

**European Defence Fund (EDF) 2022**  
**Polish RTOs and industry in search of partnership**

No.	Organization	PoC	Short description of the organization	Possible contribution to the project (technological competencies)	Experience in international defence/security R&T/R&D/S&T	Type of Entity
<b>DEFENCE MEDICAL RESPONSE, CHEMICAL BIOLOGICAL RADIOLOGICAL NUCLEAR (CBRN), BIOTECH AND HUMAN FACTORS (MCBRN)</b>						
<b>EDF-2022-RA-MCBRN-HICP: Diagnostics, treatment, transport and monitoring of highly contagious, injured and/or contaminated personnel</b>						
1.	Military Institute of Medicine <a href="http://www.wim.mil.pl">www.wim.mil.pl</a>	Ariadna Bednarz Head of Project Management Office, <a href="mailto:abednarz@wim.mil.pl">abednarz@wim.mil.pl</a> ; <a href="mailto:projekty@wim.mil.pl">projekty@wim.mil.pl</a>	Military Institute of Medicine is a research institute with a clinical hospital. Staff of the Institute are well prepared scientists, experienced practitioners in many medical specialties. Institute has a large experience in the implementation of innovative research projects of high scientific level.	Military Institute of Medicine is a central clinical hospital with the highest level of reference. We have extensive experience in the development of systems and tools supporting telediagnosics and the evacuation of a soldier from the battlefield.	EDF-2021-COUNTERACT Numerous national projects about evacuation, medical help in the battlefield and soldiers' capabilities enhancement.	RTO
2.	Military University of Technology, Institute of Optoelectronics, Biomedical Engineering Centre <a href="https://www.wojsko-polskie.pl/wat/en/">https://www.wojsko-polskie.pl/wat/en/</a>	LTC Łukasz KRZOWSKI <a href="mailto:lukasz.krzowski@wat.edu.pl">lukasz.krzowski@wat.edu.pl</a> , tel. 0048 261 837 825	The Biomedical Engineering Centre (BEC) of IOE MUT, conducts projects related to biomedical engineering and designs innovative technologies as well as equipment in the field of medicine.	– develop ultra light sensors BIO DIM, investigation from different materials, – human safety research of new decontamination solutions, – post exposure biomarkers and pre symptomatic discovery.	EDA: FABIOLA, TIPPSI, RAMBO, AMURFOCAL, CONFIDENT. EU: ENCRICLE, RISEN	RTO
3.	Łukasiewicz Research Network – Institute of Aviation, Warsaw, Poland (ILOT)  Military University of Technology, Warsaw, Poland (MUT)	<a href="mailto:Krzysztof.Lowczycki@ilot.lukasiewicz.gov.pl">Krzysztof.Lowczycki@ilot.lukasiewicz.gov.pl</a>  <a href="mailto:Beata.Lisik@ilot.lukasiewicz.gov.pl">Beata.Lisik@ilot.lukasiewicz.gov.pl</a>	ILOT: The Łukasiewicz Research Network – Institute of Aviation is one of the most modern research facilities in Europe, with traditions dating back to 1926. The Institute closely cooperates with global tycoons of the aviation industry, such as: GE, Airbus, Pratt & Whitney, and institutions from the space industry, including the European Space Agency.	ILOT: research, concept creation, design, optimization, numerical assessments (aero, structural, vibrations, acoustics), prototype manufacturing, prototype testing (vibrations, structural, etc.), teledetection  MUT: concept creation, numerical assessments (structural, joints)	Experience in European, EDA, ESA and national R&D programmes in the field of aviation, space, remote sensing, material and composite technologies. For example: ERA, SAMAS II, DREAM, LATTE, HIGHTRIP,	Ł-ILOT: RTO  MUT: university

			<p>Strategic research areas of the Institute are aviation, space and unmanned technologies. It also provides research and services for domestic and foreign industries in the field of materials, composite, additive, remote sensing, energy, and oil&amp;gas technologies.</p> <p>MUT: technical university</p>		<p>TRAIL, SAT-AM, IMOTHEP, COAST, WINGPLUSE, X-TEAM D2D.</p>	
4.	<p>Łukasiewicz Research Network – Industrial Research Institute for Automation and Measurements PIAP</p>	<p>JÓZEF WRONA Director of International Cooperation Programme for Defence Technologies <a href="mailto:jozef.wrona@piap.lukasiewicz.gov.pl">jozef.wrona@piap.lukasiewicz.gov.pl</a> tel.: +48228740302, mob.: +48602433035 <a href="https://piap.lukasiewicz.gov.pl/en/research-projects/">https://piap.lukasiewicz.gov.pl/en/research-projects/</a></p>	<p>Ł-PIAP is a state entity focused on R&amp;D and implementation new technologies in autonomous mobile platforms in various areas of use, mainly for defense and security, automation systems, production devices and control, measurement equipment. The first robot was produced for the Polish police in 1999.</p>	<ul style="list-style-type: none"> <li>• Autonomous or/and teleoperated UGVs for transport of patients or equipment and inspection/surveillance</li> <li>• Hardware and software integration</li> <li>• CBRN threat detection onboard UGVs and UAVs</li> </ul>	<ul style="list-style-type: none"> <li>• FP7 TALOS</li> <li>• FP7 EDEN</li> <li>• H2020 CAMELOT</li> <li>• H2020 ASSISTANCE</li> <li>• ESA RACER</li> <li>• JIP-RPAS ERA</li> <li>• EDA MUSICODE</li> <li>• ESA SpacePatrol</li> </ul>	RTO
5.	<p>Instytut Techniczny Wojsk Lotniczych (Air Force Institute of Technology) <a href="http://www.itwl.pl/en/">www.itwl.pl/en/</a></p>	<p>Piotr JANUSZ External Relations Officer <a href="mailto:piotr.janusz@itwl.pl">piotr.janusz@itwl.pl</a></p> <p>Paweł SZCZEPANIAK Head of Aircraft Composite Structures Division (1) <a href="mailto:pawel.szczepaniak@itwl.pl">pawel.szczepaniak@itwl.pl</a></p> <p>Mariusz ZIEJA Head of IT Logistics Support Division (2) <a href="mailto:mariusz.zieja@itwl.pl">mariusz.zieja@itwl.pl</a></p>	<p>Air Force Institute of Technology is a Polish leader in scientific and research support for military aviation. It develops innovative solutions and maintains the highest performance level of the technology in use. The Institute cooperates with numerous R&amp;D companies and armament manufacturers, carrying out works for NATO, EDA, EC.</p>	<p>(1) Detection, location and assessment of the condition of soldiers operating in dangerous/harsh conditions using UAVs – in order to monitor the physiological state of a patient to enable initial diagnostics. (2) Creation of digital models dedicated to aircraft, vehicles and ships certification, security, reliability analysis, resource management, logistics, information exchange platforms.</p>	<p>European Commission: 5D-AeroSafe, OPARUS, WIMAAS, CAESARIS, EDF (call 2021): EU HYDEF EDA: ERA (I/II), SAMAS (I/II), ASTYANAX, NAGSMA: AGS BattleLab STO: RTGs in AVT &amp; SCI Tech. Panels</p>	research & technology organization (RTO)

6.	Institute of Security Technologies MORATEX; <a href="http://moratex.eu">http://moratex.eu</a>	Paweł Kubiak, PhD, International Cooperation Coordinator, R&D Department, (pkubiak@moratex.eu)	MORATEX provides R&D, implementation & certification activities in security technologies, materials & products, CBRN, textiles, composites, ballistic & protective equipment, medical devices, risk analysis, camouflage, usability engineering, dynamic computer simulation, personalization and individualization of the textile equipment, acceleration ageing studies. The quality of our solutions/ products are proven by domestic/international organizations and government.	R&D, R&I in CBRN, ballistic, protective equipment solutions and procedures. Innovative materials, composites, elastomers, textiles. SOTA, COTS, risk analysis, usability engineering, accelerated ageing studies, 3D scanning, customization/personalization/ individualisation, VR/AR solutions, CAD systems (eg. ANSYS, Optitex). Accredited Ballistic, Metrological, Chemical Laboratories.	H2020 – Prevent H2020 – PreventPCP FP7 – D-BOX	R&D Institute
7.	Military Institute of Armoured and Automotive Technology	Marek Szudrowicz, R&D Expert, marek.szudrowicz@witp is.eu	The Institute's area of activity: scientific research relating to the construction and operation of military land vehicles, analyzes, expertise, opinions in the field of construction and operation of special vehicles and military equipment; development and implementation of research methodologies; product certification.	Cooperation in definition of the technical specifications and design of transport system on the battlefield and to treatment facilities, in this in CBRN situations. Decontamination technologies for safe treatment in vehicles and transport of HICP. Investigation of new possibilities to transport and assist HICP		RTO
8.	Research and Development Centre for Mechanical Equipment OBRUM Ltd.  <a href="https://obrum.pl/en/company/">https://obrum.pl/en/company/</a>	Magdalena Król, Specialist for research and development projects, <a href="mailto:m.krol@obrum.pl">m.krol@obrum.pl</a> , 500 - 214 - 493	OBRUM creates products intended for the Polish Armed Forces. The main customers of the works are land forces, including mechanised, armoured, radiolocation and engineering forces. An entity of the Polish Armament Group.	Autonomous Robot, whose task is to decontamination of hospital rooms and warehouses using UV lamps. Development of a system enabling automatic movement of the vehicle on a previously recorded road and warning of emerging obstacles on the route.		RTO
9.	Lukasiewicz Research Network - Institute of Non-Ferrous Metals	Dr hab. Adriana Wrona Director of Centre of Powder and Composite Materials	Łukasiewicz Research Network - Institute of Non-Ferrous Metals (Ł-IMN) is a research centre of the Polish non-ferrous industry. Complex activities cover all	The topic includes research and development in treatment, transport and monitoring of highly contagious, injured and/or contaminated personnel (HICP). Łukasiewicz-IMN -		RTO

		<a href="mailto:adriana.wrona@imn.lukasiewicz.gov.pl">adriana.wrona@imn.lukasiewicz.gov.pl</a>	stages of metallic materials production: from ore treatment to technologies for production of modern product meeting all environmental standards.	Centre of Powder and Composite Materials has an experience in developing and producing antimicrobial coatings for medical equipment. The coatings could provide additional protection for soldiers and medical personnel.		
10.	Łukasiewicz Research Network – Automotive Industry Institute  <a href="http://pimot.lukasiewicz.gov.pl/">http://pimot.lukasiewicz.gov.pl/</a>	<a href="mailto:konred.malek@pimot.lukasiewicz.gov.pl">konred.malek@pimot.lukasiewicz.gov.pl</a>  <a href="mailto:kamil.kowalski@pimot.lukasiewicz.gov.pl">kamil.kowalski@pimot.lukasiewicz.gov.pl</a>	The Łukasiewicz – PIMOT mission is to provide Polish entrepreneurs (chiefly of the transport, fuels, and renewable energy sources sectors) with strong scientific and research support in the processes of product development and introduction of the products into world markets.	Unmanned ground vehicles on the VI TRL or higher, dedicated to transport injured and/or contaminated personnel. The research, engineering and integration work with platform and medical equipment.		RTO
<b>EDF-2022-FPA-MCBRN-MCM: European defence medical countermeasures alliance</b>						
11.	Military Institute of Hygiene and Epidemiology (WIHE), <a href="http://www.wihe.pl">www.wihe.pl</a>	Marek Brytan, Head of Department of Pharmacology and Toxicology, <a href="mailto:marek.brytan@wihe.pl">marek.brytan@wihe.pl</a>	WIHE is an independent, public, non-profit research organisation in Poland whose mission is to conduct research, prophylaxis, surveillance and training associated with medical protection and countermeasures against the use of weapons of mass destruction.	Development of medical countermeasures against CBRN agents.	EDA (QUIXOTE, EBLN, EBLN II), HORIZON2020 (INHERIT)	RTO
12.	Military Institute of Medicine <a href="http://www.wim.mil.pl">www.wim.mil.pl</a>	Ariadna Bednarz Head of Project Management Office, <a href="mailto:abednarz@wim.mil.pl">abednarz@wim.mil.pl</a> ; <a href="mailto:projekty@wim.mil.pl">projekty@wim.mil.pl</a>	Military Institute of Medicine is a research institute with a clinical hospital. Staff of the Institute are well prepared scientists, experienced practitioners in many medical specialties. Institute has a large experience in the implementation of innovative research projects of high scientific level.	-	EDF-2021-Counteract  Numerous national projects about evacuation and medical help in the battlefield.	RTO
13.	Military University of Technology,	LTC Łukasz KRZOWSKI	The Biomedical Engineering Centre (BEC) of IOE MUT,	– The BEC research interests include: investigation of biological	EDA: FABIOLA, TIPPSI, RAMBO,	RTO

	Institute of Optoelectronics, Biomedical Engineering Centre <a href="https://www.wojsko-polskie.pl/wat/en/">https://www.wojsko-polskie.pl/wat/en/</a>	<a href="mailto:lukasz.krzowski@wat.edu.pl">lukasz.krzowski@wat.edu.pl</a> , tel 0048 261 837 825	conducts projects related to biomedical engineering and designs innovative technologies as well as equipment in the field of medicine.	effects of different substances chem, bio, rad (genotoxicity, mutagenicity, cell toxicity) on human cell lines, discovery new biomarkers, – investigation of the effect of different kind of radiation on healthy cells, – new capacities in CWA medical countermeasures. Develop new kind of synergies with new kind of treatment substances for nerve agents, – development of new dressings for CBRN contaminated wounds with functions of developed dressing are: assimilation/absorption of CBRN agents from wounds, – diagnostics and photodynamic therapy in the treatment of chemical burns, – nanomasks with new kind of ultrathin filtrating layer.	AMURFOCAL, CONFIDENT, EU: ENCRICLE, RISEN	
14.	Military Institute of Chemistry and Radiometry  <a href="http://www.gov.pl/web/wichir/about-us">www.gov.pl/web/wichir/about-us</a>	Grzegorz Cieloch, deputy director e-mail: <a href="mailto:g.cieloch@wichir.waw.pl">g.cieloch@wichir.waw.pl</a> tel: +(48) (22) 516 99 09;  Tomasz Sikora assistant professor, e-mail: <a href="mailto:t.sikora@wichir.waw.pl">t.sikora@wichir.waw.pl</a> +48 735207118	Polish military R&D body focused on force and general population protection versus CBRN agents. Including detection, identification, personal and collective protection and decontamination.	Design of a new chemical decontamination material based on solid nanosorbents  The Institute could be a leader in WPs focused on creation of new nanosorbent based decontamination for CWA and TICs. Could also participate in equipment testing versus real chemical agents, resistance to radiation, radiation detection, decon efficiency.		RTO
15.	Military Institute of Chemistry and Radiometry  <a href="http://www.gov.pl/web/wichir/about-us">www.gov.pl/web/wichir/about-us</a>	Grzegorz Cieloch, deputy director e-mail: <a href="mailto:g.cieloch@wichir.waw.pl">g.cieloch@wichir.waw.pl</a> tel: +(48) (22) 516 99 09;	As above.	New extraction from CBRN scene device with real time monitoring and self-diagnostic.  New diagnostic tool capable to online monitoring of inner atmosphere of the		RTO

		<p>Tomasz Sikora assistant professor, e-mail: <a href="mailto:t.sikora@wichir.waw.pl">t.sikora@wichir.waw.pl</a> +48 735207118</p>		<p>HICP compartment. This could provide information of the nature of agent use (C, RN, limited in B), identification of an agent (C, RN) as well as identification of the compounds in exhaled air which could help with diagnosis. Apart of this the Institute could participate in design and in tests of a decon equipment of HICP compartment capable to deal with both Chem and Bio contamination.</p>		
16.	<p>Military Institute of Chemistry and Radiometry</p> <p><a href="http://www.gov.pl/web/wichir/about-us">www.gov.pl/web/wichir/about-us</a></p>	<p>Grzegorz Cieloch, deputy director e-mail: <a href="mailto:g.cieloch@wichir.waw.pl">g.cieloch@wichir.waw.pl</a> tel: +(48) (22) 516 99 09;</p> <p>Tomasz Sikora assistant professor, e-mail: <a href="mailto:t.sikora@wichir.waw.pl">t.sikora@wichir.waw.pl</a> +48 735207118</p>	As above.	<p>Development of the next generation active laser stand-off C and B detection</p> <p>Cooperative work together with SME from Slovakia (Sec Technologies). The institute could work on testing during all stages of designing new generation Stand-off detector for chemical and bio contamination. Next generation could improve detection limits, false positive and negative alarm ratio, wider scope of detected agents as well as extend the range of the system even up to x km.</p>		RTO
17.	<p>Łukasiewicz Research Network – Institute of Engineering for Polymer Materials and Dyes</p> <p><a href="https://impib.lukasiewicz.gov.pl/">https://impib.lukasiewicz.gov.pl/</a></p>	<p>Monika Kurpas Chief Specialist, Commercialization Department <a href="mailto:monika.kurpas@impib.lukasiewicz.gov.pl">monika.kurpas@impib.lukasiewicz.gov.pl</a></p> <p>Agnieszka Staniszewska Manager. Project Management Department</p>	<p>As the Łukasiewicz Research Network - Institute for Engineering of Polymer Materials and Dyes, we have been closely cooperating with industry and business for many years, providing the highest quality services for large, medium and small enterprises. We specialize in areas of the economy such as construction, transport, environmental protection, military services, medicine and health protection,</p>	<p>Work on the development of coated textiles for protection against chemical warfare agents, biological agents and radiation, including enhanced barrier and bactericidal properties. They provide additional medical protection against the propagation of biological threats.</p>		RTO

		<a href="mailto:agnieszka.staniszezewska@impib.lukasiewicz.gov.pl">agnieszka.staniszezewska@impib.lukasiewicz.gov.pl</a>	as well as broadly understood production.			
18.	Łukasiewicz Research Network – Industrial Research Institute for Automation and Measurements PIAP  <a href="https://piap.lukasiewicz.gov.pl/en/research-projects/">https://piap.lukasiewicz.gov.pl/en/research-projects/</a>	JÓZEF WRONA Director of International Cooperation Programme for Defence Technologies <a href="mailto:jozef.wrona@piap.lukasiewicz.gov.pl">jozef.wrona@piap.lukasiewicz.gov.pl</a> tel.: +48228740302, mob.: +48602433035	Ł-PIAP is a state entity focused on R&D and implementation new technologies in autonomous mobile platforms in various areas of use, mainly for defense and security, automation systems, production devices and control, measurement equipment. The first robot was produced for the Polish police in 1999.	<ul style="list-style-type: none"> <li>• Capabilities for design and production of CBRN samplers and integration of threat detectors for unmanned platforms</li> <li>• Common interfaces development</li> </ul>	<ul style="list-style-type: none"> <li>• FP7 EDEN</li> <li>• H2020 CAMELOT</li> <li>• H2020 ASSISTANCE</li> <li>• H2020 ENCIRCLE</li> </ul>	RTO
19.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Material Technologies and Textile Design	Zbigniew Draczyński associate professor <a href="mailto:Zbigniew.draczyński@p.lodz.pl">Zbigniew.draczyński@p.lodz.pl</a> +48 42 631 33 60	Lodz University of Technology (TUL) is one of the largest technical universities in Poland. It employs 1,250 academic staff, 500 PhDs conduct research in 12 scientific disciplines and has 12,000 students. TUL carries out European projects and actively transfers R&D solutions to industry.	Know-how in the field of designing, making and modification of the active textile and polymeric dressings based on biopolymers (e.g. alginate, chitosan, hyaluronic acid, collagen), for example conjugated with peptides of haemostatic activity, as well as containing different active agents providing the antimicrobial activity.	–	RTO
20.	Silesian University of Technology, <i>NanoCarbon Group</i>	slawomir.boncel@polsl.pl		Antiviral, antibacterial and antifungal systems for personal and closed spaces		RTO

### INFORMATION SUPERIORITY (C4ISR)

#### EDF-2022-RA-C4ISR-AIRC2: Single European Sky interoperability

21.	Instytut Techniczny Wojsk Lotniczych (Air Force Institute of Technology) <a href="http://www.itwl.pl/en/">www.itwl.pl/en/</a>	Piotr JANUSZ External Relations Officer <a href="mailto:piotr.janusz@itwl.pl">piotr.janusz@itwl.pl</a>  Mariusz ZIEJA Head of IT Logistics Support Division <a href="mailto:mariusz.zieja@itwl.pl">mariusz.zieja@itwl.pl</a>	Air Force Institute of Technology is a Polish leader in scientific and research support for military aviation. It develops innovative solutions and maintains the highest performance level of the technology in use. The Institute cooperates with numerous R&D companies and armament manufacturers, carrying out works for NATO, EDA, EC.	Creation of mathematical models of airspace management, ATM simulation laboratory, application of quantum algorithms for space management, a laboratory with an air traffic control personnel management system regulations, certification, safety management, and for information exchange.	European Commission: 5D-AeroSafe, OPARUS, WIMAAS, CAESARIS, EDF (call 2021): EU HYDEF EDA: ERA (I/II), SAMAS (I/II), ASTYANAX,	RTO
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<b>EDF-2022-DA-C4ISR-EC2: European command and control system</b>						
22.	Instytut Techniczny Wojsk Lotniczych (Air Force Institute of Technology) www.itwl.pl/en/	Piotr JANUSZ External Relations Officer piotr.janusz@itwl.pl  Janusz BŁASZCZYK Head of C4ISR Division (1) janusz.blaszczyk@itwl.pl  Mariusz ZIEJA Head of IT Logistics Support Division (2) mariusz.zieja@itwl.pl	Air Force Institute of Technology is a Polish leader in scientific and research support for military aviation. It develops innovative solutions and maintains the highest performance level of the technology in use. The Institute cooperates with numerous R&D companies and armament manufacturers, carrying out works for NATO, EDA, EC.	(1) Integration and management of the Common Operational Picture. Information exchange services consistent with recognized military and technical standards. Data integration, modelling and simulation services. (2) Development of a sharing data system prototype for the data cataloguing and synchronization of metadata, taking into account the geospatial context. Construction of a simulation laboratory for testing data exchange protocols. Testing the prototype in near-to-real conditions to confirm its effectiveness/correctness.	European Commission: 5D-AeroSafe, OPARUS, WIMAAS, CAESARIS, EDF (call 2021): EU HYDEF EDA: ERA (I/II), SAMAS (I/II), ASTYANAX, NAGSMA: AGS BattleLab STO: RTGs in AVT & SCI Tech. Panels	RTO
23.	Warsaw University of Technology (WUT)	Prof. Jacek MISIUREWICZ, Institute of Electronic Systems Scientific Director, jacek.misiurewicz@pw.e du.pl	University with specialized Radar Systems Technology Lab, capable to research, design and develop of advanced and innovative RF products and solutions including SAR, EW (jamming, ELINT and SIGINT), ISAR,	Passive and active radar system design and development Sensing fusion algorithm development and implementation Data fusion C2 System design and development	EDA MAPIS, JAMPAR, SEPRM	RTO
24.	<b>Integrated Solutions Ltd. Orange subsidiary</b>  Karolkowa 30, 01- 633 Warsaw, Poland  <a href="https://integratedsolutions.pl/">https://integratedsolutions.pl/</a>	Bartłomiej Owczarczyk BD VP <a href="mailto:owczarczykb@i-s.com.pl">owczarczykb@i- s.com.pl</a> +48502709239  Piotr Grączewski CTO <a href="mailto:pgraczewski@i-s.com.pl">pgraczewski@i-s.com.pl</a> +48510002548	Integrated Solutions (IS) since 2011 is a specialized ICT integrator and a part of the biggest telecom company in Central and Eastern Europe – Orange Polska Group. It gives us access to the competence, experience and resources of Orange Polska, while also giving us freedom of operation, credibility and financial stability. IS combines the world of IT and Telco delivering end-to-end solutions in most complex	<ul style="list-style-type: none"> <li>IT infrastructure,</li> <li>Cloud,</li> <li>Networking</li> <li>Security,</li> <li>Microsoft licenses&amp; services,</li> <li>Software applications.</li> </ul>	Integrated Solutions is a wide known company with broad experience in security projects and defense profile. The main interest of our portfolio is gained across MODs, security services and companies. We deliver the most advanced solutions both build to print and	Large company



			<p>projects for most demanding medium and large enterprises.</p> <p>Integrated Solutions designs and delivers advanced ICT services for business within four competition centers: IT infrastructure and Cloud, Networking and Security, Microsoft, Software and applications</p> <p>The cloud competences of IS &amp; Orange Polska Group include complete solutions "as a service". Orange and Integrated Solutions are one of the largest providers of business services using the cloud in local, hybrid and public models - cooperating with the largest partners in the world: VMware, Microsoft, AWS, Google Cloud, Orange Business Services, Oracle.</p>		build to spec in fragile environment.	
25.	ITTI Sp. z o.o.	<p>Piotr Tyczka, Senior Project Manager, Piotr.tyczka@itti.com.pl</p> <p>Krzysztof Samp, Vice-President, krzysztof.samp@itti.com.pl</p>	ITTI is a Polish SME from IT sector providing innovative applications and dedicated software solutions operating since 1996. ITTI offers its services to such sectors as: space, health, public administration and manufacturing, and is a member of several international associations, e.g. 6G-IA, PSCE.	Contribution to system specification. Identification of threats and attacks. Vulnerability assessment. Cyber risks management. Expertise in modelling and simulation. User training. Software development.	<p>PADR GOSSRA</p> <p>EDIDP SMOTANET</p> <p>EDIDP HERMES</p> <p>EDF ACHILE</p> <p>EDF SDMMMS</p> <p>EDA WINLAS, EDA</p> <p>SOFTANET, EDA</p> <p>CRAI</p> <p>Over 40 projects for ESA</p> <p>Over 60 projects in EC R&amp;D programmes</p>	SME
<b>EDF-2022-DA-C4ISR-SOFC2: Deployable special operations forces multi-environment command post and C2 System</b>						
26.	<p>Asseco Poland S.A.</p> <p><a href="#">Asseco Poland - Technology for business.</a></p>	<p>Zdzisław Wiater</p> <p>Autonomous Systems Department Director</p>	Asseco Poland is the largest Polish IT company listed on the WSE and the 6th largest software developer in Europe. Asseco is a recognized provider	Unmanned systems for Special Forces and support for implementation of the following requirements:	EDIDP, EDA, ESA, NCIA	Large company

	<a href="#">Solutions for people.</a> <a href="https://pl.asseco.com/en/">https://pl.asseco.com/en/</a>	<a href="mailto:zdzislaw.wiater@asseco.pl">zdzislaw.wiater@asseco.pl</a> +48 502 737 364	of solutions for Polish uniformed services and has been increasingly active in the defense sector.	REQ6 The SOFCPC2 should feature the relevant means to be integrated with several different aircraft and/or surface vessel platforms, manned and/or unmanned, employed either for the transportation of SOF Task Groups or for the collection of intelligence.		
27.	JAKUSZ Sp. z o.o. jakusz@jakusz.com	Bartosz Jakusz Company President <a href="mailto:bartosz.jakusz@jakusz.com">bartosz.jakusz@jakusz.com</a>	Company JAKUSZ, activity is focused in the following areas: - Chemical installation and materials - Protection against explosion effects (explosion containment vessels) - Storage structures for hazardous materials - Information security and critical infrastructure protection - Munitions disposal - EOD Technicians Training Centre	New elements of hydrogen-based power systems of vehicles and platforms. Cooperation in analysis of operational scenarios, feasibility studies, definition of the technical specifications, partial tests for risk reduction, prototype testing. Analysis of standards and their evolution proposals.		SME

### ADVANCED PASSIVE AND ACTIVE SENSORS (SENS)

#### EDF-2022-RA-SENS-CSENS: Covert sensing

28.	Instytut Techniczny Wojsk Lotniczych (Air Force Institute of Technology) www.itwl.pl/en/	Piotr JANUSZ External Relations Officer piotr.janusz@itwl.pl  Jarosław SULKOWSKI Deputy Director for Development and Implementation (1) jaroslaw.sulkowski@itwl.pl  Mariusz ZIEJA Head of IT Logistics Support Division (2) mariusz.zieja@itwl.pl	Air Force Institute of Technology is a Polish leader in scientific and research support for military aviation. It develops innovative solutions and maintains the highest performance level of the technology in use. The Institute cooperates with numerous R&D companies and armament manufacturers, carrying out works for NATO, EDA, EC.	(1) Feasibility study, examination and design of low-cost solutions as a part of a complex multi-sensor modular surveillance system. Improved passive electromagnetic detection, recognition, identification and tracking of aerial and surface objects. Data integration and information exchange services. (2) Creation of mathematical models to identify static and dynamic obstacles located in the airspace. Maintenance system for radar infrastructure, based on management and reliability. Creation of digital 3D models dedicated to aircraft, vehicles and ships. Certification, security, reliability analysis, resource management,	European Commission: 5D-AeroSafe, OPARUS, WIMAAS, CAESARIS, EDF (call 2021): EU HYDEF EDA: ERA (I/II), SAMAS (I/II), ASTYANAX, NAGSMA: AGS BattleLab STO: RTGs in AVT & SCI Tech. Panels	RTO
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				logistics, information exchange platforms.		
29.	Łukasiewicz Research Network – Industrial Research Institute for Automation and Measurements PIAP	JÓZEF WRONA Director of International Cooperation Programme for Defence Technologies <a href="mailto:jozef.wrona@piap.lukasiewicz.gov.pl">jozef.wrona@piap.lukasiewicz.gov.pl</a> tel.: +48228740302, mob.: +48602433035 <a href="https://piap.lukasiewicz.gov.pl/en/research-projects/">https://piap.lukasiewicz.gov.pl/en/research-projects/</a>	Ł-PIAP is a state entity focused on R&D and implementation new technologies in autonomous mobile platforms in various areas of use, mainly for defense and security, automation systems, production devices and control, measurement equipment. The first robot was produced for the Polish police in 1999.	UGV R&D (including hardware, mechanics, electronics, software, etc), Vehicle set designed for autonomous off-road development based on pickup type car (2 vehicles), Unmanned Vehicles from 1.5kg up to 3500kg High mobility Unmanned Ground Vehicle 3500kg designed to test and development autonomous work MESH, M2M, V2V communication, Software Define Jamming Device (Jammer) to secure protected area – R&D cap.	MUSICODE, MUSAS, ERA, TALOS	RTO
30.	Creotech Instruments S.A.  <a href="https://creotech.pl/">https://creotech.pl/</a>	Jacek Mandas Chief Business Officer <a href="mailto:jacek.mandas@creotech.pl">jacek.mandas@creotech.pl</a>	Creotech Instruments is Poland's leading manufacturer of satellite systems and components, as well as advanced electronics for quantum computer control systems and other applications. We also specialise in advanced real time cameras (sCMOS and CCD)	-Microsatellite platform and competences in design of space systems accommodated by our own  - design of cameras, also astronomical, including front-ends, readout, processing units using CCD, EMCCD, CMOS, sCMOS and FPA sensors working on optical video, low light environment, infrared	Over 15 ESA projects.	SME
31.	WiRan sp. z o. o.; <a href="http://www.wiran.pl">www.wiran.pl</a>	Robert Stefański <a href="mailto:r.stefanski@wiran.pl">r.stefanski@wiran.pl</a>	SME focused on hi-rel RF electronics; space flight products, military, commercial. 2 decades of experience in quality-critical markets	Electronics; EMC; RF/MW; prototyping; QA; IoT; testing (environmental, EMC, RF); embedded devices; programming	ESA – 4 projects already successfully finished, 2 more open	SME
32.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Mechanical Engineering	Hieronim Szymanowski associate professor <a href="mailto:hieronim.szymanowski@p.lodz.pl">hieronim.szymanowski@p.lodz.pl</a>	Lodz University of Technology (TUL) is one of the largest technical universities in Poland. It employs 1,250 academic staff, 500 PhDs conduct research in 12 scientific disciplines and has 12,000 students. TUL carries out European projects and actively transfers R&D solutions to industry.	Possibility to design and develop a manufacturing method based on vacuum technology antireflection interference optical filters to increase the amount of incoming light. Such systems can be used in periscope, binoculars or night vision devices.	–	RTO

33.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Electrical, Electronic, Computer and Control Engineering	Krzysztof Slot professor <a href="mailto:krzysztof.slot@p.lodz.pl">krzysztof.slot@p.lodz.pl</a>	As above.	Development of frugal AI algorithms for edge-computing, combining deep neural representation extraction with vector symbolic architecture (VSA) – based analysis.	–	RTO
34.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Electrical, Electronic, Computer and Control Engineering	Sławomir Hausman associate professor <a href="mailto:slawomir.hausman@p.lodz.pl">slawomir.hausman@p.lodz.pl</a> + 48 602 359 950	As above.	Design and optimisation of EM metamaterials: flat lenses (dielectric or with resonating structures), band gap structures (EBG, AMC), intelligent reflecting surfaces (IRS); Development of terahertz-band metamaterials. Modelling EM metamaterials using full-wave and circuit-equivalent methods.	–	RTO
35.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Electrical, Electronic, Computer and Control Engineering	Sławomir Wiak professor <a href="mailto:slawomir.wiak@p.lodz.pl">slawomir.wiak@p.lodz.pl</a> +48 603 669 428  Dorota Kamińska assistant professor <a href="mailto:dorota.kaminska@p.lodz.pl">dorota.kaminska@p.lodz.pl</a> +48 696 411 146	As above.	Development of AR training for deepening self-awareness, User interfaces in augmented reality to communicate critical information without overloading. Immersion solutions for reducing post-traumatic stress disorder.	–	RTO

**EDF-2022-RA-SENS-ART: Advanced radar technologies**

36.	Warsaw University of Technology (WUT)	Prof. Krzysztof KULPA, Radar Technologies Lab Director, <a href="mailto:krzysztof.kulpa@pw.edu.pl">krzysztof.kulpa@pw.edu.pl</a>	University with specialized Radar Systems Technology Lab, capable to research, design and develop of the advanced and innovative RF products and solutions including SAR, EW (jamming, ELINT and SIGINT), ISAR.	Passive and active radar system design and development Sensing fusion algorithm development and implementation	EDA MAPIS, JAMPAR, SEPROM STO SET-242, STO SET-258 STO SET-320	RTO
37.	Instytut Techniczny Wojsk Lotniczych (Air Force Institute of Technology) <a href="http://www.itwl.pl/en/">www.itwl.pl/en/</a>	Piotr JANUSZ External Relations Officer <a href="mailto:piotr.janusz@itwl.pl">piotr.janusz@itwl.pl</a>	Air Force Institute of Technology is a Polish leader in scientific and research support for military aviation. It develops innovative solutions and maintains the	Creation of mathematical models to identify static and dynamic obstacles in the airspace. Maintenance system for radar infrastructure, based on management and reliability.	European Commission: 5D-AeroSafe, OPARUS, WIMAAS, CAESARIS,	RTO

		Mariusz ZIEJA Head of IT Logistics Support Division mariusz.zieja@itwl.pl	highest performance level of the technology in use. The Institute cooperates with numerous R&D companies and armament manufacturers, carrying out works for NATO, EDA, EC.		EDF (call 2021): EU HYDEF EDA: ERA (I/II), SAMAS (I/II), ASTYANAX, NAGSMA: AGS BattleLab STO: RTGs in AVT & SCI Tech. Panels	
38.	Łukasiewicz Research Network – Institute of Aviation, Warsaw, Poland (ILOT)  KUBARA LAMINA S.A. – potential partner (KUBARA)	<a href="mailto:Grzegorz.Moneta@ilot.ilkukasiewicz.gov.pl">Grzegorz.Moneta@ilot.ilkukasiewicz.gov.pl</a>	ILOT: The Łukasiewicz Research Network – Institute of Aviation is one of the most modern research facilities in Europe, with traditions dating back to 1926. The Institute closely cooperates with global tycoons of the aviation industry, such as: GE, Airbus, Pratt & Whitney, and institutions from the space industry, including the European Space Agency. Strategic research areas of the Institute are aviation, space and unmanned technologies. It also provides research and services for domestic and foreign industries in the field of materials, composite, additive, remote sensing, energy and oil&gas technologies.  KUBARA: production of high power semi-conductors for power, electronic and military industries; production of microwave products, including amplitrons, i.e. end power amplifiers used in military radiolocation equipment; production of High-Power Microwave equipment, Direct-energy weapons and defense systems	ILOT: manufacturing of complex elements (additive manufacturing + machining), optimization of the geometry (strength, thermal, fatigue life), simulation and optimization of the AM process, quality checks of manufactured elements  KUBARA: studies, research, design, and production of microwave elements for radars, creation of new concepts, testing		Ł-ILOT: RTO  Kubara: SME

39.	Creotech Instruments S.A. <a href="https://creotech.pl/">https://creotech.pl/</a>	Jacek Mandas Chief Business Officer <a href="mailto:jacek.mandas@creotech.pl">jacek.mandas@creotech.pl</a> <a href="http://h.pl">h.pl</a>	Creotech Instruments is Poland's leading manufacturer of satellite systems and components, as well as advanced electronics for quantum computer control systems and other applications. We also specialise in advanced real time cameras (sCMOS and CCD)	-State-of-the-art sub nanosecond accuracy, picosecond precision time synchronization protocol over extensive optical fibre networks compatible with Ethernet that can provide exact synchronization and syntonization of atomic clocks on the distance of more than 100km – WhiteRabbit technology	Over 15 ESA projects.	SME
40.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Electrical, Electronic, Computer and Control Engineering	Sławomir Hausman associate professor <a href="mailto:slawomir.hausman@p.lodz.pl">slawomir.hausman@p.lodz.pl</a> <a href="http://dz.pl">dz.pl</a> + 48 602 359 950	Lodz University of Technology (TUL) is one of the largest technical universities in Poland. It employs 1,250 academic staff, 500 PhDs conduct research in 12 scientific disciplines and has 12,000 students. TUL carries out European projects and actively transfers R&D solutions to industry.	Applications of opportunistic signals (e.g. 5G radio base stations) as illuminators in passive radar systems.	–	RTO
41.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Electrical, Electronic, Computer and Control Engineering	Sławomir Wiak professor <a href="mailto:slawomir.wiak@p.lodz.pl">slawomir.wiak@p.lodz.pl</a> +48 603 669 428  Dorota Kamińska assistant professor <a href="mailto:dorota.kaminska@p.lodz.pl">dorota.kaminska@p.lodz.pl</a> <a href="http://z.pl">z.pl</a> +48 696 411 146	As above.	Development of AR training for deepening self-awareness, User interfaces in augmented reality to communicate critical information without overloading. Immersion solutions for reducing post-traumatic stress disorder.	–	RTO
42.	EXPLOMET GAŁKA, SZULC SPÓŁKA KOMANDTYOWA	ZYGMUNT SZULC – DYREKTOR, <a href="mailto:zygmunt.szulc@explomet.pl">zygmunt.szulc@explomet.pl</a> , +48601473524	EXPLOMET is a company specializes in explosive cladding technology. The highly qualified and experienced staff of engineers oversees production and quality. We also have a professional research and development facilities, allowing development works, in the field of composites and their applications.	The EXPLOMET company has the ability to use the technology of explosive cladding of metals, which can be used to make two or multi-layer elements that are used in the construction of high energy waveguide channels.	PADR PILUM	SME

43.	Silesian University of Technology, <i>NanoCarbon Group</i>	slawomir.boncel@polsl.pl		Lightweight radar absorbing materials based on carbon nanotubes		RTO
<b>CYBER (CYBER)</b>						
<b>EDF-2022-DA-CYBER-CIWT: Cyber and information warfare toolbox</b>						
44.	ITTI Sp. z o.o.	Piotr Tyczka, Senior Project Manager, <a href="mailto:Piotr.tyczka@itti.com.pl">Piotr.tyczka@itti.com.pl</a>  Krzysztof Samp, Vice-President, <a href="mailto:krzysztof.samp@itti.com.pl">krzysztof.samp@itti.com.pl</a>	ITTI is a Polish SME from IT sector providing innovative applications and dedicated software solutions operating since 1996. ITTI offers its services to such sectors as: space, health, public administration and manufacturing, and is a member of several international associations, e.g. 6G-IA, PSCE.	Contribution to elaborating requirements. Use of machine learning for classification problems. Image steganography techniques. Development of specific software modules	PADR GOSSRA EDIDP SMOTANET EDIDP HERMES EDF ACHILE EDF SDMMS EDA WINLAS, EDA SOFTANET, EDA CRAI Over 40 projects for ESA Over 60 projects in EC R&D programmes	SME
45.	Poznań University of Economics and Business (PUEB), <a href="https://kie.ue.poznan.pl/en/">https://kie.ue.poznan.pl/en/</a>	Prof. Witold Abramowicz Chair of Department of Information Systems <a href="mailto:witold.abramowicz@ue.poznan.pl">witold.abramowicz@ue.poznan.pl</a>  Dr. Milena Stróżyna Assistant Professor <a href="mailto:milena.strozyna@ue.poznan.pl">milena.strozyna@ue.poznan.pl</a>	PUEB is a public university located in Poland. Department of information Systems (DIS) of PUEB is the team of over a dozen of researchers specialized in data science and data analytics. We have a wide experience in over 40 R&D projects EU-funded, national, industry-funded) in various areas and industries (news and media, transport and logistics, telecommunication, etc.).	Our main area of expertise is data science and big data. This include especially: - Data analytics, AI, machine learning, - Open data retrieval - Knowledge representation technique and semantic technologies - Information extraction, retrieval and filtering (with emphasis put on personalization and contextualisation), - Data quality assessment - Data fusion and integration	- EDA JIP ICET 2 SIMMO - EDA Cat B Project SIMMO II - NCBR INFOSTRATEG I (OpenFact – fake news detection) - FP6 and FP7 projects (IPs, STREPs, SA, AsiaLink Project, Network of Excellence, Marie Curie) - National projects (POIG, POKL, NCBR, NCN)	RTO
<b>EDF-2022-DA-CYBER-CSIR: Cybersecurity and systems for improved resilience</b>						
46.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en/">https://p.lodz.pl/en/</a> , Faculty of Electrical,	Sławomir Hausman associate professor <a href="mailto:slawomir.hausman@p.lodz.pl">slawomir.hausman@p.lodz.pl</a> + 48 602 359 950	Lodz University of Technology (TUL) is one of the largest technical universities in Poland. It employs 1,250 academic staff, 500 PhDs conduct research in 12 scientific disciplines and has	Application of Intelligent Reflecting Surfaces (IRS) for improved communication resilience  Modelling of radio wave propagation for the design and optimisation of	–	RTO

	Electronic, Computer and Control Engineering		12,000 students. TUL carries out European projects and actively transfers R&D solutions to industry.	tactical mobile radio communication systems for sub-THz bands		
47.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Civil Engineering, Architecture and Environmental Engineering	Marcin Kamiński professor <a href="mailto:Marcin.Kaminski@p.lodz.pl">Marcin.Kaminski@p.lodz.pl</a> + 48 669 001 636	As above.	Computational implementation of statistical decision tools and probabilistic entropy to analyse incoming and outgoing messages as well as various text files located in different hosts. Supervising system for automatic detection of the danger content or unsafe shared procedures and distributed computer programs.	-	RTO

**EDF-2022-RA-CYBER-CSACE: Adapting cyber situational awareness for evolving computing environments**

48.	Poznan Supercomputing and Networking Center IBCH PAS, Poland, <a href="https://www.psnk.pl/">https://www.psnk.pl/</a>	Krzysztof Kurowski (dr hab. eng.), Technical Director, <a href="https://orcid.org/0000-0002-4478-6119">https://orcid.org/0000-0002-4478-6119</a> , M: +48 618582001	The core mission of Poznan Supercomputing and Networking Center IBCH PAS (PSNC) is to foster scientific excellence by providing reliable and cutting-edge e-infrastructure, such as advanced communication networks, data and computing systems, and highly-specialized laboratories. We achieve this goal through pervasive international R&D activities related to information and communication technologies and their innovative applications, including Digital Twin technologies. PSNC has successfully established an operational Network Operations Centre (NOC) and Security Operations Centre (SOC). PSNC protects the infrastructure of the Polish National Research and Education Network called PIONIER (together with trusted PIONIER CERT).	Poznan Supercomputing and Networking Center IBCH PAS with the Military Institute of Armament Technology will prepare: integration of threat information from public repositories along with modelling elements using Digital Twins technology for technical armaments of adversaries (selected armoured vehicles, missiles, guns, radar stations, ammunition depots, etc.); advanced visualizations of various decision-making processes (timelines, histograms or dependency graphs); feasibility studies of new or upgraded tangible (weapons assets), or intangible (combat technology - the Internet of the Military Things - IOMT) components, their impact on information collection, correlation and presentation; development of approximate virtual models of defence products; technical specifications, including partial testing to reduce risks in a model (military) environment.	CyberSec, National Center for Secure Digital Transformation, EU DIGITAL-2021-EDIH-01	RTO
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SPACE (SPACE)



<b>EDF-2022-RA-SPACE-RSS: Responsive space system</b>						
49.	Łukasiewicz Research Network - Institute of Industrial Organic Chemistry	<p>Sławomir Ball Head of Explosive Techniques Research Group, slawomir.ball@ipo.lukasiewicz.gov.pl</p> <p>Mateusz Polis Senior specialist Mateusz.polis@ipo.lukasiewicz.gov.pl</p>	Ł-IPO is a leading research and development center of more than 70-year-long tradition. It carries out research concerning national defence, electrostatic hazards, state services, chemical and manufacturing process safety as well as work for the agriculture.	Development of a technology of igniters with small dimensions for motors or control systems in small satellites. We are able to develop the composition and geometry of the ignition system depending on the project requirements. Ł-IPO has the appropriate research infrastructure for this purpose.	-	RTO
50.	Łukasiewicz Research Network - Institute of Industrial Organic Chemistry ipo.lukasiewicz.gov.pl/ENG/	<p>Katarzyna Gańczyk-Specjalska, leader, katarzyna.ganczyk-specjalska@ipo.lukasiewicz.gov.pl</p> <p>Rafał Bogusz, Head of High Energy Materials Research Group, rafal.bogusz@ipo.lukasiewicz.gov.pl</p>	As above.	Development of a technology of solid propellants with small dimensions for motors or control systems in small satellites. We are able to develop the composition and geometry of the propellant depending on the project requirements. Ł-IPO has the appropriate research infrastructure for this purpose.	-	RTO
<b>EDF-2022-DA-SPACE-ISR: Innovative multi-sensor space-based Earth observation capabilities towards persistent and reactive ISR</b>						
51.	Warsaw University of Technology (WUT)	Prof. Konrad Jędrzejewski, Radar Technologies Lab, <a href="mailto:konrad.jedrzejewski@pw.edu.pl">konrad.jedrzejewski@pw.edu.pl</a>	University with specialized Radar Systems Technology Lab, capable to research, design and develop of the advanced and innovative RF products and solutions including SAR, EW (jamming, ELINT and SIGINT), ISAR,	Passive and active radar system design and development. Development and implementation of spaceborne radar signal processing algorithms.	EDA JAMPAR, STO-SET 288, STO-SET 293	RTO
52.	XY-Sensing	Dr. Piotr SAMCZYŃSKI, CEO <a href="mailto:psamczyn@xysensing.pl">psamczyn@xysensing.pl</a>	Spin-of of Warsaw University of Technology (WUT), SME specialized in SAR/ISAR technologies, passive radar technologies, and RF Sensing technologies	Passive and active radar design and development SAR/ISAR systems design and development, radar signal processing development. Consulting in sensing technologies	EDF ARTURO	SME

53.	Creotech Instruments S.A. <a href="https://creotech.pl/">https://creotech.pl/</a>	Jacek Mandas Chief Business Officer <a href="mailto:jacek.mandas@creotech.pl">jacek.mandas@creotech.pl</a>	Creotech Instruments is Poland's leading manufacturer of satellite systems and components, as well as advanced electronics for quantum computer control systems and other applications. We also specialise in advanced real time cameras (sCMOS and CCD)	-Microsatellite platform and competences in design of space systems accommodated by our own  - design of cameras, also astronomical, including front-ends, readout, processing units using CCD, EMCCD, CMOS, sCMOS and FPA sensors working on optical video, low light environment, infrared	Over 15 ESA projects.	SME
54.	Solaris Optics S.A. solarisoptics.eu	Grzegorz Fluder Production Development Manager <a href="mailto:g.fluder@solarisoptics.eu">g.fluder@solarisoptics.eu</a>	Solaris Optics specializes in manufacturing and design of high precision custom optical components and systems. We perform the whole manufacturing process in-house, from initial processing of glass blocks, through fine polishing, coating, and provide our customers with ready elements or assemblies.	Solaris Optics can contribute to the project in the field of optics. We can perform initial feasibility studies of optical systems, contribute to the concept development, as well as perform the optical design. We can also design the technological chain and manufacture prototypes or final elements.	EDIDP OPTISSE, EDIDP NEMOS	SME
<b>EDF-2022-DA-SPACE-SBMEW: Space-based missile early warning</b>						
55.	Warsaw University of Technology (WUT)	Prof. Krzysztof KULPA, Radar Technologies Lab Director, <a href="mailto:krzysztof.kulpa@pw.edu.pl">krzysztof.kulpa@pw.edu.pl</a>	University with specialized Radar Systems Technology Lab, capable to research, design and develop of the advanced and innovative RF products and solutions including SAR, EW (jamming, ELINT and SIGINT), ISAR,	Passive and active radar system design and development Sensing fusion algorithm development and implementation	EDA MAPIS, JAMPAR, SEPRM	RTO
56.	Warsaw University of Technology (WUT)	Prof. Konrad Jędrzejewski, Radar Technologies Lab, <a href="mailto:konrad.jedrzejewski@pw.edu.pl">konrad.jedrzejewski@pw.edu.pl</a>	University with specialized Radar Systems Technology Lab, capable to research, design and develop of advanced and innovative RF products and radar solutions	Passive and active space surveillance radar system design and development. Development and implementation of space surveillance radar signal processing algorithms.	EDA JAMPAR, STO-SET 288, STO-SET 293	RTO
57.	Creotech Instruments S.A. <a href="https://creotech.pl/">https://creotech.pl/</a>	Jacek Mandas Chief Business Officer <a href="mailto:jacek.mandas@creotech.pl">jacek.mandas@creotech.pl</a>	Creotech Instruments is Poland's leading manufacturer of satellite systems and components, as well as advanced electronics for quantum computer control systems and other applications.	- Microsatellite platform and competences in design of space systems accommodated by our own  - design of cameras, also astronomical, including front-ends, readout, processing units using CCD,	Over 15 ESA projects.	SME

			We also specialise in advanced real time cameras (sCMOS and CCD)	EMCCD, CMOS, sCMOS and FPA sensors working on optical video, low light environment, infrared		
<b>DIGITAL TRANSFORMATION (DIGIT)</b>						
<b>EDF-2022-RA-DIGIT-DBIR: Shared databases and integrated systems for image recognition</b>						
58.	Warsaw University of Technology (WUT)	Prof. Jacek MISIUREWICZ, Institute of Electronic Systems Scientific Director, <a href="mailto:jacek.misiurewicz@pw.edu.pl">jacek.misiurewicz@pw.edu.pl</a>	University with specialized Radar Systems Technology Lab, capable to research, design and develop of the advanced and innovative RF products and solutions including SAR, EW (jamming, ELINT and SIGINT), ISAR.	Passive and active radar system design and development Sensing fusion algorithm development and implementation Deep learning and artificial intelligence algorithms Non Cooperative Targets Recognition algorithms Data fusion.	EDA MAPIS, JAMPAR, SEPROM	RTO
59.	Instytut Techniczny Wojsk Lotniczych (Air Force Institute of Technology) <a href="http://www.itwl.pl/en/">www.itwl.pl/en/</a>	Piotr JANUSZ External Relations Officer <a href="mailto:piotr.janusz@itwl.pl">piotr.janusz@itwl.pl</a>  Mariusz ZIEJA Head of IT Logistics Support Division <a href="mailto:mariusz.zieja@itwl.pl">mariusz.zieja@itwl.pl</a>	Air Force Institute of Technology is a Polish leader in scientific and research support for military aviation. It develops innovative solutions and maintains the highest performance level of the technology in use. The Institute cooperates with numerous R&D companies and armament manufacturers, carrying out works for NATO, EDA, EC.	Sharing data within the coalition data cataloguing, synchronization of metadata between instances within the coalition searching and displaying information, taking into account the geospatial context, construction of a laboratory and simulation stand for testing data exchange protocols. Creation of a grid of points. Image identification using an artificial intelligence algorithm. Data/metadata analysis. Identification and collection of image data.	European Commission: 5D-AeroSafe, OPARUS, WIMAAS, CAESARIS, EDF (call 2021): EU HYDEF EDA: ERA (I/II), SAMAS (I/II), ASTYANAX, NAGSMA: AGS BattleLab STO: RTGs in AVT & SCI Tech. Panels	RTO
60.	Łukasiewicz Research Network – Industrial Research Institute for Automation and Measurements PIAP	JÓZEF WRONA Director of International Cooperation Programme for Defence Technologies <a href="mailto:jozef.wrona@piap.lukasiewicz.gov.pl">jozef.wrona@piap.lukasiewicz.gov.pl</a> tel.: +48228740302, mob.: +48602433035 <a href="https://piap.lukasiewicz.gov.pl/en/research-projects/">https://piap.lukasiewicz.gov.pl/en/research-projects/</a>	Ł-PIAP is a state entity focused on R&D and implementation new technologies in autonomous mobile platforms in various areas of use, mainly for defense and security, automation systems, production devices and control, measurement equipment. The first robot was produced for the Polish police in 1999.	<ul style="list-style-type: none"> <li>• Sensor data gathering and processing</li> <li>• Software, RGB systems and OEM embedded systems for object detection and tracking</li> <li>• Autonomy for UGVs</li> <li>• Hardware and software integration</li> </ul>	<ul style="list-style-type: none"> <li>• H2020 ALADDIN</li> <li>• ESA SpacePatrol</li> <li>• H2020 AEROCEPTOR</li> <li>• EDA MUSICODE</li> <li>EDA SABUVIS</li> </ul>	RTO
61.	Lodz University of Technology (TUL),	Jacek Kucharski associate professor	Lodz University of Technology (TUL) is one of the largest	Development of methods for new content generation and for derivation	–	RTO

	<a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Electrical, Electronic, Computer and Control Engineering	<a href="mailto:jacek.kucharski@p.lodz.pl">jacek.kucharski@p.lodz.pl</a>	technical universities in Poland. It employs 1,250 academic staff, 500 PhDs conduct research in 12 scientific disciplines and has 12,000 students. TUL carries out European projects and actively transfers R&D solutions to industry.	of latent semantic image representations		
62.	Military Institute of Armoured and Automotive Technology	Marek Nowakowski, assistant professor <a href="mailto:marek.nowakowski@witpis.eu">marek.nowakowski@witpis.eu</a>	The Institute's area of activity: scientific research relating to the construction and operation of military land vehicles, analyzes, expertise, opinions in the field of construction and operation of special vehicles and military equipment; development and implementation of research methodologies; product certification	Testing of indicators: Detection System – Artificial Intelligence – integrity of both Unmanned ground and aerial drone systems		RTO
<b>EDF-2022-LS-RA-CHALLENGE-DIGIT-HTDP: Unmanned ground and aerial systems for hidden threats detection – Participation to a technological challenge</b>						
63.	Military Institute of Armoured and Automotive Technology	Marek Szudrowicz, R&D Expert, <a href="mailto:marek.szudrowicz@witpis.eu">marek.szudrowicz@witpis.eu</a>	The Institute's area of activity: scientific research relating to the construction and operation of military land vehicles, analyzes, expertise, opinions in the field of construction and operation of special vehicles and military equipment; development and implementation of research methodologies; product certification	Cooperation in generating and collecting knowledge in the area of solutions to detect IEDs and landmines in complex environments and in combination with unmanned vehicles. Creating the testing environment set up.		RTO
64.	Łukasiewicz Research Network – Automotive Industry Institute  <a href="http://pimot.lukasiewicz.gov.pl/">http://pimot.lukasiewicz.gov.pl/</a>	<a href="mailto:konred.malek@pimot.lukasiewicz.gov.pl">konred.malek@pimot.lukasiewicz.gov.pl</a>	The Łukasiewicz – PIMOT mission is to provide Polish entrepreneurs (chiefly of the transport, fuels, and renewable energy sources sectors) with strong scientific and research support in the processes of product development and	Unmanned ground vehicles on the VI TRL or higher, dedicated to the project. Research and engineering work within the scope of electrical drives of Unmanned ground vehicles (UGV), energy sources, and broadly construed UGV mechatronics. Łukasiewicz Research Network –	Horizon 2020 – WEEVIL.  PR 7 – OPIBODY.  EUREKA -	RTO

			introduction of the products into world markets.	<p>Automotive Industry Institute performs work in the scope of:</p> <ul style="list-style-type: none"> <li>- Traction calculations and designing of drive systems for UGV;</li> <li>- Designing of electrical installations accounting for electrical safety issues;</li> <li>- Programming of on-board computers and development of IT networks in electric UGV;</li> <li>- Testing of energy sources (cells, supercapacitors);</li> <li>- Experimental verification of electric drives of electric vehicles on engine test stands for chassis (measurements of mechanical and electrical parameters);</li> <li>- Development of electronically controlled steer-by-wire systems and brake-by-wire systems as well as regenerative braking;</li> <li>- Development of test stands along with software;</li> <li>- UGV communication and integration with other assets.</li> </ul>	BIGASDRIVE (PL-UKR).	
65.	<p>Research and Development Centre for Mechanical Equipment OBRUM Ltd.</p> <p><a href="https://obrum.pl/en/company/">https://obrum.pl/en/company/</a></p>	<p>Magdalena Król, Specialist for research and development projects, <a href="mailto:m.krol@obrum.pl">m.krol@obrum.pl</a>, 500 - 214 - 493</p>	<p>OBRUM creates products intended for the Polish Armed Forces. The main customers of the works are land forces, including mechanised, armoured, radiolocation and engineering forces. An entity of the Polish Armament Group.</p>	<ul style="list-style-type: none"> <li>- Devices for transferring data from land platforms available on the battlefield,</li> <li>- Development of HMI for visualization of processed data.</li> </ul>		Industry
66.	<p>JAKUSZ Sp. z o.o. <a href="mailto:jakusz@jakusz.com">jakusz@jakusz.com</a></p>	<p>Bartosz Jakusz Company President <a href="mailto:bartosz.jakusz@jakusz.com">bartosz.jakusz@jakusz.com</a></p>	<p>JAKUSZ activity areas:</p> <ul style="list-style-type: none"> <li>- EOD Technicians Training Centre</li> </ul>	<p>Cooperation in the area of:</p> <ul style="list-style-type: none"> <li>- explosion and bombing scene investigation</li> </ul>		SME

			<ul style="list-style-type: none"> <li>- Munitions disposal - Chemical installation and materials</li> <li>- Protection against explosion effects (explosion containment vessels)</li> <li>- Storage structures for hazardous materials</li> <li>- Information security and critical infrastructure protection</li> </ul>	<ul style="list-style-type: none"> <li>- new method to land clearance of unexploded ordnance,</li> <li>- test range and infrastructure enabling work with explosives,</li> <li>- development of equipment for detection, transport, storage and neutralization of hazardous materials</li> </ul>		
67.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Mechanical Engineering	Leszek Podseǳkowski professor <a href="mailto:leszek.podsedkowski@p.lodz.pl">leszek.podsedkowski@p.lodz.pl</a> +48 601 227 427	Lodz University of Technology (TUL) is one of the largest technical universities in Poland. It employs 1,250 academic staff, 500 PhDs conduct research in 12 scientific disciplines and has 12,000 students. TUL carries out European projects and actively transfers R&D solutions to industry.	An unmanned aerial vehicle designed to automatic locate, intercept and neutralise unwanted UAV. It will perform vertical take-off and landing (VTOL) and transition to horizontal flight. An innovative technology will ensure very high speeds.	–	RTO
<b>EDF-2022-LS-RA-CHALLENGE-DIGIT-HTDO: Unmanned ground and aerial systems for hidden threats detection – Organisation of a technological challenge</b>						
68.	Łukasiewicz Research Network – Automotive Industry Institute  <a href="http://pimot.lukasiewicz.gov.pl/">http://pimot.lukasiewicz.gov.pl/</a>	<a href="mailto:konred.malek@pimot.lukasiewicz.gov.pl">konred.malek@pimot.lukasiewicz.gov.pl</a>	The Łukasiewicz – PIMOT mission is to provide Polish entrepreneurs (chiefly of the transport, fuels, and renewable energy sources sectors) with strong scientific and research support in the processes of product development and introduction of the products into world markets.	Unmanned ground vehicles on the VI TRL or higher, dedicated to the project. Research and engineering work within the scope of electrical drives of Unmanned ground vehicles (UGV), energy sources, and broadly construed UGV mechatronics. Łukasiewicz Research Network – Automotive Industry Institute performs work in the scope of: <ul style="list-style-type: none"> <li>- Traction calculations and designing of drive systems for UGV;</li> <li>- Designing of electrical installations accounting for electrical safety issues;</li> <li>- Programming of on-board computers and development of IT networks in electric UGV;</li> <li>- Testing of energy sources (cells, supercapacitors);</li> </ul>	Horizon 2020 – WEEVIL.  PR 7 – OPIBODY.  EUREKA - BIGASDRIVE (PL-UKR).	RTO

				<ul style="list-style-type: none"> <li>- Experimental verification of electric drives of electric vehicles on engine test stands for chassis (measurements of mechanical and electrical parameters);</li> <li>- Development of electronically controlled steer-by-wire systems and brake-by-wire systems as well as regenerative braking;</li> <li>- Development of test stands along with software;</li> <li>- UGV communication and integration with other assets.</li> </ul>		
69.	JAKUSZ Sp. z o.o. jakusz@jakusz.com	Bartosz Jakusz Company President <a href="mailto:bartosz.jakusz@jakusz.com">bartosz.jakusz@jakusz.com</a>	JAKUSZ activity areas: - EOD Technicians Training Centre - Munitions disposal - Chemical installation and materials - Protection against explosion effects (explosion containment vessels) - Storage structures for hazardous materials - Information security and critical infrastructure protection	Cooperation in the area of: - explosion and bombing scene investigation - new method to land clearance of unexploded ordnance, - test range and infrastructure enabling work with explosives, - development of equipment for detection, transport, storage and neutralization of hazardous materials		SME
<b>ENERGY RESILIENCE AND ENVIRONMENTAL TRANSITION (ENERENV)</b>						
<b>EDF-2022-RA-ENERENV-CUW: Sustainable components for underwater applications</b>						
70.	Military University of Technology;  <a href="https://www.wojsko-polskie.pl/wat/en/">https://www.wojsko-polskie.pl/wat/en/</a>	Judyta Sienkiewicz, Ph.D.; assistant profesor; <a href="mailto:judyta.sienkiewicz@wat.edu.pl">judyta.sienkiewicz@wat.edu.pl</a> ; +48 507 605 967  Bartosz Fikus, Ph.D.; assistant profesor; <a href="mailto:bartosz.fikus@wat.edu.pl">bartosz.fikus@wat.edu.pl</a> ; +48 784 071 857	MUT is a modern, polytechnic university that serves science by educating research and teaching staff in addition to students in areas of the national economy and the Polish Armed Forces. MUT, as a recognized and highly reputable polytechnic university, cooperates with numerous universities, institutions and research centers in Poland and abroad.	preparation of samples for microstructural analysis, materials characterization, microstructure analysis, static testing, dynamic testing, hardness testing, failure analysis of the geometry measurement, ballistic experimental and numerical simulations	EDA-AMALIA EDA-RECBALL EDA-SAAT	RTO

71.	<p>Instytut Techniczny Wojsk Lotniczych (Air Force Institute of Technology)</p> <p><a href="http://www.itwl.pl/en/">www.itwl.pl/en/</a></p>	<p>Piotr JANUSZ External Relations Officer <a href="mailto:piotr.janusz@itwl.pl">piotr.janusz@itwl.pl</a></p> <p>Krzysztof DRAGAN Head of Aircraft Airworthiness Division <a href="mailto:krzysztof.dragan@itwl.pl">krzysztof.dragan@itwl.pl</a></p>	<p>Air Force Institute of Technology is a Polish leader in scientific and research support for military aviation. It develops innovative solutions and maintains the highest performance level of the technology in use. The Institute cooperates with numerous R&amp;D companies and armament manufacturers, carrying out works for NATO, EDA, EC.</p>	<p>Climate and aging environmental conditions tests (temperature, humidity, UV radiation) on materials or finished products.</p> <p>Tensile, compression, bending and shear tests to determine strength and other mechanical properties of metals, alloys and polymer composites.</p> <p>Fracture toughness, low cycle, high cycle and fatigue crack growth rate tests.</p>	<p>European Commission: 5D-AeroSafe, OPARUS, WIMAAS, CAESARIS, EDF (call 2021): EU HYDEF EDA: ERA (I/II), SAMAS (I/II), ASTYANAX, NAGSMA: AGS BattleLab STO: RTGs in AVT &amp; SCI Tech. Panels</p>	RTO
72.	<p>Łukasiewicz Research Network – Institute of Engineering for Polymer Materials and Dyes</p> <p><a href="https://impib.lukasiewicz.gov.pl/">https://impib.lukasiewicz.gov.pl/</a></p>	<p>Monika Kurpas Chief Specialist, Commercialization Department <a href="mailto:monika.kurpas@impib.lukasiewicz.gov.pl">monika.kurpas@impib.lukasiewicz.gov.pl</a></p> <p>Agnieszka Staniszewska Manager. Project Management Department <a href="mailto:agnieszka.staniszewska@impib.lukasiewicz.gov.pl">agnieszka.staniszewska@impib.lukasiewicz.gov.pl</a></p>	<p>As the Łukasiewicz Research Network - Institute for Engineering of Polymer Materials and Dyes, we have been closely cooperating with industry and business for many years, providing the highest quality services for large, medium and small enterprises. We specialize in areas of the economy such as construction, transport, environmental protection, military services, medicine and health protection, as well as broadly understood production.</p>	<p>Designing new piezoelectric materials. We have experience in this topic.</p> <p>The objective of our last project was to manufacture the polymer composites based on well-known polyolefins such like polyethylene PE and polypropylene PP, which also show crystalline structure. These non-polar polymers have been appropriately modified to enable the formation of the durable electric charges in them.</p> <p>The advantages of the elaborated composites is easiness of their modification, known processing method, lack of toxic heavy metals (like in ceramic sensors), possibility of shaping (also thin films), flexibility and low price.</p>	None	RTO
73.	<p>Łukasiewicz Research Network - Institute of Non-Ferrous Metals</p>	<p>Dr hab. Aleksandra Kolano-Burian Director of Centre of Functional Materials</p>	<p>Łukasiewicz Research Network - Institute of Non-Ferrous Metals (Ł-IMN) is a research centre of the Polish non-ferrous industry. Complex activities cover all stages of metallic materials</p>	<p>Institute of Non-Ferrous Metals is a part of the Łukasiewicz Research Network, the third-largest research network in Europe. Łukasiewicz Research Network – Institute of Non-Ferrous Metals has a high</p>		RTO



		<a href="mailto:aleksandra.kolano-burian@imn.lukasiewicz.gov.pl">aleksandra.kolano-burian@imn.lukasiewicz.gov.pl</a>	production: from ore treatment to technologies for production of modern product meeting all environmental standards.	experience in synthesising and testing ceramic materials, including nanoparticles, high-entropy compounds, ferrites and multiferroics. We specialise in testing the new synthesis methods of new compounds, their structure and the description of dielectric properties in wide frequency and temperature ranges. Our interest also concentrates on preparing filaments for 3D printing of multifunctional composites containing oxide particles and nanoparticles.		
74.	Łukasiewicz Research Network – Industrial Research Institute for Automation and Measurements PIAP	JÓZEF WRONA Director of International Cooperation Programme for Defence Technologies <a href="mailto:jozef.wrona@piap.lukasiewicz.gov.pl">jozef.wrona@piap.lukasiewicz.gov.pl</a> tel.: +48228740302, mob.: +48602433035 <a href="https://piap.lukasiewicz.gov.pl/en/research-projects/">https://piap.lukasiewicz.gov.pl/en/research-projects/</a>	Ł-PIAP is a state entity focused on R&D and implementation new technologies in autonomous mobile platforms in various areas of use, mainly for defense and security, automation systems, production devices and control, measurement equipment. The first robot was produced for the Polish police in 1999.	<ul style="list-style-type: none"> <li>• Video processing for underwater navigation and object detection</li> <li>• Software integration</li> </ul>	<ul style="list-style-type: none"> <li>• EDA SABUVIS</li> <li>• EDA SABUVIS 2</li> <li>• H2020 ALADDIN</li> <li>• H2020 ASSISTANCE</li> <li>• H2020 CAMELOT</li> </ul>	RTO
75.	EXPLOMET GAŁKA, SZULC SPÓŁKA KOMANDTYOWA	ZYGMUNT SZULC – DYREKTOR, <a href="mailto:zygmunt.szulc@explomet.pl">zygmunt.szulc@explomet.pl</a> , +48601473524	EXPLOMET is a company specializes in explosive cladding technology. The highly qualified and experienced staff of engineers oversees production and quality. We also have a professional research and development facilities, allowing development works, in the field of composites and their applications.	The technology of explosive cladding of metals, in which Explomet specializes, can be used to produce three-layer elements that meet the requirements of electromagnetic impulse protection, while at the same time performing structural and corrosion-resistant functions in marine conditions, including underwater.	PADR PILUM	SME
<b>MATERIALS AND COMPONENTS (MATCOMP)</b>						
<b>EDF-2022-RA-MATCOMP-PACOMP: Packaging technologies for critical defence components</b>						

76.	Military Institute of Armament Technology; Zielonka, Poland <a href="http://www.witu.mil.pl">www.witu.mil.pl</a>	Tomasz Meda <a href="mailto:merdat@witu.mil.pl">merdat@witu.mil.pl</a>	MIAT is a leading R&D institution for the Polish Armed Forces and covers most aspects of development and testing of weapons, ammunition and armours of the Land Forces. MIAT has 6 laboratories accredited by the Polish MOD and Polish Accreditation Center, including its own area for field testing	Smart, miniature sensor for environmental conditions control in ammunition containers, placed in a transport box.	EDF/ <a href="#">NEWHEAT</a> EDA-ENNSA RRT/ <a href="#">Round Robin Test</a> EDA/ <a href="#">PREMIUM</a> EDA/ <a href="#">AMTEM</a>	RTO
77.	Warsaw University of Technology (WUT)	Prof. Krzysztof KULPA, Radar Technologies Lab Director, <a href="mailto:krzysztof.kulpa@pw.edu.pl">krzysztof.kulpa@pw.edu.pl</a>	University with specialized Radar Systems Technology Lab, capable to research, design and develop of the advanced and innovative RF products and solutions including SAR, EW (jamming, ELINT and SIGINT), ISAR	Passive and active radar system design and development Sensing fusion algorithm development and implementation	EDA MAPIS, JAMPAR, SEPROM	RTO
78.	XY-Sensing	Dr. Piotr SAMCZYŃSKI, CEO <a href="mailto:psamczyn@xysensing.pl">psamczyn@xysensing.pl</a>	Spin-off of Warsaw University of Technology (WUT), SME specialized in SAR/ISAR technologies, passive radar technologies, and RF Sensing technologies	Passive and active radar design and development SAR/ISAR systems design and development, radar signal processing development. Consulting in sensing technologies	EDF ARTURO	SME
79.	Instytut Techniczny Wojsk Lotniczych (Air Force Institute of Technology) <a href="http://www.itwl.pl/en/">www.itwl.pl/en/</a>	Piotr JANUSZ External Relations Officer <a href="mailto:piotr.janusz@itwl.pl">piotr.janusz@itwl.pl</a>  Mariusz ZIEJA Head of IT Logistics Support Division <a href="mailto:mariusz.zieja@itwl.pl">mariusz.zieja@itwl.pl</a>	Air Force Institute of Technology is a Polish leader in scientific and research support for military aviation. It develops innovative solutions and maintains the highest performance level of the technology in use. The Institute cooperates with numerous R&D companies and armament manufacturers, carrying out works for NATO, EDA, EC.	Planning, placement of sensors on load-bearing structures, monitoring of load-bearing structures., Creation of digital models of military platforms. Certification, security, reliability analysis, resource management, logistics, information exchange platforms.	European Commission: 5D-AeroSafe, OPARUS, WIMAAS, CAESARIS, EDF (call 2021): EU HYDEF EDA: ERA (I/II), SAMAS (I/II), ASTYANAX, NAGSMA: AGS BattleLab STO: RTGs in AVT & SCI Tech. Panels	RTO
80.	Łukasiewicz Research Network – Institute of Engineering for	Monika Kurpas Chief Specialist, Commercialization Department	As the Łukasiewicz Research Network - Institute for Engineering of Polymer Materials and Dyes, we have	Development of elastomeric and plastomeric components to protect components from damage by damping vibration, shock and impact.	None	RTO

	Polymer Materials and Dyes <a href="https://impib.lukasiewicz.gov.pl/">https://impib.lukasiewicz.gov.pl/</a>	<a href="mailto:monika.kurpas@impib.lukasiewicz.gov.pl">monika.kurpas@impib.lukasiewicz.gov.pl</a>  Agnieszka Staniszevska Manager. Project Management Department <a href="mailto:agnieszka.staniszevska@impib.lukasiewicz.gov.pl">agnieszka.staniszevska@impib.lukasiewicz.gov.pl</a>	been closely cooperating with industry and business for many years, providing the highest quality services for large, medium and small enterprises. We specialize in areas of the economy such as construction, transport, environmental protection, military services, medicine and health protection, as well as broadly understood production.	Physicomechanical, chemical and thermal tests, including dynamic, fatigue, accelerated ageing and heat resistance tests, of the applied materials.  We have a universal testing machine with a range of 100kN, equipped with a chamber for tests at elevated and lowered temperatures, DSC, DMA, TG, SEM+EDX devices, as well as the ability to simulate extreme environmental conditions.		
<b>EDF-2022-DA-MATCOMP-SMT: Smart and multifunctional textiles</b>						
81.	Military Institute of Armament Technology; <a href="https://www.witu.mil.pl/wp/en/">https://www.witu.mil.pl/wp/en/</a>	Dawid Pacek PhD, MSc Assistant Professor / Adjunct <a href="mailto:pacekd@witu.mil.pl">pacekd@witu.mil.pl</a> 48 667400144	MIAT is a leading R&D institution for the Polish Armed Forces and covers most aspects of development and testing of weapons, ammunition and armours of the Land Forces. MIAT has 6 laboratories accredited by the Polish MOD and Polish Accreditation Center, including its own area for field testing	1) designing of protective structures to maintain functionality of smart textiles in a hostile environment 2) testing if added functionalities remain compatible with ballistic and protective functions 3) subjecting to different environmental conditions 4) resistance tests to mechanical damage and fire	EDF/ <a href="#">NEWHEAT</a>  EDA-ENNSA RRT/ <a href="#">Round Robin Test</a>  EDA/ <a href="#">PREMIUM</a>  EDA/ <a href="#">AMTEM</a>	RTO
82.	Warsaw University of Technology (WUT)	Prof. Krzysztof KULPA, Radar Technologies Lab Director, <a href="mailto:krzysztof.kulpa@pw.edu.pl">krzysztof.kulpa@pw.edu.pl</a>	University with specialized Radar Systems Technology Lab, capable to research, design and develop of the advanced and innovative RF products and solutions including SAR, EW (jamming, ELINT and SIGINT), ISAR	Active protection against SAR reconnaissance Anti-RF reconnaissance cover (coating)	EDA MAPIS, JAMPAR, SEEPROM	RTO
83.	Łukasiewicz Research Network – Institute of Engineering for Polymer Materials and Dyes	Monika Kurpas Chief Specialist, Commercialization Department <a href="mailto:monika.kurpas@impib.lukasiewicz.gov.pl">monika.kurpas@impib.lukasiewicz.gov.pl</a>	As the Łukasiewicz Research Network - Institute for Engineering of Polymer Materials and Dyes, we have been closely cooperating with industry and business for many years, providing the highest	Performing tests of physicomechanical and thermal properties of materials. We have a universal testing machine with a range of 100kN, equipped with a chamber for tests at elevated and lowered temperatures, DSC and	None	Research Institute

	<a href="https://impib.lukasiewicz.gov.pl/">https://impib.lukasiewicz.gov.pl/</a>	Agnieszka Staniszewska Manager. Project Management Department <a href="mailto:agnieszka.staniszewska@impib.lukasiewicz.gov.pl">agnieszka.staniszewska@impib.lukasiewicz.gov.pl</a>	quality services for large, medium and small enterprises. We specialize in areas of the economy such as construction, transport, environmental protection, military services, medicine and health protection, as well as broadly understood production.	DMA devices, as well as the ability to simulate extreme environmental conditions.  We have experience in designing, processing and testing of polymer materials with increased thermal and chemical resistance as well as antibacterial properties. We have our own physicochemical and biological laboratories.		
84.	Lukasiewicz Research Network - Institute of Non-Ferrous Metals	Dr hab. Aleksandra Kolano-Burian Director of Centre of Functional Materials <a href="mailto:aleksandra.kolano-burian@imn.lukasiewicz.gov.pl">aleksandra.kolano-burian@imn.lukasiewicz.gov.pl</a>	Łukasiewicz Research Network - Institute of Non-Ferrous Metals (Ł-IMN) is a research centre of the Polish non-ferrous industry. Complex activities cover all stages of metallic materials production: from ore treatment to technologies for production of modern product meeting all environmental standards.	Institute of Non-Ferrous Metals is a part of the Łukasiewicz Research Network, the third-largest research network in Europe. Łukasiewicz Research Network – Institute of Non-Ferrous Metals has a high experience in synthesising and testing ceramic materials, including nanoparticles, high-entropy compounds, ferrites and multiferroics. We specialise in testing the new synthesis methods of new compounds and the description of dielectric properties: electrical conductivity, magnetodielectric properties, and shielding properties in wide frequency and temperature ranges. Our interest also concentrates on preparing filaments for 3D printing of multifunctional composites and producing nano- and macrofibres using the electrospinning technique.		RTO
85.	Łukasiewicz Research Network – Institute of Precision Mechanics in Warsaw	Dr Lech Kwiatkowski Email: <a href="mailto:lech.kwiatkowski@imp.lukasiewicz.gov.pl">lech.kwiatkowski@imp.lukasiewicz.gov.pl</a> Tel. +48 22 22 56 02 846	The Institute conducts high-quality research, development and implementation activities relating to surface treatment of metallic products and improvement of mechanical properties, durability and	A new generation of material that allow for thermal isolation (temporary fire resistant). The materials can be integrated into the soldier's uniform. The thickness can be less than 2mm. The proposed material is elastic, can be bend and is washable.		RTO

	<a href="http://imp.edu.pl">http://imp.edu.pl</a>		corrosion resistance of tools, machine parts and structures.			
86.	Lukasiewicz Research Network Lodz Institute of Technology (L-LIT) <a href="https://lit.lukasiewicz.gov.pl">https://lit.lukasiewicz.gov.pl</a>	Izabela Jasińska, R&D senior specialist <a href="mailto:izabela.jasinska@lit.lukasiewicz.gov.pl">izabela.jasinska@lit.lukasiewicz.gov.pl</a> +48422534411	L-LIT has experience in research on fibre-based functional textiles including: - develop unconventional textiles structures for applications such textronic solutions, composites reinforcement; - innovative finishing processes; - physico-chemical textile materials modification, including nanotechnology.	Study of raw materials suitable to create textile structures with desired properties able to use in uniforms and/or technical products. Development and functionalization of textile-based woven and non-woven structures dedicated for uniforms and/or technical products.	-	RTO
87.	Institute of Security Technologies MORATEX; <a href="http://moratex.eu">http://moratex.eu</a>	Paweł Kubiak, PhD, International Cooperation Coordinator, R&D Department, (pkubiak@moratex.eu)	MORATEX provides R&D, implementation & certification activities in security technologies, materials & products, CBRN, textiles, composites, ballistic & protective equipment, medical devices, risk analysis, camouflage, usability engineering, dynamic computer simulation, personalization and individualization of the textile equipment, acceleration ageing studies. The quality of our solutions/ products are proven by domestic/international organizations and government.	R&D, R&I in CBRN, ballistic, protective equipment solutions and procedures. Innovative materials, composites, elastomers, textiles. SOTA, COTS, risk analysis, usability engineering, accelerated ageing studies, 3D scanning, customization/personalization/ individualisation, VR/AR solutions, CAD systems (eg. ANSYS, Optitex). Accredited Ballistic, Metrological, Chemical Laboratories.	H2020 – Prevent H2020 – PreventPCP FP7 – D-BOX	R&D Institute
88.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Mechanical Engineering	Bożena Pietrzyk associate professor <a href="mailto:bozena.pietrzyk@p.lodz.pl">bozena.pietrzyk@p.lodz.pl</a>	Lodz University of Technology (TUL) is one of the largest technical universities in Poland. It employs 1,250 academic staff, 500 PhDs conduct research in 12 scientific disciplines and has 12,000 students. TUL carries out European projects and actively transfers R&D solutions to industry.	Sol-gel coatings on fibers, textiles or continuous surfaces. Depending on the type of coating used, they can exhibit hydrophobic (water repellence), photocatalytic (dirt repellence), antibacterial or conductive properties. These can be multi-layer and multi-functional coatings.	-	RTO
89.	Lodz University of Technology (TUL),	Sławomir Wiak professor	As above.	Smart sensors and multi-functional textiles with energy harvesting	-	RTO

	<a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Electrical, Electronic, Computer and Control Engineering and Faculty of Material Technologies and Textile Design	<a href="mailto:slawomir.wiak@p.lodz.pl">slawomir.wiak@p.lodz.pl</a> +48 603 669 428  Katarzyna Grabowska professor <a href="mailto:katarzyna.grabowska@p.lodz.pl">katarzyna.grabowska@p.lodz.pl</a> +48 781 600 604		functionality applied to defence applications.		
90.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Material Technologies and Textile Design	Zbigniew Draczyński associate professor <a href="mailto:Zbigniew.draczynski@p.lodz.pl">Zbigniew.draczynski@p.lodz.pl</a> +48 42 631 33 60	As above.	The Institute has know-how in the field of designing and making active reusable masks for the protection of the upper respiratory tract with antibacterial and antiviral properties (Sars CoV-2) made in the ffp2 standard. The Institute has know-how in the field of optical camouflage prints.	–	RTO
91.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Material Technologies and Textile Design	Zbigniew Stempień associate professor <a href="mailto:zbigniew.stempien@p.lodz.pl">zbigniew.stempien@p.lodz.pl</a>	As above.	We can fabricate polymer-, graphene-, silver-based electroconductive layers on different textile substrates by using inkjet printing technique. By combination of these layers different sensors and actuators were fabricated and tested like pressure, strain, temperature sensors, supercapacitors, heaters and other.	–	RTO
92.	Silesian University of Technology, <i>NanoCarbon Group</i>	slawomir.boncel@polsl.pl		Functional carbon nanotube coating-based paintable or printable textronics for short-term and sustained Holter-type electrocardiography		RTO
<b>AIR COMBAT (AIR)</b>						
<b>EDF-2022-DA-AIR-AEW: Airborne electronic warfare</b>						
93.	Warsaw University of Technology (WUT)	Prof. Krzysztof KULPA, Radar Technologies Lab Director, <a href="mailto:krzysztof.kulpa@pw.edu.pl">krzysztof.kulpa@pw.edu.pl</a>	University with specialized Radar Systems Technology Lab, capable to research, design and develop of the advanced and innovative RF products and solutions including SAR, EW	Passive and active radar system design and development Sensing fusion algorithm development and implementation ISR systems design and development including smart active jamming	EDA MAPIS, JAMPAR, SEPROM	RTO

			(jamming, ELINT and SIGINT), ISAR,			
94.	XY-Sensing	Dr. Piotr SAMCZYŃSKI, CEO psamczyn@xysensing.pl	Spin-off of Warsaw University of Technology (WUT), SME specialized in SAR/ISAR technologies, passive radar technologies, and RF Sensing technologies	Passive and active radar design and development SAR/ISAR systems design and development, radar signal processing development. Consulting in sensing technologies	EDF ARTURO	SME
95.	Łukasiewicz Research Network - Institute of Non-Ferrous Metals Division in Poznan <a href="https://claiopoznan.pl/en/home-page/">https://claiopoznan.pl/en/home-page/</a>	Katarzyna Lota, Leader of Research Group of New Technologies for Energy Storage <a href="mailto:katarzyna.lota@imn.lukasiewicz.gov.pl">katarzyna.lota@imn.lukasiewicz.gov.pl</a>	We carry out research focused on manufacture and modernization of energy storage. We can offer extensive expertise in the fields of battery testing and certification according to international regulations, including standardisation and safety tests, as well as individual testing programs.	Development of chemical power sources to power electrical and electronic systems in airborne electronic warfare  - electrical and endurance tests of batteries, devices, systems, materials	-	RTO
<b>GROUND COMBAT (GROUND)</b>						
<b>EDF-2022-DA-GROUND-CGC: Collaborative combat for land forces</b>						
96.	Huta Stalowa Wola S.A. www.hsw.pl	Marek Szudrowicz <a href="mailto:m.szudrowicz@hsw.pl">m.szudrowicz@hsw.pl</a> +48 693 740 044	HSW area activity are specialized vehicles for artillery, engineering and mechanized troops. Design platforms in terms of construction and technology. Create vehicles hardware and IT architecture. Create information acquisition and processing systems to enhance command and control of platforms.	New solutions demonstration and implementation for land tracked and wheeled vehicles. Cooperation in analysis of operational scenarios, feasibility studies, definition of the technical specifications, design, partial tests for risk reduction, prototyping and prototype testing.	EDF-2021-GROUND-D-UGVT COMMANDS project - subcontractor	Large company
97.	Łukasiewicz Research Network – Industrial Research Institute for Automation and Measurements PIAP	JÓZEF WRONA Director of International Cooperation Programme for Defence Technologies <a href="mailto:jozef.wrona@piap.lukasiewicz.gov.pl">jozef.wrona@piap.lukasiewicz.gov.pl</a>	Ł-PIAP is a state entity focused on R&D and implementation new technologies in autonomous mobile platforms in various areas of use, mainly for defense and security, automation systems, production devices and control,	UGV R&D (including hardware, mechanics, electronics, software, etc), Vehicle set designed for autonomous off-road development based on pickup type car (2 vehicles), Unmanned Vehicles from 1.5kg up to 3500kg	MUSICODE, MUSAS, ERA, TALOS	RTO

		tel.: +48228740302, mob.: +48602433035 <a href="https://piap.lukasiewicz.gov.pl/en/research-projects/">https://piap.lukasiewicz.gov.pl/en/research-projects/</a>	measurement equipment. The first robot was produced for the Polish police in 1999.	High mobility Unmanned Ground Vehicle 3500kg designed to test and development autonomous work MESH, M2M, V2V communication.		
98.	Military Institute of Armoured and Automotive Technology	Krzysztof Kosiuczenko, assistant professor krzysztof.kosiuczenko@witpis.eu	The Institute's area of activity: scientific research relating to the construction and operation of military land vehicles, analyzes, expertise, opinions in the field of construction and operation of special vehicles and military equipment; development and implementation of research methodologies; product certification	Cooperation in analysis of operational scenarios, feasibility studies, definition of the technical specifications, partial tests for risk reduction of new or upgraded vehicles Analysis of standards and their evolution proposals;		RTO
99.	Łukasiewicz Research Network – Automotive Industry Institute  <a href="http://pimot.lukasiewicz.gov.pl/">http://pimot.lukasiewicz.gov.pl/</a>	<a href="mailto:konred.malek@pimot.lukasiewicz.gov.pl">konred.malek@pimot.lukasiewicz.gov.pl</a>	The Łukasiewicz – PIMOT mission is to provide Polish entrepreneurs (chiefly of the transport, fuels, and renewable energy sources sectors) with strong scientific and research support in the processes of product development and introduction of the products into world markets.	Unmanned ground vehicles on the VI TRL or higher, dedicated to the project. UGV energy management and distribution. UGV tests in deferent conditions – city, terrain. UGV communication and integration with other assets.	-	No classified
100.	Łukasiewicz Research Network - Institute of Non-Ferrous Metals Division in Poznan  <a href="https://claio.poznan.pl/en/home-page/">https://claio.poznan.pl/en/home-page/</a>	Katarzyna Lota, Leader of Research Group of New Technologies for Energy Storage  <a href="mailto:katarzyna.lota@imn.lukasiewicz.gov.pl">katarzyna.lota@imn.lukasiewicz.gov.pl</a>	We carry out research focused on manufacture and modernization of energy storage. We can offer extensive expertise in the fields of battery testing and certification according to international regulations, including standardisation and safety tests, as well as individual testing programs.	Development of chemical power sources to power electrical and electronic systems in collaborative ground combat  - electrical and endurance tests of batteries, devices, systems, materials	-	RTO



101.	JAKUSZ Sp. z o.o. <a href="mailto:jakusz@jakusz.com">jakusz@jakusz.com</a>	Bartosz Jakusz Company President <a href="mailto:bartosz.jakusz@jakusz.com">bartosz.jakusz@jakusz.com</a>	Company JAKUSZ, activity is focused in the following areas: - Chemical installation and materials - Protection against explosion effects (explosion containment vessels) - Storage structures for hazardous materials - Information security and critical infrastructure protection - Munitions disposal - EOD Technicians Training Centre	New elements of hydrogen-based power systems of vehicles and platforms. Cooperation in analysis of operational scenarios, feasibility studies, definition of the technical specifications, partial tests for risk reduction, prototype testing. Analysis of standards and their evolution proposals.		SME
102.	Research and Development Centre for Mechanical Equipment OBRUM Ltd.  <a href="https://obrum.pl/en/company/">https://obrum.pl/en/company/</a>	Magdalena Król, Specialist for research and development projects, <a href="mailto:m.krol@obrum.pl">m.krol@obrum.pl</a> , 500 - 214 - 493	OBRUM creates products intended for the Polish Armed Forces. The main customers of the works are land forces, including mechanised, armoured, radiolocation and engineering forces. An entity of the Polish Armament Group.	<ul style="list-style-type: none"> <li>- Communication with the vehicle using the PCAN bus;</li> <li>- Use of interchangeable content using Asset Bundle technology in the Unity3D environment;</li> <li>- Creation of a hardware element together with software;</li> <li>- Project management and analysis of project requirements for the purposes of their implementation;</li> <li>- Created a system that allows easy detection of defects and creation of a list of spare parts. We would like to refine it and enlarge it with more products – at the moment it is only available for MS20/MG20. Unifying this system would allow us to integrate more easily with other hardware vendors.</li> </ul>		Industry
<b>FORCE PROTECTION AND MOBILITY (PROTMOB)</b>						
<b>EDF-2022-RA-PROTMOB-FMTC: Future mid-size tactical cargo aircraft</b>						
103.	Instytut Techniczny Wojsk Lotniczych (Air Force Institute of Technology) <a href="http://www.itwl.pl/en/">www.itwl.pl/en/</a>	Piotr JANUSZ External Relations Officer <a href="mailto:piotr.janusz@itwl.pl">piotr.janusz@itwl.pl</a>  Mariusz ZIEJA	Air Force Institute of Technology is a Polish leader in scientific and research support for military aviation. It develops innovative solutions and maintains the highest performance level of the	Aircraft configuration management. Development of: mission management and planning systems, scheduling of cargo work activities, Supply chain management systems to enhance the operational and	European Commission: 5D-AeroSafe, OPARUS, WIMAAS, CAESARIS,	RTO

		Head of IT Logistics Support Division mariusz.zieja@itwl.pl	technology in use. The Institute cooperates with numerous R&D companies and armament manufacturers, carrying out works for NATO, EDA, EC.	reliability management of transport aircraft.	EDF (call 2021): EU HYDEF EDA: ERA (I/II), SAMAS (I/II), ASTYANAX, NAGSMA: AGS BattleLab STO: RTGs in AVT & SCI Tech. Panels.	
104.	Warsaw University of Technology, Faculty of Power and Aeronautical Engineering,  <a href="https://www.meil.pw.edu.pl/eng">https://www.meil.pw.edu.pl/eng</a>	dr inż. Wojciech Grendysa, assistant professor, <a href="mailto:wojciech.grendysa@pw.edu.pl">wojciech.grendysa@pw.edu.pl</a> , +48 22 234 5778, +48 503 150 579	Warsaw University of Technology is one of the oldest and the best technical university in Poland; in the ranking of Polish universities, it has taken the first place in its category for fifteen years. The Faculty of Power and Aeronautical Engineering is one of the best faculties at WUT.	Mission-Based Multidisciplinary Aircraft Design Optimization, Aerodynamic Aircraft Design, Airframe Design, CFD Analysis, Finite Element Analysis of Composite Structures, Flight Dynamics Modelling, Dynamic Stability and Control Analysis, Wind Tunnel Tests, Flight Tests, Prototyping and Manufacturing	EDA MAPIS, JAMPAR, SEPROM STO SET-242, STO SET-258 STO SET-320	RTO
105.	Łukasiewicz Research Network - Institute of Non-Ferrous Metals Division in Poznan  <a href="https://claio.poznan.pl/en/home-page/">https://claio.poznan.pl/en/home-page/</a>	Katarzyna Lota, Leader of Research Group of New Technologies for Energy Storage  <a href="mailto:katarzyna.lota@imn.lukasiewicz.gov.pl">katarzyna.lota@imn.lukasiewicz.gov.pl</a>	We carry out research focused on manufacture and modernization of energy storage. We can offer extensive expertise in the fields of battery testing and certification according to international regulations, including standardisation and safety tests, as well as individual testing programs.	Development of chemical power sources to power electrical and electronic systems in medium size tactical cargo  - electrical and endurance tests of batteries, devices, systems, materials		RTO
106.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Mechanical Engineering	Konrad Dybowski associate professor <a href="mailto:konrad.dybowski@p.lodz.pl">konrad.dybowski@p.lodz.pl</a>	Lodz University of Technology (TUL) is one of the largest technical universities in Poland. It employs 1,250 academic staff, 500 PhDs conduct research in 12 scientific disciplines and has 12,000 students. TUL carries out European projects and actively transfers R&D solutions to industry.	The research unit has scientific achievements in modern thermo-chemical treatments of machine parts, including aircraft engine gear parts. The developed FineCarb and PreNitLPC vacuum carburizing technologies have been implemented in the machinery industry worldwide	–	RTO

107.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Mechanical Engineering	Łukasz Kaczmarek professor <a href="mailto:lukasz.kaczmarek@p.lodz.pl">lukasz.kaczmarek@p.lodz.pl</a>	Lodz University of Technology (TUL) is one of the largest technical universities in Poland. It employs 1,250 academic staff, 500 PhDs conduct research in 12 scientific disciplines and has 12,000 students. TUL carries out European projects and actively transfers R&D solutions to industry.	Light weight graphene composite with enhanced mechanical properties	–	RTO
<b>NAVAL COMBAT (NAVAL)</b>						
<b>EDF-2022-DA-NAVAL-MSAS: Medium-size semi-autonomous surface vessel</b>						
108.	GDYNIA MARITIME UNIVERSITY <a href="https://umg.edu.pl/en/university">https://umg.edu.pl/en/university</a>	Prof. Adam Weintrit, Master Mariner, Rector of the GMU +48506960340; +48 585586442  Prof. Zbigniew Burciu, Master Mariner +48691033597	GMU is currently one of the most highly ranked maritime universities in the world. The scientific research projects carried out at the University are part of national and international programs financed by the National Science Centre the National Centre for Research and Development, and the EU.	GMU carries out research in the field of safety in maritime transport, safe operation of waterborne means of transport and Search and Rescue. The research team has a wide experience in numerical modeling and experimental investigations of waterborne units performance including new steering devices.	ESA.	RTO
109.	Łukasiewicz Research Network – Institute of Engineering for Polymer Materials and Dyes <a href="https://impib.lukasiewicz.gov.pl/">https://impib.lukasiewicz.gov.pl/</a>	Monika Kurpas Chief Specialist, Commercialization Department <a href="mailto:monika.kurpas@impib.lukasiewicz.gov.pl">monika.kurpas@impib.lukasiewicz.gov.pl</a>  Agnieszka Staniszewska Manager. Project Management Department <a href="mailto:agnieszka.staniszewska@impib.lukasiewicz.gov.pl">agnieszka.staniszewska@impib.lukasiewicz.gov.pl</a>	As the Łukasiewicz Research Network - Institute for Engineering of Polymer Materials and Dyes, we have been closely cooperating with industry and business for many years, providing the highest quality services for large, medium and small enterprises. We specialize in areas of the economy such as construction, transport, environmental protection, military services, medicine and health protection, as well as broadly understood production.	Development and matching of polymer components (elastomers and plastomers) used in a semi-autonomous surface ship. Physicomechanical, chemical and thermal tests, including accelerated ageing and heat resistance tests, of the applied materials.  We have a universal testing machine with a range of 100kN, equipped with a chamber for tests at elevated and lowered temperatures, DSC, DMA, TG, SEM+EDX devices, as well as the ability to simulate extreme environmental conditions.  Testing of properties of organic coatings, including: mechanical, resistance and optical properties.	None	Research Institute

110.	Lukasiewicz Research Network - Institute of Non-Ferrous Metals	Dr hab. Aleksandra Kolano-Burian Director of Centre of Functional Materials <a href="mailto:aleksandra.kolano-burian@imn.lukasiewicz.gov.pl">aleksandra.kolano-burian@imn.lukasiewicz.gov.pl</a>	Łukasiewicz Research Network - Institute of Non-Ferrous Metals (Ł-IMN) is a research centre of the Polish non-ferrous industry. Complex activities cover all stages of metallic materials production: from ore treatment to technologies for production of modern product meeting all environmental standards.	Institute of Non-Ferrous Metals is a part of the Łukasiewicz Research Network, the third-largest research network in Europe. Institute has a high experience in the field of converting energy. We are specialized in designed and adapted to energy sources (electric cell / or emergency techniques in the form of, for example, electric drive) and electric energy source techniques, technology with reduction of the losses, reduction of the system and size. Our interest also concentrates on coatings and absorbers that absorb or disperse microwave waves. Especially in the field of development, fabrication, and testing of coatings that can be used on the elements of a vessel in order to reduce its detectability by known radar systems and specialized coatings protecting sensitive electronics against the attack of high intensity microwave radiation.		RTO
111.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Mechanical Engineering	Łukasz Kaczmarek professor <a href="mailto:lukasz.kaczmarek@p.lodz.pl">lukasz.kaczmarek@p.lodz.pl</a>	Lodz University of Technology (TUL) is one of the largest technical universities in Poland. It employs 1,250 academic staff, 500 PhDs conduct research in 12 scientific disciplines and has 12,000 students. TUL carries out European projects and actively transfers R&D solutions to industry.	Light weight graphene composite with enhanced mechanical properties.	–	RTO
<b>EDF-2022-DA-NAVAL-NCS: Naval Collaborative Surveillance</b>						
112.	Warsaw University of Technology (WUT)	Prof. Krzysztof KULPA, Radar Technologies Lab Director, <a href="mailto:krzysztof.kulpa@pw.edu.pl">krzysztof.kulpa@pw.edu.pl</a>	University with specialized Radar Systems Technology Lab, capable to research, design and develop of the advanced and innovative RF products and solutions including SAR, EW	Passive and active radar system design and development Sensing fusion algorithm development and implementation	EDA MAPIS, JAMPAR, SEPRM	RTO

			(jamming, ELINT and SIGINT), ISAR,	ISR systems design and development including smart active jamming		
113.	XY-Sensing	Dr. Piotr SAMCZYŃSKI, CEO psamczyn@xysensing.pl	Spin-of of Warsaw University of Technology (WUT), SME specialized in SAR/ISAR technologies, passive radar technologies, and RF Sensing technologies	Passive and active radar design and development SAR/ISAR systems design and development, radar signal processing development. Consulting in sensing technologies	EDF ARTURO	SME
<b>UNDERWATER WARFARE (UWW)</b>						
<b>EDF-2022-RA-UWW-UTS: Underwater manned-unmanned teaming and swarms</b>						
114.	Gdańsk University of Technology, www.pg.edu.pl	PhD, E.Eng Agnieszka Czapiewska, Assistant professor, agnieszka.czapiewska@pg.edu.pl	Gdańsk Tech is awarded by Ministry of Science and Higher Education with title 'Initiative of Excellence – Research University'. At Gdańsk Tech are conducted research and development projects financed by the National Science Centre the National Centre for Research and Development, and the EU.	Gdańsk Tech has, among others, experience in research of wideband underwater communication with utilization of acoustic wave. Recent researches were conducted in static and moving conditions in difficult environment such as shallow waters and wrecks.	STO IST-187 RTG	RTO
115.	GDYNIA MARITIME UNIVERSITY <a href="https://umg.edu.pl/en/university">https://umg.edu.pl/en/university</a>	Prof. Adam Weintrit, Master Mariner, Rector of the GMU +48 506960340 +48585586442  Dr. Ryszard Studański, Associate professor; +48585586630	GMU is currently one of the most highly ranked maritime universities in the world. The scientific research projects carried out at the University are part of national and international programs financed by the National Science Centre the National Centre for Research and Development, and the EU.	For many years GMU has been carrying out research in the field of broadband data transmission in conditions of strong multipath that occur in shallow waters, ports and sunken wrecks. The research of the environment is in static and in motion conditions, and concerns the assessment of the parameters of the underwater acoustic channel and adaptive communication techniques. The University has a hydroacoustics laboratory dedicated to this research.		RTO
116.	JAKUSZ Sp. z o.o. <a href="mailto:jakusz@jakusz.com">jakusz@jakusz.com</a>	Bartosz Jakusz Company President <a href="mailto:bartosz.jakusz@jakusz.com">bartosz.jakusz@jakusz.com</a>	Company JAKUSZ, activity is focused in the following areas: - Chemical installation and materials - Protection against explosion effects (explosion containment vessels)	New elements of hydrogen-based power systems of vehicles and platforms and their movement characteristics. Cooperation in analysis of operational scenarios, feasibility studies, definition of the technical specifications, partial tests		SME

			<ul style="list-style-type: none"> <li>- Storage structures for hazardous materials</li> <li>- Information security and critical infrastructure protection</li> <li>- Munitions disposal</li> <li>- EOD Technicians Training Centre</li> </ul>	for risk reduction, prototyping and testing.		
<b>EDF-2022-RA-UWW-ODAC: Underwater observation, detection, acquisition and communications</b>						
117.	Polish Naval Academy <a href="https://www.amw.gdynia.pl/index.php/en/">https://www.amw.gdynia.pl/index.php/en/</a>	Stanisław Hożyń, <a href="mailto:s.hozyn@amw.gdynia.pl">s.hozyn@amw.gdynia.pl</a> , 698314500	The Polish Naval Academy is a leading research and development center for the Polish Navy, defense and maritime industry.	Signal and image processing using deep learning techniques, Signal analysis and modelling, Ships physical field measurement, Multidimensional physical surveillance and underwater reconnaissance	EDA SABUVIS, EDA SABUVIS II, EDA SIRAMIS	RTO
118.	Gdańsk University of Technology, <a href="http://www.pg.edu.pl">www.pg.edu.pl</a>	PhD, E.Eng Agnieszka Czapiewska, Assistant professor, <a href="mailto:agnieszka.czapiewska@pg.edu.pl">agnieszka.czapiewska@pg.edu.pl</a>	Gdańsk Tech is awarded by Ministry of Science and Higher Education with title 'Initiative of Excellence – Research University'. At Gdańsk Tech are conducted research and development projects financed by the National Science Centre the National Centre for Research and Development, and the EU.	Gdańsk Tech has, among others, experience in research of wideband underwater communication with utilization of acoustic wave. Recent researches were conducted in static and moving conditions in difficult environment such as shallow waters and wrecks.	STO IST-187 RTG	RTO
119.	GDYNIA MARITIME UNIVERSITY <a href="https://umg.edu.pl/en/university">https://umg.edu.pl/en/university</a>	Prof. Adam Weintrit, Master Mariner, Rector of the GMU +48585586442  Dr. Ryszard Studański, Associate professor; +48585586630	GMU is currently one of the most highly ranked maritime universities in the world. The scientific research projects carried out at the University are part of national and international programs financed by the National Science Centre the National Centre for Research and Development, and the EU.	For many years GMU has been carrying out research in the field of broadband data transmission in conditions of strong multipath that occur in shallow waters, ports and sunken wrecks. The research of the environment is in static and in motion conditions, and concerns the assessment of the parameters of the underwater acoustic channel and adaptive communication techniques. The University has a hydroacoustics laboratory dedicated to this research.		RTO

**SIMULATION AND TRAINING (SIMTRAIN)**

EDF-2022-DA-SIMTRAIN-MSSI: Modelling, simulation and simulator integration contributing to decision-making and training						
120.	ITTI Sp. z o.o.	Andrzej Adamczyk, Senior Project Manager, Andrzej.adamczyk@itti.com.pl Krzysztof Samp, Vice-President, <a href="mailto:krzysztof.samp@itti.com.pl">krzysztof.samp@itti.com.pl</a>	ITTI is a Polish SME from IT sector providing innovative applications and dedicated software solutions operating since 1996. ITTI offers its services to such sectors as: space, health, public administration and manufacturing, and is a member of several international associations, e.g. 6G-IA, PSCE.	Development of complex scenarios. Identification and evaluation of services available on the market and software design of services. Expertise in multi-criteria decision making. Use of PROCeed and OST; adaptation and integration. Scenario-based validation of the platform by practitioners.	PADR GOSSRA EDIDP SMOTANET EDIDP HERMES EDF ACHILE EDF SDMMMS EDA WINLAS, EDA SOFTANET, EDA CRAI Over 40 projects for ESA Over 60 projects in EC R&D programmes	SME
121.	Instytut Techniczny Wojsk Lotniczych (Air Force Institute of Technology)  <a href="http://www.itwl.pl/en/">www.itwl.pl/en/</a>	Piotr JANUSZ External Relations Officer <a href="mailto:piotr.janusz@itwl.pl">piotr.janusz@itwl.pl</a>  Mariusz ZIEJA Head of IT Logistics Support Division <a href="mailto:mariusz.zieja@itwl.pl">mariusz.zieja@itwl.pl</a>	Air Force Institute of Technology is a Polish leader in scientific and research support for military aviation. It develops innovative solutions and maintains the highest performance level of the technology in use. The Institute cooperates with numerous R&D companies and armament manufacturers, carrying out works for NATO, EDA, EC.	Creation of mathematical models: airspace management, air traffic, aircraft traffic model. Creation of dedicated simulation solutions, use of quantum algorithms to optimize mathematical functions, a laboratory with an air traffic control personnel management system, regulations, certification, safety management. Creation of information exchange platforms, reliability analysis for military aircraft, vehicles, ships.	European Commission: 5D-AeroSafe, OPARUS, WIMAAS, CAESARIS, EDF (call 2021): EU HYDEF EDA: ERA (I/II), SAMAS (I/II), ASTYANAX, NAGSMA: AGS BattleLab STO: RTGs in AVT & SCI Tech. Panels	RTO
122.	Military Institute of Medicine <a href="http://www.wim.mil.pl">www.wim.mil.pl</a>	Ariadna Bednarz Head of Project Management Office, <a href="mailto:abednarz@wim.mil.pl">abednarz@wim.mil.pl</a> ; <a href="mailto:projekty@wim.mil.pl">projekty@wim.mil.pl</a>	Military Institute of Medicine is a research institute with a clinical hospital. Staff of the Institute are well prepared scientists, experienced practitioners in many medical specialties. Institute has a large experience in the implementation of innovative research projects of high scientific level.	Solutions and ideas concerning training system using simulations as well as creation of a simulator adapted to the needs of military training	EDF-2021-MCBRN-D-MCM COUNTEARCT  Numerous national projects about evacuation and medical help in the battlefield.	RTO
123.	Institute of Security Technologies MORATEX; <a href="http://moratex.eu">http://moratex.eu</a>	Paweł Kubiak, PhD, International Cooperation Coordinator, R&D Department,	MORATEX provides R&D, implementation & certification activities in security technologies, materials & products, CBRN, textiles,	R&D, R&I in CBRN, ballistic, protective equipment solutions and procedures. Innovative materials, composites, elastomers, textiles.	H2020 – Prevent H2020 – PreventPCP FP7 – D-BOX	R&D Institute

		(pkubiak@moratex.eu)	composites, ballistic & protective equipment, medical devices, risk analysis, camouflage, usability engineering, dynamic computer simulation, personalization and individualization of the textile equipment, acceleration ageing studies. The quality of our solutions/ products are proven by domestic/international organizations and government.	SOTA, COTS, risk analysis, usability engineering, accelerated ageing studies, 3D scanning, customization/personalization/ individualisation, VR/AR solutions, CAD systems (eg. ANSYS, Optitex). Accredited Ballistic, Metrological, Chemical Laboratories.		
<b>DISRUPTIVE TECHNOLOGIES (DIS)</b>						
<b>EDF-2022-LS-RA-DIS-AC: Innovative technologies for adaptive camouflage</b>						
124.	Huta Stalowa Wola S.A. <a href="http://www.hsw.pl">www.hsw.pl</a>	Marek Szudrowicz <a href="mailto:m.szudrowicz@hsw.pl">m.szudrowicz@hsw.pl</a> +48 693 740 044	HSW area activity are specialized vehicles for artillery, engineering and mechanized troops. Design platforms in terms of construction and technology. Create vehicles hardware and IT architecture. Create information acquisition and processing systems to enhance command and control of platforms.	New solutions demonstration and implementation for land tracked and wheeled vehicles. Cooperation in analysis of operational scenarios, feasibility studies, definition of the technical specifications, partial tests for risk reduction.	EDF-2021-GROUND-D-UGVT COMMANDS project - subcontractor	Large company
125.	Military Institute of Armament Technology; <a href="https://www.witu.mil.pl/wp/en/">https://www.witu.mil.pl/wp/en/</a>	Dawid Pacek PhD, MSc Assistant Professor / Adjunct <a href="mailto:pacekd@witu.mil.pl">pacekd@witu.mil.pl</a> 48 667400144	MIAT is a leading R&D institution for the Polish Armed Forces and covers most aspects of development and testing of weapons, ammunition and armours of the Land Forces. MIAT has 6 laboratories accredited by the Polish MOD and Polish Accreditation Center, including its own area for field testing.	1) threat analysis, 2) definition of additional requirements which should be taken into account in reference to specific application 3) subjecting of developed solution to different environmental conditions 4) field tests 5) mechanical strength tests	EDF/ <a href="#">NEWHEAT</a> EDA-ENNSA RRT/ <a href="#">Round Robin Test</a> EDA/ <a href="#">PREMIUM</a> EDA/ <a href="#">AMTEM</a>	RTO
126.	Military Institute of Armament Technology; Zielonka, Poland <a href="http://www.witu.mil.pl">www.witu.mil.pl</a>	Adam Wiśniewski; Full professor (prof. dr hab. eng.); <a href="mailto:wisniewskia@witu.mil.pl">wisniewskia@witu.mil.pl</a> <a href="https://orcid.org/0000-0003-1795-2422">https://orcid.org/0000-0003-1795-2422</a> M: +48 691585220	As above	The MIAT with Miranda Spolka z o.o.: will prepare various passive Radar Absorbing Material (RAM) layers, various metal and textile samples, coat various samples with these layers and test them in an Electro-magnetic Compatibility	EDF/ <a href="#">NEWHEAT</a> EDA-ENNSA RRT/ <a href="#">Round Robin Test</a>	RTO



				<p>(EMC) semi-anechoic chamber in radar bands X (8-12 GHz), Ka (27-40 GHz) and W (75-119 GHz) and use a terahertz scanner for testing; will prepare the samples for video camouflage (ultraviolet radiation (100-380 nm), visible radiation (380-780 nm), near infrared (0.75-1.4 μm), short-wavelength infrared (1.4-3 μm), mid-wavelength infrared (3-8 μm), long-wavelength infrared (8-15 μm) and test them with high speed, IR cameras and use a terahertz scanner for testing; participate in the preparation of active camouflage, adaptive camouflage techniques and devices that are able to adapt their signatures to the back-ground, etc. and test them; He will participate in all types of activities. All samples will be tested mechanically, under different environmental conditions, etc.</p>	<p>EDA/ <a href="#">PREMIUM</a> EDA/ <a href="#">AMTEM</a></p>	
127.	<p>Warsaw University of Technology (WUT)</p>	<p>Prof. Krzysztof KULPA, Radar Technologies Lab Director, <a href="mailto:krzysztof.kulpa@pw.edu.pl">krzysztof.kulpa@pw.edu.pl</a></p>	<p>University with specialized Radar Systems Technology Lab, capable to research, design and development of the advanced and innovative RF products and solutions including SAR, EW (jamming, ELINT and SIGINT), ISAR</p>	<p>Active protection against SAR reconnaissance Anti-RF reconnaissance cover (coating)</p>	<p>EDA MAPIS, JAMPAR, SEEPROM</p>	<p>RTO</p>
128.	<p>Instytut Techniczny Wojsk Lotniczych (Air Force Institute of Technology)</p> <p><a href="http://www.itwl.pl/en/">www.itwl.pl/en/</a></p>	<p>Piotr JANUSZ External Relations Officer <a href="mailto:piotr.janusz@itwl.pl">piotr.janusz@itwl.pl</a></p> <p>Krzysztof DRAGAN Head of Aircraft Airworthiness Division <a href="mailto:krzysztof.dragan@itwl.pl">krzysztof.dragan@itwl.pl</a></p>	<p>Air Force Institute of Technology is a Polish leader in scientific and research support for military aviation. It develops innovative solutions and maintains the highest performance level of the technology in use. The Institute cooperates with numerous R&amp;D companies and armament manufacturers, carrying out works for NATO, EDA, EC.</p>	<p>Climate and aging environmental conditions tests (temperature, humidity, UV radiation) on materials or finished products. Tensile, compression, bending and shear tests to determine strength and other mechanical properties of metals, alloys and polymer composites.</p>	<p>European Commission: 5D-AeroSafe, OPARUS, WIMAAS, CAESARIS, EDF (call 2021): EU HYDEF EDA: ERA (I/II), SAMAS (I/II), ASTYANAX,</p>	<p>RTO</p>

				Fracture toughness, low cycle, high cycle and fatigue crack growth rate tests.	NAGSMA: AGS BattleLab STO: RTGs in AVT & SCI Tech. Panels	
129.	Lukasiewicz Research Network - Institute of Non-Ferrous Metals	Dr hab. Aleksandra Kolano-Burian Director of Centre of Functional Materials <a href="mailto:aleksandra.kolano-burian@imn.lukasiewicz.gov.pl">aleksandra.kolano-burian@imn.lukasiewicz.gov.pl</a>	Łukasiewicz Research Network - Institute of Non-Ferrous Metals (Ł-IMN) is a research centre of the Polish non-ferrous industry. Complex activities cover all stages of metallic materials production: from ore treatment to technologies for production of modern product meeting all environmental standards.	Institute of Non-Ferrous Metals is a part of the Łukasiewicz Research Network, the third-largest research network in Europe. Łukasiewicz Research Network – Institute of Non-Ferrous Metals has a high experience in synthesising and testing ceramic materials, including nanoparticles, high-entropy compounds, ferrites and multiferroics. We specialise in testing the new synthesis methods of new compounds and the description of dielectric properties: electrical conductivity, magnetodielectric properties, and shielding properties in wide frequency and temperature ranges. Our interest also concentrates on preparing filaments for 3D printing of multifunctional composites and producing nano- and macrofibres using the electrospinning technique.		RTO
130.	Łukasiewicz Research Network – Institute of Engineering for Polymer Materials and Dyes <a href="https://impib.lukasiewicz.gov.pl/">https://impib.lukasiewicz.gov.pl/</a>	Monika Kurpas Chief Specialist, Commercialization Department <a href="mailto:monika.kurpas@impib.lukasiewicz.gov.pl">monika.kurpas@impib.lukasiewicz.gov.pl</a>  Agnieszka Staniszewska Manager. Project Management Department <a href="mailto:agnieszka.staniszewska@impib.lukasiewicz.gov.pl">agnieszka.staniszewska@impib.lukasiewicz.gov.pl</a>	As the Łukasiewicz Research Network - Institute for Engineering of Polymer Materials and Dyes, we have been closely cooperating with industry and business for many years, providing the highest quality services for large, medium and small enterprises. We specialize in areas of the economy such as construction, transport, environmental protection, military services, medicine and health protection,	Development of camouflage based on elastomeric and plastomeric coatings to inhibit detection using infrared and radar techniques. Physicomechanical, chemical and thermal tests, of the applied elastomers and plastomers, including dynamic, fatigue, accelerated ageing and heat resistance tests.  Development of camouflage paints for various substrates. Testing of properties of coatings, including: mechanical, resistance and optical properties.	None	RTO

			as well as broadly understood production.	We have a universal testing machine with a range of 100kN, equipped with a chamber for tests at elevated and lowered temperatures, DSC, DMA, TG, SEM+EDX devices, as well as the ability to simulate extreme environmental conditions.		
131.	Lukasiewicz Research Network Lodz Institute of Technology (L-LIT)  <a href="https://lit.lukasiewicz.gov.pl">https://lit.lukasiewicz.gov.pl</a>	Izabela Jasińska, R&D senior specialist <a href="mailto:izabela.jasinska@lit.lukasiewicz.gov.pl">izabela.jasinska@lit.lukasiewicz.gov.pl</a> +48422534411	L-LIT has experience in research on fibre-based functional textiles including: - develop unconventional textiles structures for applications such as textronic solutions, composites reinforcement; - innovative finishing processes; - physico-chemical textile materials modification, including nanotechnology.	Study of raw materials suitable to create textile structures with desired properties able to use in uniforms and/or technical products. Development and functionalization of textile-based woven and non-woven structures dedicated for uniforms and/or technical products.	-	RTO
132.	Institute of Security Technologies MORATEX  <a href="http://moratex.eu">http://moratex.eu</a>	Paweł Kubiak, PhD, International Cooperation Coordinator, R&D Department, (pkubiak@moratex.eu)	MORATEX provides R&D, implementation & certification activities in security technologies, materials & products, CBRN, textiles, composites, ballistic & protective equipment, medical devices, risk analysis, camouflage, usability engineering, dynamic computer simulation, personalization and individualization of the textile equipment, acceleration ageing studies. The quality of our solutions/ products are proven by domestic/international organizations and government.	R&D, R&I in CBRN, ballistic, protective equipment solutions and procedures. Innovative materials, composites, elastomers, textiles. SOTA, COTS, risk analysis, usability engineering, accelerated ageing studies, 3D scanning, customization/personalization/individualisation, VR/AR solutions, CAD systems (eg. ANSYS, Optitex). Accredited Ballistic, Metrological, Chemical Laboratories.	H2020 – Prevent H2020 – Prevent PCP FP7 – D-BOX	R&D Institute
133.	Silesian University of Technology, Faculty of Chemistry, Department of Physical Chemistry	Agnieszka Stolarczyk, associate professor, <a href="mailto:agnieszka.stolarczyk@polsl.pl">agnieszka.stolarczyk@polsl.pl</a>	SUT-RCh designs/develops new functional materials (polymer, organic and composite), tailored for specialised applications (explosives, optically-	Development and testing of functional materials (including propellants) for the space system. Preliminary design of materials-based functional sub-systems. Development and testing of colour-	-	RTO

	and Technology of Polymers (SUT-RCh)	Tomasz Jarosz, assistant professor, <a href="mailto:tomasz.jarosz@polsl.pl">tomasz.jarosz@polsl.pl</a>	active/colour-changing materials, materials for sensing, structural materials, etc.) and has an extensive industrial cooperation portfolio.	changing camouflage materials and devices based on them.		
134.	Silesian University of Technology, Department of Physical Chemistry and Technology of Polymers <a href="https://www.polsl.pl/rch4/en/">https://www.polsl.pl/rch4/en/</a>	Przemyslaw Ledwon, Ph.D. assistant professor  Wojciech Domagala, D.Sc. Ph.D associate professor	The research area of researchers in our department covers such topics as work with conjugated polymers, optoelectronic devices, electroactive materials, electrochemistry, characteristics of materials, electrochemical deposition of organic materials	Construction of electrochromic devices: - Deposition of electrochromic layers on a conductive substrate on a laboratory scale - Synthesis of electroactive conjugated polymers - fabrication of small electrochromic cells	-	University
135.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> ,  Faculty of Mechanical Engineering	Łukasz Kołodziejczyk assistant professor <a href="mailto:lukasz.kolodziejczyk@p.lodz.pl">lukasz.kolodziejczyk@p.lodz.pl</a>	Lodz University of Technology (TUL) is one of the largest technical universities in Poland. It employs 1,250 academic staff, 500 PhDs conduct research in 12 scientific disciplines and has 12,000 students. TUL carries out European projects and actively transfers R&D solutions to industry.	Surface modification (metallized, alloyed, ceramic and composite thin films, TBC) by PVD and CVD techniques.  Manufacturing of the multilayer, thin films arrays assemblies of active thermoelectric and/or electrochromic and/or thermochromic systems		RTO
136.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> ,  Faculty of Electrical, Electronic, Computer and Control Engineering	Łukasz Januszkiewicz associate professor <a href="mailto:lukasz.januszkiewicz@p.lodz.pl">lukasz.januszkiewicz@p.lodz.pl</a> + 48 691 565 277	Lodz University of Technology (TUL) is one of the largest technical universities in Poland. It employs 1,250 academic staff, 500 PhDs conduct research in 12 scientific disciplines and has 12,000 students. TUL carries out European projects and actively transfers R&D solutions to industry.	1. Designing adaptive personal electromagnetic camouflage against electromagnetic warfare, that could be integrated with clothing. 2. Modelling the effectiveness of electromagnetic camouflage with advanced human body models. 3. Automated optimization of adaptive electromagnetic camouflage.	-	RTO
137.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Electrical, Electronic, Computer	Katarzyna Grabowska professor <a href="mailto:katarzyna.grabowska@p.lodz.pl">katarzyna.grabowska@p.lodz.pl</a> +48 781 600 604		Application of Intelligent Reflecting and absorbing Surfaces for improved communication resilience  Modelling of radio wave propagation for the design and optimisation of	-	RTO

	and Control Engineering and Faculty of Material Technologies and Textile Design	Łukasz Szymański associate professor <a href="mailto:lukasz.szymanski@p.lodz.pl">lukasz.szymanski@p.lodz.pl</a> +48 609 737 893		tactical radio communication systems.		
138.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Civil Engineering, Architecture and Environmental Engineering	Michał Domińczak assistant professor <a href="mailto:michal.dominczak@p.lodz.pl">michal.dominczak@p.lodz.pl</a> <a href="http://dz.pl">dz.pl</a>	Lodz University of Technology (TUL) is one of the largest technical universities in Poland. It employs 1,250 academic staff, 500 PhDs conduct research in 12 scientific disciplines and has 12,000 students. TUL carries out European projects and actively transfers R&D solutions to industry.	Conducting the research on the new techniques of passive camouflage enriched with cutting-edge technologies (incl. smart materials). Particularly it is the idea of a "hard shell" - masking covers/shelters made in 3D printing technology prepared in situ by autonomous vehicles and / or devices mounted on combat vehicles,		RTO
139.	Silesian University of Technology, <i>NanoCarbon Group</i>	slawomir.boncel@polsl.pl	Masking nets containing nanocarbon coatings			RTO
<b>EDF-2022-LS-RA-DIS-EAD: Electromagnetic artillery demonstrator</b>						
140.	Huta Stalowa Wola S.A.  <a href="http://www.hsw.pl">www.hsw.pl</a>	Marek Szudrowicz <a href="mailto:m.szudrowicz@hsw.pl">m.szudrowicz@hsw.pl</a> +48 693 740 044	HSW area activity are specialized vehicles for artillery, engineering and mechanized troops. Design platforms in terms of construction and technology. Create vehicles hardware and IT architecture. Create information acquisition and processing systems to enhance command and control of platforms.	New solutions demonstration and implementation for land tracked and wheeled vehicles. Cooperation in analysis of operational scenarios, feasibility studies, definition of the technical specifications, partial tests for risk reduction.	EDF-2021-GROUND-D-UGVT COMMANDS project - subcontractor	Large company
141.	Military Institute of Armament Technology; Zielonka, Poland <a href="http://www.witu.mil.pl">www.witu.mil.pl</a>	Marcin Krol, <a href="mailto:krolm@witu.mil.pl">krolm@witu.mil.pl</a>	MIAT is a leading R&D institution for the Polish Armed Forces and covers most aspects of development and testing of weapons, ammunition and armours of the Land Forces. MIAT has 6 laboratories accredited by the Polish MOD and Polish Accreditation Center,	Projectile design in terms of ballistics and aerodynamics. Competence in ballistics, aerodynamics, CFD modelling, ammunition testing. Ballistic proving ground in disposition.	EDF/ <a href="#">NEWHEAT</a>  EDA-ENNSA RRT/ <a href="#">Round Robin Test</a>  EDA/ <a href="#">PREMIUM</a>	RTO

			including its own area for field testing		EDA/ <a href="#">AMTEM</a>	
142.	Military Institute of Armament Technology; <a href="https://www.witu.mil.pl/_wp/en/">https://www.witu.mil.pl/_wp/en/</a>	Przemysław Badurowicz MSc, Assistant <a href="mailto:badurowiczp@witu.mil.pl">badurowiczp@witu.mil.pl</a> +48 22 76 14 756	As above.	1) Definition of the operational requirements of the artillery system; 2) Design, development and test of a medium calibre EMG: Reduction of the gun wear to increase the bore life; 3) Design, development and test of the sabot and the armature required to accelerate and guide the projectile along the gun bore 4) Medium calibre hypervelocity projectile: Low-drag and heat-resistant aerodynamic profile; Lethality mechanism: kinetic penetrator or airburst/fragmentation warhead.	EDF/ <a href="#">NEWHEAT</a> EDA-ENNSA RRT/ <a href="#">Round Robin Test</a> EDA/ <a href="#">PREMIUM</a> EDA/ <a href="#">AMTEM</a>	RTO
143.	Lukasiewicz Research Network - Institute of Non-Ferrous Metals	Dr hab. Aleksandra Kolano-Burian Director of Centre of Functional Materials <a href="mailto:aleksandra.kolano-burian@imn.lukasiewicz.gov.pl">aleksandra.kolano-burian@imn.lukasiewicz.gov.pl</a>	Łukasiewicz Research Network - Institute of Non-Ferrous Metals (Ł-IMN) is a research centre of the Polish non-ferrous industry. Complex activities cover all stages of metallic materials production: from ore treatment to technologies for production of modern product meeting all environmental standards.	Institute of Non-Ferrous Metals is a part of the Łukasiewicz Research Network, the third-largest research network in Europe. Łukasiewicz Research Network – Institute of Non-Ferrous Metals has a high experience in producing and characterising magnetically soft components with low power losses and operating at high frequencies enabling miniaturisation of the devices responsible for the power conversion. In addition, we specialise in new materials development, characterisation of the structure, properties and production of the prototype components from amorphous and nanocrystalline alloys and using SLM technology.		RTO
<b>EDF-2022-LS-RA-DIS-NT: Non-thematic research actions targeting disruptive technologies for defence</b>						
144.	MCI – NRI Military Communication Institute – National	DSc Ireneusz KUBIAK – institute professor <a href="mailto:i.kubiak@wil.waw.pl">i.kubiak@wil.waw.pl</a> +48 261 885 537	Main activity: design of tactical communications systems, radio networks and radio	One of the largest anechoic cabins in Europe, in which the electromagnetic compatibility and the	EDA, NCIA, MNE, CWIX, TIDE, IST/RTG-043 SOA Challenges over time	RTO

	Research Institute <a href="https://www.wil.waw.pl">https://www.wil.waw.pl</a>		communication components; developing and design elements of information protection in teleinformation systems; design of electronic warfare systems; design of information infrastructure for network-centric systems.	protection against electromagnetic infiltration are tested.  Accredited testing laboratories: <ul style="list-style-type: none"> <li>• Electromagnetic Compability Laboratory</li> <li>• Cyberattacks Analysis Laboratory</li> <li>• Environmental Research Laboratory</li> </ul>	and disadvantaged grids, RTG IST-114 Task Group Trusted Information Sharing for Partnerships (TISP), IST-104/RTG-050 Cognitive Radio in NATO, IST-108 Cyber Defense Situational Awareness, TC Syndicate AC/322 (CP/4) N) 2013 Technical Characteristics NATO INE (NATO Network and Information Infrastructure Internet Protocol Network Encryption), IICWG International Interoperability Control Working Group	
145.	Łukasiewicz Research Network - Institute of Industrial Organic Chemistry <a href="http://ipo.lukasiewicz.gov.pl/ENG/">ipo.lukasiewicz.gov.pl/ENG/</a>	Katarzyna Gańczyk-Specjalska, leader, <a href="mailto:katarzyna.ganczyk-specjalska@ipo.lukasiewicz.gov.pl">katarzyna.ganczyk-specjalska@ipo.lukasiewicz.gov.pl</a>  Rafał Bogusz, Head of High Energy Materials Research Group, <a href="mailto:rafal.bogusz@ipo.lukasiewicz.gov.pl">rafal.bogusz@ipo.lukasiewicz.gov.pl</a>	Ł-IPO is a leading research and development center of more than 70-year-long tradition. It carries out research concerning national defence, electrostatic hazards, state services, chemical and manufacturing process safety as well as work for the agriculture.	Development of solid rocket propellants for marching motors obtained by pressing method. This method allows to reduce the amount of liquid components, which improves the ballistic parameters of the propellant. Development composition and geometry depending on the project requirements.	-	RTO
146.	Łukasiewicz Research Network – Institute of Engineering for	Monika Kurpas Chief Specialist, Commercialization Department	As the Łukasiewicz Research Network - Institute for Engineering of Polymer Materials and Dyes, we have been closely cooperating with	Development and matching of polymer components (elastomers and plastomers). Physicomechanical, chemical and thermal tests, including dynamic, fatigue, accelerated ageing	None	RTO

	<p>Polymer Materials and Dyes  <a href="https://impib.lukasiewicz.gov.pl/">https://impib.lukasiewicz.gov.pl/</a></p>	<p><a href="mailto:monika.kurpas@impib.lukasiewicz.gov.pl">monika.kurpas@impib.lukasiewicz.gov.pl</a></p> <p>Agnieszka Staniszewska  Manager. Project Management Department  <a href="mailto:agnieszka.staniszewska@impib.lukasiewicz.gov.pl">agnieszka.staniszewska@impib.lukasiewicz.gov.pl</a></p>	<p>industry and business for many years, providing the highest quality services for large, medium and small enterprises. We specialize in areas of the economy such as construction, transport, environmental protection, military services, medicine and health protection, as well as broadly understood production.</p>	<p>and heat resistance tests, of the applied materials.</p> <p>We have a universal testing machine with a range of 100kN, equipped with a chamber for tests at elevated and lowered temperatures, DSC, DMA, TG, SEM+EDX devices, as well as the ability to simulate extreme environmental conditions.</p> <p>Testing of properties of organic coatings, including: mechanical, resistance and optical properties.</p>		
147.	<p>Łukasiewicz Research Network – Krakow Institute of Technology (KIT)  <a href="https://kit.lukasiewicz.gov.pl/en">https://kit.lukasiewicz.gov.pl/en</a></p>	<p>Dr Wojciech Polkowski, Leader of High Temperature Research Area,  <a href="mailto:wojciech.polkowski@kit.lukasiewicz.gov.pl">wojciech.polkowski@kit.lukasiewicz.gov.pl</a></p>	<p>KIT is a part of the Łukasiewicz Research Network which is an integrated market player providing attractive, complete and competitive business solutions in the areas of automation, chemistry, biomedicine, ICT, materials and manufacturing technologies.</p>	<p>Designing, fabrication and characterization of structural and functional composite materials for statically and dynamically loaded components. Metal/Ceramic Matrix Composites for lightweight and/or high temperature applications produced in powder metallurgy, additive manufacturing or casting processes.</p>	<p>1. National Centre for Research and Development – State Defense and Security Programme – PANCERMET</p> <p>2. National Centre for Research and Development –</p> <p>3. National Development Projects Programme - Development of the structure and technology of hydroactive suspension in mobile unmanned objects resistant to the threat of IED type.</p>	RTO
148.	<p>Lodz University of Technology (TUL),  <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a>,  Faculty of Mechanical Engineering</p>	<p>Mariusz Dudek  associate professor  <a href="mailto:mariusz.dudek@p.lodz.pl">mariusz.dudek@p.lodz.pl</a></p>	<p>Lodz University of Technology (TUL) is one of the largest technical universities in Poland. It employs 1,250 academic staff, 500 PhDs conduct research in 12 scientific disciplines and has</p>	<p>Anti-icing surfaces - shaping the surface by creating micro-holes and depositing coatings with hydrophobic properties with good adhesion to the substrate (including resistant to temperature changes) in applications</p>	–	RTO



			12,000 students. TUL carries out European projects and actively transfers R&D solutions to industry.	as an anti-icing surface layer on aircraft.		
149.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Mechanical Engineering	Łukasz Kołodziejczyk assistant professor <a href="mailto:lukasz.kolodziejczyk@p.lodz.pl">lukasz.kolodziejczyk@p.lodz.pl</a>	As above.	Surface modification (low friction coatings working in high and low temperature, wear and oxidation resistant, hard and superhard, anticorrosive coatings) by PVD and CVD techniques, plasma assisted heat and chemical treatment in vacuum or duplex technology.	–	RTO
150.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Mechanical Engineering	Łukasz Kołodziejczyk assistant professor <a href="mailto:lukasz.kolodziejczyk@p.lodz.pl">lukasz.kolodziejczyk@p.lodz.pl</a>	As above.	Surface modification (xylylene polymer coatings) by CVD technique. Metal-ceramic composites for wear-resistant mechanical parts working at high temperatures (up to 900°C)	–	RTO
151.	Military Institute of Medicine <a href="http://www.wim.mil.pl">www.wim.mil.pl</a>	Ariadna Bednarz Head of Project Management Office, <a href="mailto:abednarz@wim.mil.pl">abednarz@wim.mil.pl</a> ; <a href="mailto:projekty@wim.mil.pl">projekty@wim.mil.pl</a>	As above.	Solutions and ideas concerning supporting the capabilities of a soldier on the battlefield, ie. night vision devices with increased depth of field	EDF-2021-MCBRN-D-MCM: Development of defence medical countermeasures  Numerous national projects about evacuation and medical help in the battlefield.	RTO
<b>CALLS FOR PROPOSALS NOT RELATED TO THE CATEGORIES OF ACTIONS</b>						
<b>EDF-2022-LS-RA-SMERO: Call for proposals dedicated to SMEs and research organisations</b>						
<b>EDF-2022-LS-RA-SMERO-NT: Non-thematic research actions by SMEs and research organisations</b>						
152.	Military Institute of Armament Technology <a href="https://www.witu.mil.pl/wp/en/">https://www.witu.mil.pl/wp/en/</a>	Dawid Pacek PhD, MSc Assistant Professor / Adjunct <a href="mailto:pacekd@witu.mil.pl">pacekd@witu.mil.pl</a> 48 667400144	MIAT is a leading R&D institution for the Polish Armed Forces and covers most aspects of development and testing of weapons, ammunition and armours of the Land Forces. MIAT has 6 laboratories accredited by the Polish MOD and Polish Accreditation Center, including its own area for field testing.	Development of new joining technology for armor steel 1) Definition of requirements 2) Ballistic tests 3) Quasi-static mechanical tests 4) Numerical simulations	EDF/ <a href="#">NEWHEAT</a>  EDA-ENNSA RRT/ <a href="#">Round Robin Test</a>  EDA/ <a href="#">PREMIUM</a>  EDA/ <a href="#">AMTEM</a>	RTO

153.	Military Institute of Armament Technology; <a href="https://www.witu.mil.pl/_wp/en/">https://www.witu.mil.pl/_wp/en/</a>	Dawid Pacek PhD, MSc Assistant Professor / Adjunct pacekd@witu.mil.pl 48 667400144	As above.	Personal Protective structures 1) Definition of requirements 2) Design 3) Ballistic tests 4) Stab resistance tests 5) Numerical simulations	As above.	RTO
154.	Military Institute of Armament Technology; <a href="https://www.witu.mil.pl/_wp/en/">https://www.witu.mil.pl/_wp/en/</a>	Dawid Pacek PhD, MSc Assistant Professor / Adjunct pacekd@witu.mil.pl 48 667400144	As above.	Combat Helmet 1) Definition of requirements 2) Design of antitrauma protection inserts for Combat Helmet 3) Ballistic tests 4) Non destructive tests 5) Quasi-static mechanical tests 6) Numerical simulations	As above.	RTO
155.	Military Institute of Armament Technology; <a href="https://www.witu.mil.pl/_wp/en/">https://www.witu.mil.pl/_wp/en/</a>	Marcin CEGŁA PhD ceglam@witu.mil.pl 48 660749526	As above.	Composite armour solutions for critical functional parts of UAVs and UGVs 1) Definition of requirements 2) Indication of possible applications 3) Design and mass calculation, material selection 4) Ballistic tests	As above.	RTO
156.	Warsaw University of Technology, Faculty of Management, <a href="https://www.pw.edu.pl/engpw">https://www.pw.edu.pl/engpw</a>	Michał Wiśniewski, Ph.D. Eng., Assistant Professor, Michal.Wisniewski@pw.edu.pl	Warsaw University of Technology started in 1915. It is the best technical university in Poland; in the ranking of Polish universities, it has taken the first place in its category for fifteen years. Since the beginning realizes defence project for example Risk assessment methodology for the Polish crisis management system.	Risk management, IT management, public management, international security, business security, operational risk management, transport management, supply chain management, business analysis, civil planning, rescue planning, crisis management, quality management, project management, process management, investment project.		RTO
157.	ITTI Sp. z o.o.	Piotr Tyczka, Senior Project Manager, Piotr.tyczka@itti.com.pl  Krzysztof Samp, Vice-President, <a href="mailto:krzysztof.samp@itti.com.pl">krzysztof.samp@itti.com.pl</a>	ITTI is a Polish SME from IT sector providing innovative applications and dedicated software solutions operating since 1996. ITTI offers its services to such sectors as: space, health, public administration and manufacturing, and is a member	<ul style="list-style-type: none"> <li>Cybersecurity: IDS/IPS, efficient detection of malware using machine-learning, clusterization, classification and pattern recognition, penetration tests, network traffic analysis and anomalies detection, security by design</li> </ul>	PADR GOSSRA EDIDP SMOTANET EDIDP HERMES EDF ACHILE EDF SDMMMS EDA WINLAS, EDA SOFTANET, EDA CRAI	SME

			of several international associations, e.g. 6G-IA, PSCE.	<ul style="list-style-type: none"> <li>Software development</li> </ul>	Over 40 projects for ESA Over 60 projects in EC R&D programmes	
158.	Military Institute of Medicine <a href="http://www.wim.mil.pl">www.wim.mil.pl</a>	Ariadna Bednarz Head of Project Management Office, <a href="mailto:abednarz@wim.mil.pl">abednarz@wim.mil.pl</a> ; <a href="mailto:projekty@wim.mil.pl">projekty@wim.mil.pl</a>	Military Institute of Medicine is a research institute with a clinical hospital. Staff of the Institute are well prepared scientists, experienced practitioners in many medical specialties. Institute has a large experience in the implementation of innovative research projects of high scientific level.	Military Institute of Medicine is a central clinical hospital with the highest level of reference. We have extensive experience in the development of systems and tools supporting telediagnosics and the evacuation of a soldier from the battlefield	EDF-2021-MCBRN-D-MCM: Development of defence medical countermeasures  Numerous national projects about evacuation, medical help in the battlefield and soldiers' capabilities enhancement.	RTO
159.	JAKUSZ Sp. z o.o. <a href="mailto:jakusz@jakusz.com">jakusz@jakusz.com</a>	Bartosz Jakusz Company President <a href="mailto:bartosz.jakusz@jakusz.com">bartosz.jakusz@jakusz.com</a>	Company JAKUSZ, activity is focused in the following areas: - Chemical installation and materials - Protection against explosion effects (explosion containment vessels) - Storage structures for hazardous materials - Information security and critical infrastructure protection - Munitions disposal - EOD Technicians Training Centre	New elements of hydrogen-based power systems of vehicles and platforms. Cooperation in analysis of operational scenarios, feasibility studies, definition of the technical specifications, partial tests for risk reduction, prototype testing. Analysis of standards and their evolution proposals.		SME
160.	WiRan sp. z o. o.; <a href="http://www.wiran.pl">www.wiran.pl</a>	Robert Stefański <a href="mailto:r.stefanski@wiran.pl">r.stefanski@wiran.pl</a>	SME focused on hi-rel RF electronics; space flight products, military, commercial. 2 decades of experience in quality-critical markets	Electronics; EMC; RF/MW; prototyping; QA; IoT; testing (environmental, EMC, RF); embedded devices; programming	ESA – 4 projects already successfully finished, 2 more open	SME
161.	Łukasiewicz Research Network – Institute of Engineering for Polymer Materials and Dyes <a href="https://impib.lukasiewicz.gov.pl/">https://impib.lukasiewicz.gov.pl/</a>	Monika Kurpas Chief Specialist, Commercialization Department <a href="mailto:monika.kurpas@impi.gov.pl">monika.kurpas@impi.gov.pl</a>	As the Łukasiewicz Research Network - Institute for Engineering of Polymer Materials and Dyes, we have been closely cooperating with industry and business for many years, providing the highest quality services for large,	Development and matching of polymer components (elastomers and plastomers). Physicomechanical, chemical and thermal tests, including dynamic, fatigue, accelerated ageing and heat resistance tests, of the applied materials.	None	RTO

		<p>Agnieszka Staniszevska  Manager. Project Management Department  <a href="mailto:agnieszka.staniszevska@impib.lukasiewicz.gov.pl">agnieszka.staniszevska@impib.lukasiewicz.gov.pl</a></p>	<p>medium and small enterprises. We specialize in areas of the economy such as construction, transport, environmental protection, military services, medicine and health protection, as well as broadly understood production.</p>	<p>We have a universal testing machine with a range of 100kN, equipped with a chamber for tests at elevated and lowered temperatures, DSC, DMA, TG, SEM+EDX devices, as well as the ability to simulate extreme environmental conditions.</p> <p>Development of coatings with special properties, including: antistatic, reflecting or absorbing radiation of various ranges, antibacterial, anticorrosive, fire protective. Testing of properties of organic coatings, including: mechanical, resistance and optical properties.</p>		
162.	<p>Lukasiewicz Research Network - Institute of Non-Ferrous Metals</p>	<p>Dr hab. Adriana Wrona Director of Centre of Powder and Composite Materials  <a href="mailto:adriana.wrona@imn.lukasiewicz.gov.pl">adriana.wrona@imn.lukasiewicz.gov.pl</a></p>	<p>Łukasiewicz Research Network - Institute of Non-Ferrous Metals (Ł-IMN) is a research centre of the Polish non-ferrous industry. Complex activities cover all stages of metallic materials production: from ore treatment to technologies for production of modern product meeting all environmental standards.</p>	<p>The Centre focuses on:</p> <p>Non-ferrous metal processes development concerning the design of the chemical composition of new grades of alloys, melting, refining, casting, extrusion, rolling, production of drawn products, development of new technologies in the field of additive manufacturing (WAAM), production of composites by liquid phase methods (autoclave) and high temperature isostatic pressing (HIP), determination of the relationship between chemical composition, structure, technological parameters and properties. The Centre specializes in:</p> <ul style="list-style-type: none"> <li>- casting ingots, small size individual castings or short series</li> <li>- production of alloys with atypical chemical composition</li> </ul>		RTO

				<ul style="list-style-type: none"> <li>- feedstock materials manufacturing (wires) for additive manufacturing technologies (WAAM)</li> <li>- production of materials for spectral reference</li> <li>- heat treatment and plastic working of non-ferrous metals and their alloys</li> <li>- consultancy in optimisation of technological parameters and assessment of potential and technological needs in the activities carried out by enterprises</li> <li>- material expert opinions about products made of non-ferrous metals</li> </ul>		
163.	EXPLOMET GAŁKA, SZULC SPÓŁKA KOMANDTYOWA	ZYGMUNT SZULC – DYREKTOR, <a href="mailto:zygmunt.szulc@explomet.pl">zygmunt.szulc@explomet.pl</a> , +48601473524	EXPLOMET is a company specializes in explosive cladding technology. The highly qualified and experienced staff of engineers oversees production and quality. We also have a professional research and development facilities, allowing development works, in the field of composites and their applications.	The EXPLOMET company has the ability to use the technology of explosive cladding of metals, which can be used for production of multilayer ballistic shields with gradient structural properties.	PADR PILUM	SME
164.	Lodz University of Technology (TUL), <a href="https://p.lodz.pl/en">https://p.lodz.pl/en</a> , Faculty of Mechanical Engineering	Mariusz Dudek associate professor <a href="mailto:mariusz.dudek@p.lodz.pl">mariusz.dudek@p.lodz.pl</a>	Lodz University of Technology (TUL) is one of the largest technical universities in Poland. It employs 1,250 academic staff, 500 PhDs conduct research in 12 scientific disciplines and has 12,000 students. TUL carries out European projects and actively transfers R&D solutions to industry.	Anti-icing surfaces - shaping the surface by creating micro-holes and depositing coatings with hydrophobic properties with good adhesion to the substrate (including resistant to temperature changes) in applications as an anti-icing surface layer on aircraft.	–	RTO
<b>EDF-2022-LS-DA-SME: Call for proposals dedicated to SMEs</b>						
<b>EDF-2022-LS-DA-SME-NT: Non-thematic development actions by SMEs</b>						
165.	ITTI Sp. z o.o.	Piotr Tyczka, Senior Project Manager,	ITTI is a Polish SME from IT sector providing innovative	<ul style="list-style-type: none"> <li>• Cybersecurity: IDS/IPS, efficient detection of malware using</li> </ul>	PADR GOSSRA EDIDP SMOTANET	SME

		<a href="mailto:Piotr.tyczka@itti.com.pl">Piotr.tyczka@itti.com.pl</a> Krzysztof Samp, Vice-President, <a href="mailto:krzysztof.samp@itti.com.pl">krzysztof.samp@itti.com.pl</a>	applications and dedicated software solutions operating since 1996. ITTI offers its services to such sectors as: space, health, public administration and manufacturing, and is a member of several international associations, e.g. 6G-IA, PSCE.	machine-learning, clusterization, classification and pattern recognition, penetration tests, network traffic analysis and anomalies detection, security by design <ul style="list-style-type: none"> <li>• Software development</li> </ul>	EDIDP HERMES EDF ACHILE EDF SDMMS EDA WINLAS, EDA SOFTANET, EDA CRAI Over 40 projects for ESA Over 60 projects in EC R&D programmes	
166.	JAKUSZ Sp. z o.o. <a href="mailto:jakusz@jakusz.com">jakusz@jakusz.com</a>	Bartosz Jakusz Company President <a href="mailto:bartosz.jakusz@jakusz.com">bartosz.jakusz@jakusz.com</a>	Company JAKUSZ, activity is focused in the following areas: <ul style="list-style-type: none"> <li>- Chemical installation and materials</li> <li>- Protection against explosion effects (explosion containment vessels)</li> <li>- Storage structures for hazardous materials</li> <li>- Information security and critical infrastructure protection</li> <li>- Munitions disposal</li> <li>- EOD Technicians Training Centre</li> </ul>	New elements of hydrogen-based power systems of vehicles and platforms. Cooperation in analysis of operational scenarios, feasibility studies, definition of the technical specifications, partial tests for risk reduction, prototype testing. Analysis of standards and their evolution proposals.		SME
167.	WiRan sp. z o. o. <a href="http://www.wiran.pl">www.wiran.pl</a>	Robert Stefański <a href="mailto:r.stefanski@wiran.pl">r.stefanski@wiran.pl</a>	SME focused on hi-rel RF electronics; space flight products, military, commercial. 2 decades of experience in quality-critical markets	Electronics; EMC; RF/MW; prototyping; QA; IoT; testing (environmental, EMC, RF); embedded devices; programming	ESA – 4 projects already successfully finished, 2 more open	SME