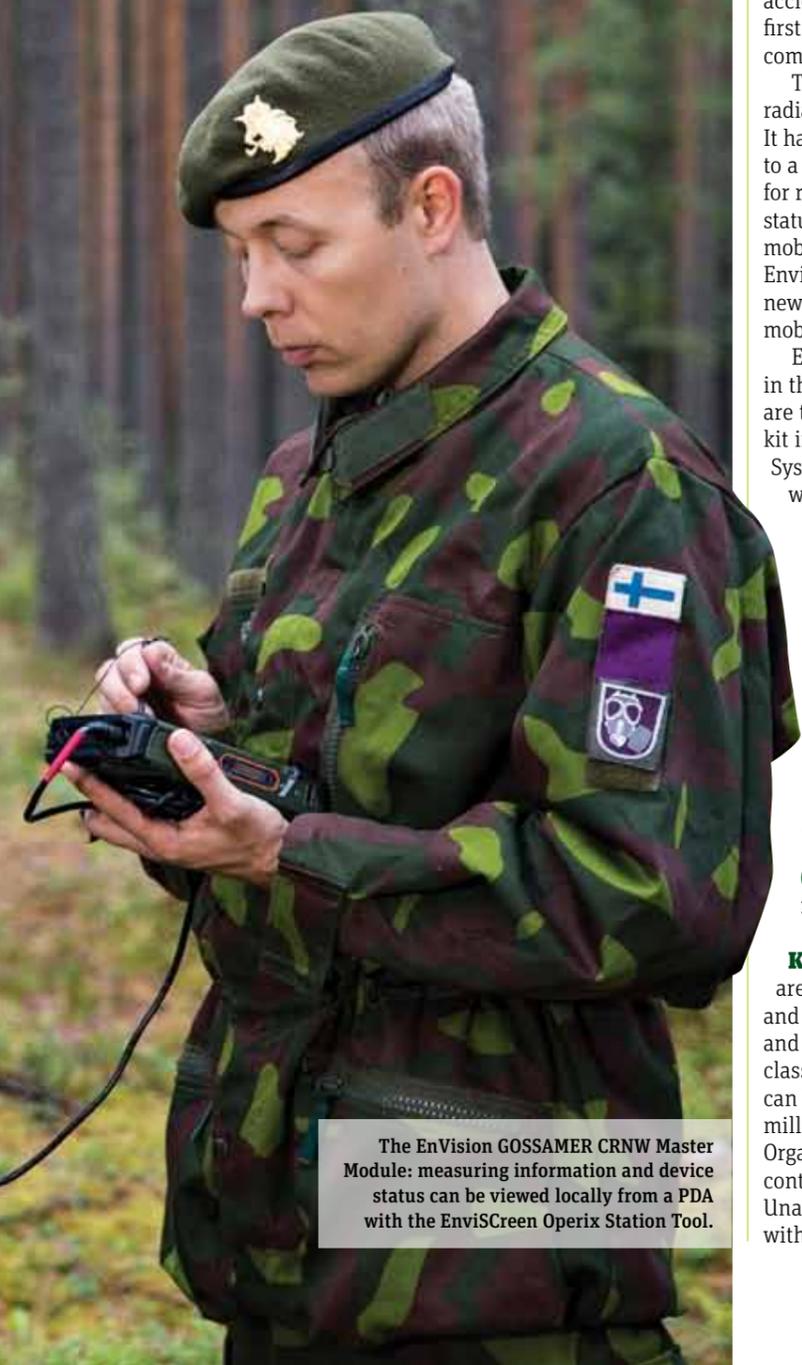
**KK:** There are around 58 persons working in Environics HQ in Mikkeli, Finland. Roughly 70% of them work in technology, production and operations. The personnel have a high commitment to the company and the turnover rate is small. Environics invests in R&D, and behind our comprehensive range of products is a highly competent team of experts with years of experience in implementing demanding projects in CBRN and industry.

**CBNW:** What are the main advantages that you can offer against those of your competitors in detection and identification?

**KK:** We have a broad, proven CBRN product portfolio to cover customer needs both in terms of portable, hand-held instrumentation, and fixed and mobile CBRN detection and monitoring systems. In addition, during the past years we have developed application-specific solutions utilising our core technologies in CBRN detection and identification. Our broad partner and co-operator network also enables us to offer and integrate third-party products to complete the product range.



Environics is AQAP, ISO 14001, and ISO9001-certified. Services cover project management, engineering support for all products, spare parts and consumables, operation and maintenance training, upgrades, and repair services.



The EnVision GOSSAMER CRNW Master Module: measuring information and device status can be viewed locally from a PDA with the EnviScreen Operix Station Tool.

Environics can meet varied scale requirements, from single detection point systems to nationwide security networks. The flexible and modular structure of our EnviScreen CBRN detection and monitoring systems enables cost-effective and fully scalable systems for naval and land vehicles and critical infrastructure protection. Based on specific customer requirements, appropriate modules and features are selected and systems are easily expandable for small- and large-scale CBRN surveillance applications. Environics can take on different roles depending on the nature of the project, from a CBRN detector supplier to an integrator and turnkey system solution provider.

**CBNW:** Can you explain what applications you offer for mass events?

**KK:** Environics' Mobile CBRN Monitoring Systems, as the EnVision product family, are intended for temporary CBRN detection for many applications in a speedy, cost-efficient way at VIP meetings, sports and cultural events, for monitoring accidental releases of hazardous CBRN material on site by first responders, or safeguarding mobile, civilian or military command and control centres.

The EnVision CBRN combines chemical, biological and radiation detection in a rugged, transportable standalone unit. It has a local display and user interface and wired connectivity to a control station running EnviScreen Operix system software for real-time situational awareness given by measurement, and status data for threat management. The EnVision HRS provides mobile chemical and radiation detection units networked to EnviScreen Operix-driven control centres via a radio link. The newest launch, EnVision GOSSAMER, represents a military-grade, mobile CBRN surveillance system for temporary detection needs.

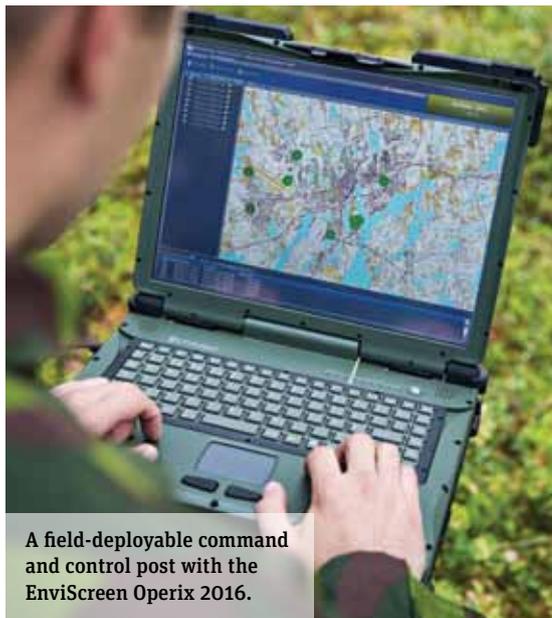
Environics also offers hand-held portable devices and tools in the other product categories for mass-event protection. These are the hand-held ChemPro100i CWA/TIC detector with a CBRN kit including optional accessories and additional ENVI Assay Systems Gold rapid tests, and our RanidVision product family with RanidPro200 backback, and RanidPort Mobile portal solutions for radiation detection and nuclide identification with reachback capabilities. The light CBRN reconnaissance vehicles and the specialised Ranid SONNI vehicle for radiation detection and analysis are well suited for the same purpose.

**CBNW:** Who are your main customers in the civil sector?

**KK:** In the homeland security sector police, fire, border control and civil defence organizations, ministries of public security, form the typical customer segments worldwide.

**CBNW:** What percentage of your business is in the military sector, and who are your main customers?

**KK:** It varies annually, but often most our delivery projects are related to the military sector. We work with land, naval and air forces in several countries in Europe, the Middle-East and Asia, with most information on end users remaining classified. However, some examples of the latest success stories can be given. They include a four-year framework contract of 3 million euros with the Danish Defence Acquisition and Logistics Organization, DALO, for acquisition of chemical detectors; a contract for the CBRUGS (Chemical, Biological, and Radiological Unattended Ground Sensors) programme of 3.8 million Euros with the Finnish Defence Forces; and a delivery of light CBRN



A field-deployable command and control post with the EnviScreen Operix 2016.



Measuring units can be transported easily with rugged transportation cases.

reconnaissance vehicles to the Indonesian Army.

**GBNW:** Can you give details of solutions implemented on military CBRN surveillance vehicles?

**KK:** Environics' CBRN reconnaissance vehicle concept is independent of the vehicle platform. Our company provides its customers in civil and military defence with scalable CBRN reconnaissance vehicle solutions for diverse vehicle platforms and according to a customer's platforms and requirements – acting either as an integrator, or CBRN detector supplier, or a combination of these.

Environics has implemented, successfully, vehicle CBRN detection system projects on the Patria XA-185 platform (FDF SUTI 1 Military NC reconnaissance vehicles), on wheeled armoured combat vehicles (both PARS 6 x 6 and PARS 8 x 8), and on the Mercedes Benz Sprinter and Vario based platforms (light CBRN reconnaissance vehicles for military and civil use).

In addition to the ChemProDM CWA/TIC detector designed for vehicle applications, Environics has dedicated rugged, military grade product lines for the ENVI BioScout bioaerosol detector and the Master Module, a data processing unit acting as a key component in our EnviScreen CBRN detection systems.

Environics supplies EnviScreen CBRN detection systems for PARS wheeled armoured vehicles manufactured by Turkish company FNSS: proprietary chemical detection from air and ground samples, bioaerosol detection and sampling, provisional BWA identification, dedicated air sampling systems, data processing, and CBRN detection system software. These solutions are complemented with third-party equipment to cover full CBRN reconnaissance vehicle capabilities.

From 2003-2006, SUTI military vehicles for the Finnish Defense Forces were built on the XA-185 vehicle chassis for use by reconnaissance patrols, incorporating chemical detection and analysis (GC-MS, FTIR), radiation detection, sample collection and area marking, weather measurement, GPS and radio communication. The vehicles contain both fixed and portable instrumentation, ColPro, and PPE. Environics Oy acted as system supplier in this delivery project.

**GBNW:** Can you give details of the new EnVision GOSSAMER system supplied to the Finnish Armed Forces?

**KK:** The EnVision GOSSAMER is based on the original concept of Chemical, Biological and Radiological Unattended Ground Sensors (CBRUGS), delivered to the Finnish Defence Forces at the beginning of this year. It represents a new ruggedized, field-deployable CBRN surveillance system in our EnVision product family.

The EnVision GOSSAMER is formed by CBRN measuring and data processing units, command and control posts with GIS-based EnviScreen Operix CBRN monitoring software, rugged laptops and PDAs (personal digital assistants) for local user interface, and related radio communication systems and battery packs as power supplies. The EnVision GOSSAMER is typically featured with several sensor fields, each built on key system components: one sensor can field up to 10 sensor nodes and a command and control post.

The system has been designed for Special Forces to be applied both in peacetime and wartime missions. It can be applied for creating temporary, mobile sensor fields for CBRN detection anywhere and anytime for national or international crisis management; surveillance of accidental releases of airborne hazards such as CWAs, TICs and radiation around factories, warehouses, power plants and port terminals; and surveillance of possible intentional releases of airborne CBRN agents from battlefield operations, terrorism or vandalism.

**GBNW:** Do you train your customers in the installation, use and maintenance of your product solutions?

**KK:** Yes, of course. User and maintenance training are integral to our delivery projects. Installation can be within the scope of Environics, or we train our trusted local partners for CBRN detection system installations and only supervise the installations on site.

**GBNW:** Where do you see the greatest potential growth for your CBRN and environmental monitoring products?

**KK:** We expect growth in the demand for CBRN detection systems for land vehicles, naval vessels, and mobile, fieldable CBRN surveillance systems. Geographically, I think that the Asia Pacific and Middle East will retain their position as potential areas for system sales. ■