

July 2023

ERANEWS



AIRSPACE WORLD GENEVA 2023: ATM EVENT OF THE YEAR

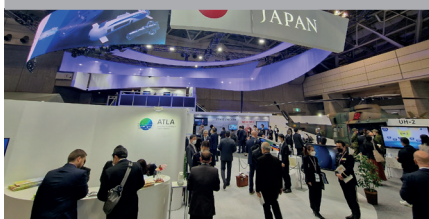


Return to Dublin to secure
flawless system's operation



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DSEI Japan - exhibiting ERA
EW solutions in Tokyo



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Czech Old Crows flew to Bonn
to join AOC Europe



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ERA COMPLETED THE EXTENSION OF ITS MLAT SYSTEM AT THE INCHEON AIRPORT IN SEOUL

ERA HAS EXTENDED ITS SURFACE SURVEILLANCE MULTILATERATION SYSTEM, THE END USER, INCHEON INTERNATIONAL AIRPORT CORPORATION (IIAC), ACCEPTED THE SAT PROCEDURE AND THUS THE ENHANCED SYSTEM HAS GONE FULLY OPERATIONAL.



In 2017 ERA installed its MLAT system as part of the ASGCM-S system for the airport in Seoul, which covers not only the airport area but also 20 nautical miles of TMA. ERA was contracted by IIAC again last year to extend the coverage of the airport premises due the construction of the airport's fourth runway,

new cargo terminal and a number of new aprons. To meet the requirements, ERA delivered a dozen new Ground Stations of its tried and tested system NEO using ERA's original and unique central time architecture; the number of GS has increased by one quarter.

ERA cooperated on the project with a local Korean partner, the company HIST (Hanjin Information Systems & Telecommunications Co., LTD.). The second phase of the extension, including the upgrade of the used software, is about to start this summer. The entire project is planned to continue for another 19 months.

The system, which is functioning flawlessly at Incheon airport, is a great example of using ERA innovative passive surveillance solutions for ATM. The original Incheon project is clearly remembered among ERA experts as an important milestone in ERA technological development due to its pioneering use of then introduced NEO system, an enhanced version of the ERA traditional product MSS (Multilateration Surveillance System) combining the technology of multilateration, e.g. passive surveillance, with ADS-B sensors.

NEW CONTRACT TO INSTALL ADS-B SYSTEM IN OMAN

ERA HAS BEEN CHOSEN TO DELIVER AN ADS-B SYSTEM COVERING THE ENTIRE AIRSPACE OF THE SULTANATE OF OMAN. ERA WILL SUPPLY A SYSTEM CONSISTING OF SEVERAL ADS-B STATIONS AS WELL AS ADS-B DATA FUSION AND A MANAGEMENT SYSTEM BY ERA.

ERA is subcontracting Indra Sistemas S.A., a global technology and consulting company from Madrid, which will deliver its new Monopulse Secondary Surveillance Radar to Oman and serve as the prime contractor for the entire ATM project for Oman. The contract was assigned between Indra and the end user Civil Aviation Authority of Oman. As part of this project, ERA will install a net of six stand-alone ADS-B ground stations of its proven multi-sensor surveillance system NEO. The project has already started, the round of tests in situ SAT are planned for late summer 2023.

"The selection of ERA is the result of a tendering procedure where ERA has been selected as the successful bidder after an intensive technical and administration evaluation. With this project realisation, ERA has demonstrated its leading position in deliver-



ing wide area surveillance systems worldwide while increasing its presence on the Middle Eastern market as well," officially stated Petr Burián, ERA Head of Sales.

ERA has already had two operational surface surveillance, multilateration systems in Oman – installed at the Muscat and Salalah international airports, functioning there since 2020.

The planned sensors of the NEO system are purely passive and have minimal requirements for power and network connectivity. The system is designed to be essentially maintenance-free and resistant to extreme weather conditions, such as high temperatures prevailing in the desert state of Oman.

ERA WILL INSTALL THE WAM SYSTEM FOR TMA POZNAN

ERA COMPANY OBTAINED A CONTRACT AWARD FOR A PROJECT WAM WEST IN POLAND. ERA, ACTING IN THE CONSORTIUM WITH LOCAL COMPANY GISS, SIGNED A CONTRACT TO DELIVER A WIDE AREA MULTILATERATION/ADS-B SYSTEM TO COVER THE AIRSPACE ABOVE THE WESTERN PART OF POLAND, INCLUDING THE TERMINAL MANOEUVRING AREA OF THE POZNAN AIRPORT.

The consortium's proposal has been chosen by Polish Air Navigation Services Agency (PANSa) after a public bidding procedure in April. According to the contract ADS-B system sensors will be installed on multiple PANSa sites. The heart of the system is ERA's system MSS-5, the latest generation Multilateration multi-sensor Surveillance System by ERA.



"ERA-GISS consortium is responsible for providing a turn-key solution together with network equipment, radio and FO links. We are excited about being part of another important project in the development of the Polish critical infrastructure," stated Bartosz Peas on behalf of GISS.

The system will consist of 13 ground stations covering nearly half of the plain land of the Polish territory and the dual Central Processing Station located in Poznań. ERA, GISS and PANSa already held a kick-off meeting, followed by a site survey of the proper locations. The project should be completed over a challenging 12 month period.

ERA is a well-known supplier in Poland, having obtained experiences there thanks to the previous project of commissioning a surface monitoring system to the international Warsaw Chopin Airport in the Polish capital. The next step will be applying to provide the coverage of other part of Poland's airspace in a tender for WAM South.

ERA PROVIDES THE DUBLIN AIRPORT WITH YET ANOTHER MLAT SYSTEM'S EXTENSION AND MODERNIZATION

IRISH AVIATION AUTHORITY HAS PLACED ITS TRUST IN THE ERA SURVEILLANCE AND MONITORING SYSTEMS AGAIN. ERA HAS SIGNED THE CONTRACT TO PROVIDE THE THIRD EXTENSION OF ITS SURFACE GUIDANCE SYSTEM DEPLOYED AT THE DUBLIN AIRPORT IN IRELAND.

The installation of 10 new Ground Stations (GS), the modernization of Central Processing Station and MasterCare programme of assurance services for another 5 years are part of the contract.

Currently the net of ERA multi-sensor GS, using multilateration and ADS-B technologies, and 102 pieces of SQUID vehicle tracking units are in operation to ensure the safety of the main international Irish airport serving the capital Dublin. In 2007 the customer awarded the programme of safety enhancement to ERA and since this time, the system underwent three rounds of extension plus several deliveries of SQUIDs and has been in successful operations ever since.

Irish Aviation Authority requires improved airport surface surveillance in order to maintain a high level of safety for airport operations and to reduce the risk of

runway incursion. To meet the challenge ERA has repeatedly delivered its most proven and reliable system MSS (Multilateration

Surveillance System) an A-SMGCS system compliant. MSS has a number of compelling advantages, first of all being able to endure all weather conditions, which suits foggy, damp and salty air environment of the Irish island.

"ERA is one of our favourite suppliers. Since the beginning of our partnership in 2007, ERA has installed and extended its surface MLAT system at Dublin Airport several times. Thanks to the newly signed contract for the advanced services including modernization and MasterCare program, the system will prolong its life cycle for another decade or more, I believe," stated IAA Engineering with the Irish Aviation Authority.



ERA HAS RELEASED THE E-LEARNING PLATFORM FOR THE USERS OF ITS SYSTEMS AT THE EXHIBITION AIRSPACE WORLD 2023



ERA COMPANY TAKES ANOTHER STEP INTO THE DIGITAL ERA OF THE 21ST CENTURY WITH A BRAND NEW LEARNING MANAGEMENT SYSTEM IN AN INTERACTIVE FORM CALLED ERA ACADEMY. THE SYSTEM IS ACCESSIBLE ONLINE 24/7 FOR ERA CUSTOMERS FROM ANYWHERE AROUND THE WORLD. THE ERA TEAM INTRODUCED IT TO THE ATM COMMUNITY WHILE EXHIBITING AT THE AIRSPACE WORLD 2023 CONFERENCE IN GENEVA, SWITZERLAND, IN MARCH.



ERA Academy – Learning Management System by ERA allows for an efficient way of providing training materials and exercises to partners who have purchased ERA systems. The e-learning courses are an easy-to-use tool for educating technical personnel from the start or refreshing their knowledge, as their skills fade over time and need to be regularly updated.

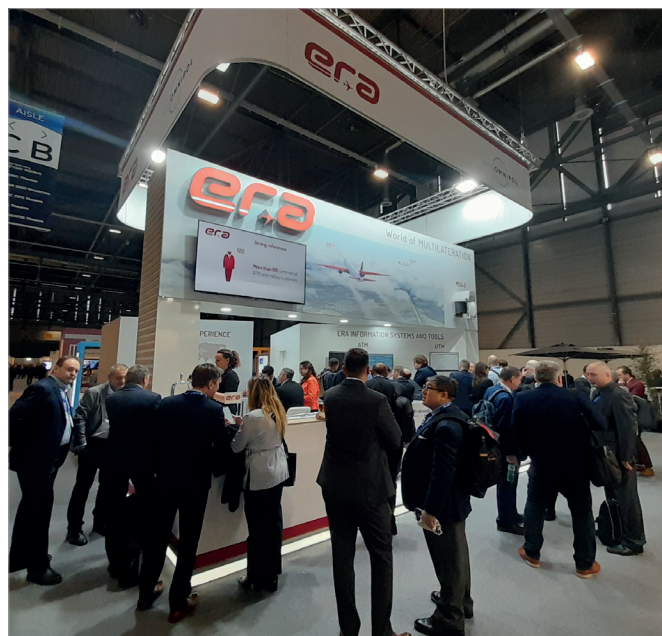
ERA will therefore offer both basic and refresher trainings suitable for technicians, operators and instructors dealing with ERA systems. As a pilot, the training team presents the e-learning course for the ERA vehicle tracking system SQUID. “When you choose any of our systems, you can rest assured ERA ensures its customers

will have their personnel optimally trained to install and operate the equipment in the most efficient manner. Introducing the e-learning courses is yet another, cost-effective, way to achieve this goal,” stated Pavel Horčíčka, Head of the Training Department.

ERA Academy is based on an interactive platform with a completely responsive design – i.e., it is optimized for computers, tablets, or cell phones. This ensures that the courses are available at any time and anywhere for all ERA system personnel. The courses provide mitigation of the risks caused by improper working procedures and help increase the lifespan of the equipment in terms of proper operation and maintenance.

ERA Academy courses pass on the needed knowledge using tools such as: videos and tutorials, full 3D animations and interactive exercises. A library of the manuals and user guides are also available as part of the learning management system. In each chapter of the course, the learning progress is checked with a short quiz and after completing the compulsory final test, the certificate is automatically issued to the user.

The conference Airspace World Geneva replaced the World ATM Congress Madrid and has become the ATM industry's event of the year.



KEY FEATURES AND BENEFITS:

- Interactive form of learning
- 24/7 access
- Suitable for technicians, operators, instructors
- Includes videos, tutorials and Interactive exercises
- Full 3D animations
- Library of manuals and user guides
- Immediate certification
- Cost-effective

LIFE OF ERA COMMUNITY IN PHOTOS



ERA shared the knowledge with prospect users of its EW systems at the FEINDEF Defence Fair in Madrid. ERA joined the producers primarily from Hispanic regions.



A delegation of Canadian journalists visited ERA HQ. They have been mainly interested in ERA non-traditional solutions for Air Traffic Management and the uniqueness of passive surveillance systems as an original Czech invention.



ERA returned in presence to South America on the occasion of the Expo Naval 2022 congress held in Valparaíso. ERA conducted meetings with the officials of the Chilean MoD and NAVY.



The Turkish Minister of Defence Hulusi Akar met ERA officials in Prague in January. Representatives of ERA and OMNIPOL introduced him and his entourage to their product portfolio and held fruitful discussions.



ERA participated in the International & Defence Security Exhibition DEFEA, held in Metropolitan Expo Athens in Greece in May. The visitors of ERA/ Aero joined stand had an opportunity to become familiar with its passive surveillance solutions for modern military concepts.



ERA presented its passive surveillance systems VERA-NG and PLESS at the Czech Embassy in Budapest, Hungary, as part of a series of projects of economic diplomacy called PROPED.

ERA PARTICIPATED IN THE DEFENCE TRADE FAIR IDEX IN THE UNITED ARAB EMIRATES

ERA INTRODUCED ITS PASSIVE SURVEILLANCE SOLUTIONS - PASSIVE ESM TRACKER VERA-NG AND OVER THE HORIZON SYSTEM PLESS - FOR TRACKING AND IDENTIFICATION OF TARGETS AT THE CZECH SHARED EXHIBITION STAND AT THE TRADE FAIR IDEX (INTERNATIONAL DEFENCE EXHIBITION AND CONFERENCE), HELD IN ABU DHABI IN FEBRUARY.



The prestigious five-day event, visited by around 1,350 exhibitors from 65 countries and 130 thousand visitors, was aimed at demonstrating technology from the land, sea and air sectors of defence.

A number of prominent personages visited the Czech stand including the Czech Prime Minister Petr Fiala, his Highness Sheikh Abdullah bin Rashid Al Mualla, the Minister of Defence of Mongolia Gursed Saikhanbayar and officials of the Czech Embassy to the United Arab Emirates and the Czech Ministry of Defence.

OMNIPOL Group presented a wide range of military products and services including some of the very latest projects such as: the passive long-range system PLESS by ERA, the L-39NG jet trainer by AERO Vodochody, tactical communication equipment by MESIT and a new generation of L-410 aircraft by Aircraft Industries. As part of the exhibition, ERA managers discussed forms of future cooperation with representatives of national delegations and other exhibition participants from various regions of the world.

The show included a conference program of dedicated talks and some live demonstrations: displays, maneuvers and flyovers.

ERA JOINED THE DSEI JAPAN EXHIBITION IN TOKYO

The ERA team flew to Tokyo to present its passive surveillance solutions at the exhibition DSEI Japan (Defence and Security Equipment International). The event took place at Makuhari Messe congress center in Chiba, the outskirts of the capital, in May. After years of gaining experience in ATM business in Japan and six references of surveillance systems installed at Japanese international airports, ERA has now advanced to presentation of its proven solutions for military sector. His Excellence, the Ambassador of the Czech Republic to Japan, Martin Tomčo was among the visitors (see the photo).



ERA SHINED AT ADRIATIC SEA DEFENSE & AEROSPACE IN CROATIA



ERA presented its passive surveillance systems VERA-NG and PLESS within ASDA (the Adriatic Sea Defense & Aerospace), International Exhibition & Demonstration Dedicated to Defense, Aerospace, Cyber Defense & Homeland Security, held in Zadar, CROATIA, in May.

ERA presentation was organized as part of PROPED, a series of projects in economic diplomacy (of the Czech Ministry of Foreign Affairs), under the auspices of the Ministry of Defence of the Republic of Croatia. ERA sales representatives introduced the ERA latest military solutions: the Over the Horizon Direction Finding system PLESS and Passive ESM Tracker VERA-NG, focused on its new feature for tracking Unmanned Aerial Vehicles.

ERA EXHIBITED ITS EW SOLUTIONS AT AOC EUROPE

THE NATIONAL CHAPTER OF THE ASSOCIATION OF OLD CROWS (AOC) WAS ESTABLISHED IN THE CZECH REPUBLIC LAST AUTUMN. NOW ITS MEMBERS JOINED EW CONFERENCE AOC EUROPE IN BONN, GERMANY.

ERA took part in AOC Europe – the annual conference devoted to Electronic Warfare, held this year at the World Conference Center in Bonn, Germany, in May.

ERA experts presented their long-term experience with EW data management, analysis and distribution. The focus was on the newest passive ESM (Electronic Support Measure) OTH (Over The Horizon) system, PLESS by ERA and field-proven Passive ESM Tracker (PET) VERA-NG. Both systems use advanced techniques to conduct cross-border long-term and long-range surveillance.

The format of the AOC Europe, event organized by and named after the Association of Old Crows, connects organizations and individuals across government, defence, industry, and academia to promote the exchange of ideas and review the latest advances within the electromagnetic and information-related domains.



The Association of Old Crows was founded in 1964, and with over 13,000 members internationally, is a not-for-profit organization for individuals who have common interests in Electronic Warfare (EW), Electromagnetic Spectrum Management Operations (EMSO), Cyber Electromagnetic Activities (CEMA), Information Operations (IO), etc.

ERA CELEBRATED THE 60TH BIRTHDAY OF THE AVIATION ORGANIZATION EUROCAE

In April, an ERA expert on technologies for civil flight operations took part in the Eurocae symposium to celebrate 60 years of this European aviation organization. The symposium was held on the premises of the airport Le Bourget, currently serving as an air transport museum, outside of Paris.

The two-day event, full of lectures and meetings, was divided into eight discussion panels. The participants discussed visions of aviation in various domains: unmanned flying, decarbonization of air traffic, the future of the spectrum or the use of artificial intelligence. Visions from the point of view of the European Commission, the SESAR Program or the EASA organization were also part of the program.

ERA has been an active member of Eurocae working groups for years, and its specialists regularly contribute as co-authors to creating standards for air traffic management.



THE CEO OF ERA WAS ELECTED TO THE ALKP BOARD OF DIRECTORS



The leadership of the largest industry association in the Czech Republic, the Association of the Aviation and Space Industry (ALKP), has been strengthened by ERA CEO Ondřej Chlost. The nine-member ALKP Board of Directors will set the pace of the Association's direction for the next three years and thus ERA joins the company of Czech captains of the aviation industry.

With the accession of ERA ALKP gained a member, which expands the portfolio of classic manufacturers of aviation technology (aircraft and their components) with a company bringing technological overlap in related fields and its experience will undoubtedly be beneficial for other ALKP members.

"We look forward to working with others within the Association to get our systems directly on board various aircraft platforms. We have already started one promising project," said new ALKP board member Ondřej Chlost.

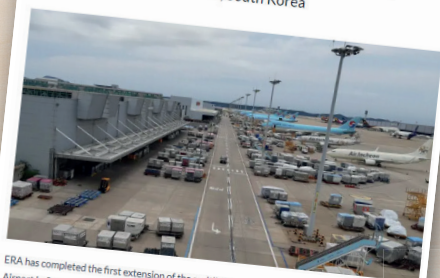
ERA IN NEWS

NEWS

ERA completes multilateration system extension at Incheon Airport

12 April Operations

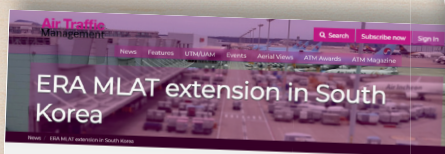
ERA has extended the multilateration system at Incheon International Airport in Seoul, South Korea



ERA has completed the first extension of the multilateration system at Incheon International Airport in Seoul, South Korea.

Incheon International Airport Corporation (IIAC) has accepted the SAT procedure of the first phase of planned extension and thus the enhanced system has gone fully operational. ERA is currently getting ready to start the second phase of its extension and modernization.

In 2017 ERA installed its multilateration (MLAT) system as part of the A-SGMS (Advanced Surface Movement Guidance and Control System) for the airport in Seoul, which covers not only the airport area but also 20 nautical miles of TMA.



Air Traffic Management

ERA MLAT extension in South Korea

Airspace Integration

25-27 September 2023

ERA MLAT extension in South Korea

Air Traffic Management

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Air Traffic Management

MLAT

ERA isn't only sensors

Looking ahead to 2023 and their portfolio expansion

Air Traffic Management recently spoke with Jakub Thom, commercial director at ERA, about the company's current focus after emerging from two very difficult years in lockdowns. The reduction of overflights resulted in reduced ANSP revenue and CPEX projects for new projects being cut or put on hold. Surprisingly, Jakub was very optimistic about the current state of ERA and their customers in the post-pandemic rebound of aviation traffic. For ERA, the situation wasn't as challenging as it could have been because the majority of its projects during the pandemic were financed from an OPEX spent by the ANSP's maintenance, operational support, modernisation and upgrade focused on extending the life cycle of installed systems. Thom expressed his thanks to all of ERA's customers in 47 countries for jointly working together to overcome a hard time in the industry.

Multilateration in aviation
This technology was originally developed for military purposes during the 1960s to detect airborne targets and in the heritage of the company. In 1994, ERA was founded and, the following year, brought multilateration or MLAT into civilian aviation. At the simplest level, multilateration or hyperbolic positioning is the process of locating an object by accurately computing the time difference of arrival (TDOA) of a signal emitted from the object to three or more receivers, allowing an ANSP to precisely identify the aircraft's location.

Over time, the surface MLAT surveillance system and all-weather multilateration (WAM) systems as a surveillance system for air traffic control have become standard technology supporting international standards. Surface MLAT is an essential part of any A-SMGCS and with WAM systems and ADS-B support almost any national surveillance infrastructure.

MS-5 today's multilateration surveillance system
ERA has recently launched its fifth generation MLAT system including ADS-B functionality to meet the needs of ANSP's air traffic management requirements. The evolution of this system has addressed five key elements: deployability, safety, security, traffic density and time synchronisation. It has reduced the number of modules required from eight down to two. The system aligns with current aviation standards DO260, DO260B, DO260C, and is ready for upcoming standards EUROCAE ADS-B and ED424 – WAM.

What's ahead for ERA?
ERA has a strong position in the MLAT WAM/ADS-B market and a product backlog.



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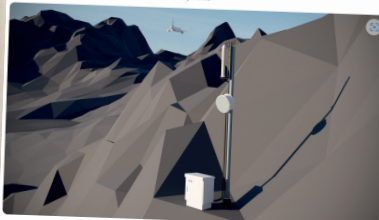
MS-5 is the latest generation of multilateration surveillance system, the technology invented by ERA ERA on "more than sensors". The next step in ERA Information System and Tools which provide validation of surveillance systems through working with ADS-B as a predictive tool for coverage analysis of surveillance systems and ERIS-DMAT as a validation tool for already installed systems and their performance. The company also provides ATM systems for regional and small airports, data communications management, UTM, complex solutions for airspace user and a recent and replay system already in use at ANSP.

This year the focus is on helping airports and airlines that are still struggling with staffing levels post-pandemic to catch up with the industry standards. ERA is seeing interest from customers in new projects, but the supply chain for components is still an issue. Airspace World is coming up and ERA is looking forward to spending time connecting with its global customers to reinforce relationships and discuss their current plans and challenges. Stop by ERA's stand B00 from 4:00-5:00pm on the first day of the show to enjoy a glass of typical Czech Pils and look ahead to a

ERA is releasing the E-learning platform for the users of its systems. The first presentation is planned at the exhibition Airspace World 2023

ERA company (a member of OMNIPOL group) takes another step into the digital era of the 21st century with a brand new learning management system in an interactive form called ERA Academy. The system will be available online 24/7 for ERA customers from anywhere around the world. The ERA team will introduce it to the ATM community while exhibiting at the Airspace World 2023 conference in Geneva, Switzerland, this week.

Monday, March 6, 2023 10:03 PM - Pardubice, Czech Republic



ERA Academy - Learning Management System by ERA allows for an efficient way of providing training materials and exercises to partners who have purchased ERA systems. The e-learning courses are an easy-to-use tool for educating technical personnel from the start or refreshing their knowledge, as their skills fade over time and need to be regularly updated. ERA will therefore offer both basic and refresher trainings suitable for technicians, operators and instructors dealing with ERA systems. As a pilot, the training team presents the e-learning course for the ERA vehicle tracking system SQUID.

ATC Network - 25 Years Anniversary Business Membership Program 25 Years - Join our Business Members

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ERA provides the Dublin Airport with yet another MLAT system's extension

Tuesday, March 28, 2023 9:57 PM - Pardubice, Czech Republic.



Irish Aviation Authority, the Irish Air Navigation Service Provider, has placed its trust in the ERA surveillance and monitoring systems again. ERA has signed the contract to provide the third extension of its surface guidance system deployed at the Dublin Airport in Ireland in November. The installation of 10 new Ground Stations (GS), the modernization of Central Processing Station and MasterCare programme of assurance services for another 5 years are part of the contract.

ABOUT ERA:

ERA (a member of OMNIPOL group) is a leading company in multilateration, multistatic surveillance, and reconnaissance technology. Unrivalled experience in passive surveillance sensor development provides ERA with unique know-how to deliver comprehensive solutions for global markets. We develop, manufacture and implement mission-critical systems for military and civil purposes.

ERA made air traffic control history when deploying the first multilateration system and introducing gate-to-gate surveillance. ERA has brought to the world a novel passive medium range surveillance sensor category called Passive ESM Tracker (PET) for defence and electronic warfare purposes - which is today in its 5th generation known as VERA-NG - tailored for air, maritime and land target surveillance and reconnaissance. The company heritage and global experience in passive ESM/ELINT helped ERA introduce

another category of the Over the Horizon Direction Finding (OTH DF) long-range sensor, in its 2nd generation known as PLESS.

The above-mentioned sensors make possible a broad ecosystem consisting of sensor performance prediction and evaluation tools and data mining tools together with a full virtual EW scene simulator to help military intelligence.

Over the last 3 decades, ERA has reached a number of more than 160 installations, deployed in over 67 countries on 5 continents with 24/7 operations fulfilling demanding customer requirements. More important, however, than the given number of references is the experience we have achieved and lessons learnt during implementation of our solutions. We intend to continue introducing new technologies to adapt to tomorrow's challenges.



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