PCO S.A.

PGZ

Company profile

Editorial Staff: Communications and PR Department, PCO S.A.
e-mail: nzk@pcosa.com.pl
web: www.pcosa.com.pl
tel.: + 48 22 515 75 07

PCO S.A.
28 Jana Nowaka-Jeziorańskiego St.,
PL 03-982 Warsaw, Poland

Graphic design and print: LUMIKANTO Piotr Wideryński
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Foreword

'By carrying out orders for the benefit of the arms industry we exert influence on the potential of Polish defence. Therefore, we are obliged to preserve the highest standards and continuously improve our products.'

I have the pleasure of introducing you to the "Company profile" of the PCO S.A.

For over 40 years PCO S.A. is an important part of the Polish arms industry creating defensive potential of Poland. We are a leading domestic producer of technically advanced optoelectronic equipment for soldiers and other uniform services. Our products are based on night vision, thermal imaging, and laser technologies.

We follow newest trends in the branch and participate in numerous strategic-organisational initiatives. We have significant role in programs of modernization of the Polish Armed Forces, supplying devices for soldiers and combat vehicles. Due to our own research and development infrastructure we build strong position of the domestic defence industry.

Our products are characterised with high quality and their users confirm reliability and innovative character of offered technical solutions. We provide services of our products on every stage of their use, implement constant improvements and widen our offer according to clients' suggestions.

The "Company profile" contains basic information on the Company and its products. Moreover, the financial situation, research and development plans, human capital as well as future prospects have been presented.

The present document may function as a guide for our clients, business partners, representatives of the defence industry, scientists and state authorities as well as the employees.

Krzysztof Kluza Ph.D.
President of the Board at PCO S.A.

For many years PCO S.A. has constituted the potential of Polish defence industry, supporting the safety of soldiers on the battlefield and increasing safety of our Homeland.

- About the Company
- Certificates
- Awards and distinctions

About the Company

PCO S.A. was established in 1976 under the name Przemysłowe Centrum Optyki w budowie. In 1994 it was transformed into a state–owned joint–stock company under the name Przemysłowe Centrum Optyki Spółka Akcyjna. PCO S.A. is a joint–stock company operating according to the Commercial Companies Code and the articles of association. Since 21st of October 2014 the Company is a member of Polish Armaments Group (PGZ).

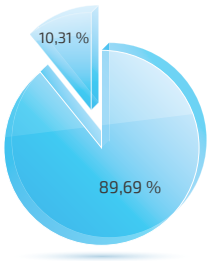
The primary activities of PCO S.A. consist of the production and sale of optoelectronic observation and aiming devices, employing laser, night vision and thermal vision technologies supplied to the army. Furthermore, the Company is engaged in research and development as well as implementation activities.

The Company's governing bodies are the General Meeting of Shareholders, the Supervisory Board and the Board of Directors.

The members of the Supervisory Board include three employee representatives chosen by secret ballot. The Board serves statutory supervision functions, but simultaneously cooperates with the Board of Directors supporting programs and initiatives crucial to the position and development of the company.

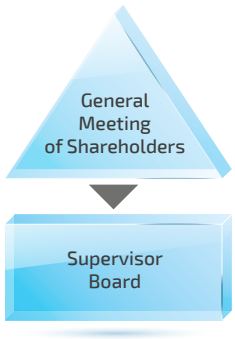
The scope of activities of the Company's governing bodies is stipulated in the Commercial Companies Code, company's articles of association, and the regulations of the Board of Directors and Supervisory Board.

Shareholder structure



10,31% – Employees
89,69% – Polish Armaments Group

Company's governing bodies



Board of Directors

Krzysztof Kluza
President of the Board
Director General

Błażej Borzym
Member of the Board
Financial-Economic Director

Paweł Glica
Member of the Board
Commercial Director

Certificates

Over forty years of activity has allowed the Company to achieve a strong position in the market. This position is reflected in the certificates obtained by the Company over the years. The certificates guarantee our Clients and business partners that our products and services are of the highest quality.

The Company has been granted the following concessions and certificates:

Concession of the Ministry of Interior and Administration of the Republic of Poland
The scope of the concession encompasses manufacturing and selling military and police equipment.

NATO Commercial and Government Entity Code
Certificate of NATO Commercial and Government Entity Code NCAGE: 2550H issued by the Military Center for Standardization, Quality and Codification.

Certificate of Management System
The certificate encompasses the following scope of activities: domestic and foreign trade in goods, technologies and services of strategic importance to the security of the State with observance of criteria of the Internal Control System.

Quality Management System Certification ISO 9001:2015 and AQAP 2110:2016
The quality of our products and services is a crucial factor for the market success of our Company. It depends on the ability to continuously supply products fulfilling the needs and expectations of our customers to an extent that is higher than our competitors. By applying and constantly improving the system compatible with the requirements of ISO 9001:2015 and AQAP 2110:2016, we strive to increase customer satisfaction, recognizing and fulfilling their requirements and expectations regarding the offered products.

Awards and distinctions

The numerous awards and distinctions achieved by PCO S.A. prove the quality and modernity of its products and services, and its robust and dynamic development.

Traditionally, our products are distinguished with the Defender award, which is granted for the most innovative technical solutions and special meaning for national safety.

Moreover, the Company has achieved many awards and distinctions from state authorities and institutions, including Ministers and organizations such as the Business Centre Club.

PCO S.A. has been granted the following awards over the last few years:

Defender
Award for innovative technical solutions in national defence equipment.
PCO S.A. has received DEFENDER every year for last 10 years. In 2015 it was awarded for KLW-1 Thermal Imaging Camera, in 2016 for KLW-1R Thermal Imaging Camera and in 2017 for the set of cameras for the "POPRAD" self-propelled anti-aircraft missile system.

Distinction of the Commander of the Territorial Defence
In 2017 PCO S.A. has received a distinction of the Commander of Territorial Defence for Modular Day Sight DCM-1.

Golden Statuette of the Leader of Polish Business
The title "Leader of the Polish Business" is given to dynamically developing companies that contribute to economic growth and act focusing not only on profits but also on ethics of business. PCO S.A. has also received 6 diamonds, awards given to dynamically developing Polish companies.

Prize of the Second Stage of the Minister of Defence
Prize in a competition for the best scientific work and implementation on the field of defence given in 2016 for Modification Set with KLW-1 Thermal Imaging Camera.

Ambassador of the Polish Economy
The Ambassador of the Polish Economy in the Creator of Solutions for the 21st Century category awarded to the Company by the prestigious club of entrepreneurs – Business Centre Club. The competition rewards companies promoting Poland as a reliable business partner on the international market. The competition is held under the honorary patronage of the Minister of Foreign Affairs of the Republic of Poland.

Leader of the National Security

The award given to PCO S.A for the MU-3, MU-3M Night Vision Monoculars, PNL-2AD/M Night Vision Goggles, KLW-1 Thermal Imaging Camera and NPL-1T Thermal Binocular as products enabling the implementation of the project of modernising individual soldier equipment and adjusting it to the requirements of a modern battlefield, according to the concepts and standards of NATO. In 2018 PCO has received the award also in "Innovative Compant for the Security and Defence" category.

Innovations for the Polish Armed Forces

Award for best innovative technological solutions in defence industry given by the Inspectorate of Implementation of Innovative Defence Technologies in cooperation with Military University of Technology. Competition was held under honorary patronage of the Secretary of State in the Ministry of Defence. In 2016 PCO S.A. has received 1st stage Award in "Industry" category for project of the KLW-1 Thermal Imaging Camera.

Laurel of Innovations

Prize is given by the Polish Federation of Engineering Associations for innovative products, modern technologies and cutting edge services or other innovative solutions.

In 2016 PCO S.A. has received Laurel of Innovations prize for KLW-1 Thermal Imaging Camera.

Approved by the managerial staff,
our mission and vision determine
our strategy and action and
help us achieve common goals
and inspire us in all our undertakings.

- Mission and vision
- Values
- Ethics in PCO S.A.
- Social Responsibility

Mission and vision

Mission
To fulfil needs and expectations of the customers by supplying on time modern, reliable and safe optoelectronic devices providing security.

Vision
To be the leading supplier of optoelectronic solutions for Polish Armed Forces and significant on foreign markets.

Motto
Innovations for the safety of the population.

Values

Our brand and the values attached to it distinguish PCO S.A. from its competitors. We pursue these values on a day–to–day basis and we are proud of them. Our values constitute a solid foundation on which the future of our Company can be based. We are governed by the following values:

- Client orientation
- Development and innovation
- Professionalism
- Responsibility
- Cooperation and exchange of knowledge
- Commitment
- Responsibility, reliability and loyalty

Ethics in PCO S.A.

PCO S.A., as a defence industry company, is obliged to conduct its business activity in an ethical and responsible way pursuant to the established rules and norms as well as the binding law. These rules can be found in the Code of Ethics of our Company. On the 4th of July it was updated by the Disposition 14/2018 of the President of the Board, Director General of PCO S.A.

The Code includes a detailed description of the most important values and rules which company employees follow as well as the manner of conduct of PCO S.A. in relation to areas of high importance in the defence industry. The rules described in the Code result from the effective legal regulations including work regulations binding in PCO S.A.

On the 3rd of January 2017 through Disposition 1/2017 of the President of the Board, Director General of PCO S.A. Code of Ethics of PGZ S.A. was introduced in PCO.

This Code of Ethics is an internal document regulating rules of ethical activities of employees and external partners. Code mentions standards that must be adhered to in the Group for example in employment, avoiding conflicts of interests, and contacts among employees. It is in forces consecutively with Code of Ethics of PCO S.A.

We rely on our Codes of Ethics, striving to be a model, reliable and honest partner, and employer. These documents constitute a guide of conduct for all our employees and provides a basis for our everyday operations in a constantly changing environment.

The content of the Codes is available on the PCO S.A. website (www.pcosa.com.pl).

Social Responsibility

PCO S.A. is a socially responsible company giving priority to building partnership with clients, suppliers, partners, employees and local community. PCO S.A. actively supports development of science and entrepreneurship, cooperating with universities, scientific institutes and supporting numerous social and charity initiatives.
Values of the socially responsible business are implemented by the following actions:

Partnership with clients and suppliers.
According our mission and vision we try to fulfil expectations and requirements of clients by supplying on time modern and reliable optoelectronic devices increasing safety. Also in contacts with suppliers and business partners we respect values of partnership and honesty.

Creating friendly workplace.
Employees are the biggest value for the Company and base of its success. That is why we care for our employees and support their further development and training.

Cooperating with research and development circles.
During research and development activities Company actively cooperates with technical universities and research-development centres, including Institute of Optoelectronics of the Military University of Technology, Air Force Institute of Technology, Military Institute of Armament Technology and Military Institute of Armour and Vehicles Technology.

We are a student friendly company.
PCO S.A. cooperates with technical universities and high schools what includes student visits in the Company, lectures, practices and probations, opinions on educational level and education programmes and participation in trade fairs organized by universities. We cooperate ia. with Military University of Technology, Technical University Warsaw, Academy of National Defence and Higher School of the Air Force in Dęblin.

Participating in patriotic initiatives.
We highly value propagating of the patriotic values and traditions. We support events commemorating important anniversaries.

Supporting local communities.
We highly value good contacts with local communities, including inhabitants of Gocław region by supporting ia. local schools.

Supporting balanced development and innovations.
Initiatives of the Company fit into EU policy towards the most modern areas of the European economy. Establishment of the Polish Technological Platform on Photonics was in accordance with Europe 2020 Strategy. Photonics is nowadays one of the key technologies in the EU.

Each year employees of PCO S.A. participate in charity actions such as “Szlachetna Paczka”. Due to dedication of employees it was possible to prepare material help for the families in need – purchase goods for the household and toys for children.


Stowarzyszenie WIOSNA

Szlachetna PACZKA

Certyfikat

PCO SA

Witaj w Drużynie SZLACHETNEJ PACZKI. Razem z nami zmieniasz świat na lepsze!

Wierzę, że nie ma Polski biednej i Polski bogatej. Jest jedna Polska. Dlatego cieszę się, że razem z nami podejmujesz wysiłek, aby zainspirować rodziny potrzebujące do samodzielnego radzenia sobie w życiu.

Paczka, którą otrzymała rodzina to coś więcej niż prezent, który spełnia jej materialne potrzeby. To przede wszystkim wyraz prawdziwej miłości, tego że ktoś dostrzegł w nich coś wyjątkowego i uwierzył w nich po to, aby teraz oni uwierzyli w siebie.

Gdybym dzisiaj miał powiedzieć, kiedy najbardziej pomagam, to od razu odpowiem, gdy koncentruję się na poznaniu drugiego człowieka i odkrywaniu jego piękna.

Mam nadzieję, że doświadczenie tego piękna było również Twoim udziałem!

Z wyrazami szacunku

Prezes Zarządu Stowarzyszenia WIOSNA

Fundacja

Sfinansowano ze środków Fundacji PKO Banku Polskiego, Partnera Strategicznego Projektu.

PCO S.A. enjoys a stable financial situation.
Our business results constitute
the effect engagement
and hard work by our Employees.

- Financial analysis
- Sales revenues

Financial report

PCO S.A. in enjoying a good financial situation. The Company has achieved good financial performance indicators for the past couple of years.

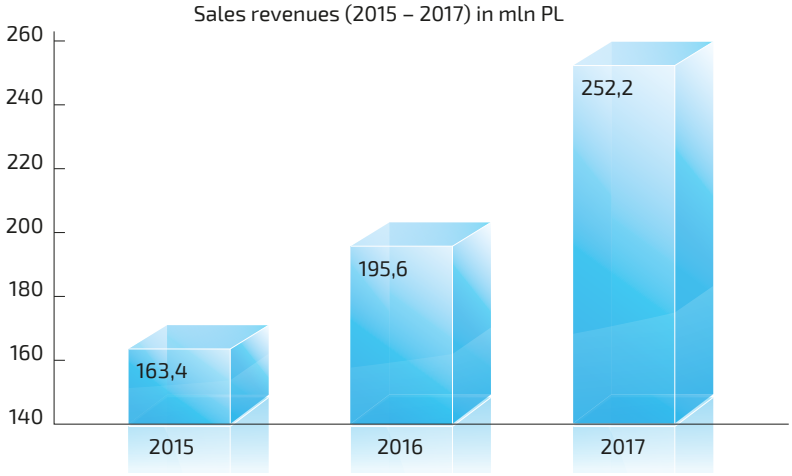
The beneficial financial situation of the Company creates opportunities for the growth of its value, creates image of a good contractor and a solid partner of the Polish Armed Forces. Moreover it enables prompt fulfilment of contracts, and contributes to the image of the Company as a credible partner in settlements with suppliers and contractors.

The strategic goal of PCO S.A. is to participate in all operational programs being part of the Plan of Technical Mobilisation of the Polish Armed Forces, as a supplier of optoelectronic devices and systems, providing defence of the basic interests of the state security. Sales of the individual equipment for soldiers has the key significance for the incomes of the Company. In frames of the products for combat platforms the priority of the PCO S.A. is to realise contracts on supply of the optoelectronic products for the Polish Armed Forces as a part of the operational programs, mainly for the Leopard 2A4 tanks and unmanned turrets for combat vehicles (program of modernization of the armoured and mechanized forces), KRAB self-propelled howitzers and RAK self-propelled mortars (program of modernization of the missile forces and the artillery), armoured personnel carriers (Rosomak APC program), light reconnaissance vehicles (patrol and reconnaissance program), PILICA, POPRAD and PIORUN anti-aircraft systems (air-defence programs), and development of the optoelectronic devices for military vehicles. Other priorities include continuation of works on TYTAN Advanced Individual Battle System and participation in scientific-research projects.

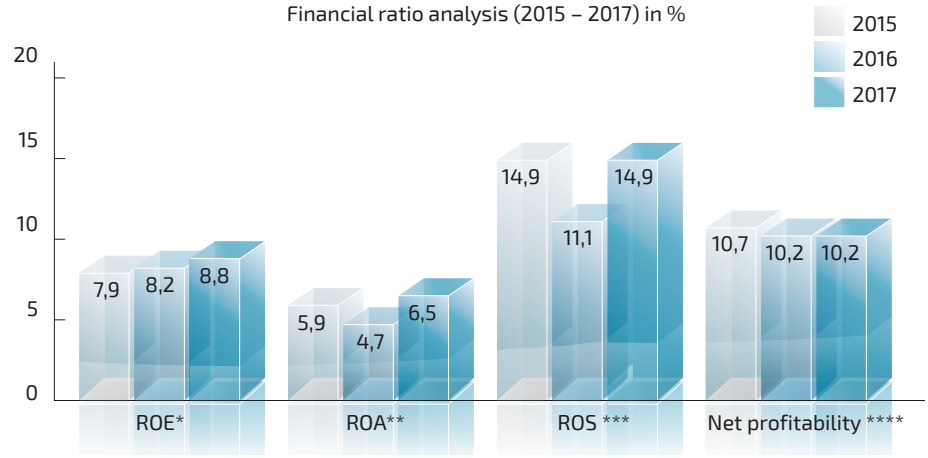
Financial performance 2015 – 2017 in mln PL

Financial performance in mln PL	2015	2016	2017
Net revenue from sales	163,4	195,6	252,2
Operating expenses	164,4	199,5	219,4
Gross profit on sales	28,7	25,0	38,4
Operating profit	24,4	21,8	30,3
Profit on business activities	26,5	28,5	33,8
Net profit	21,4	24,2	27,5

Sales revenues (2015 – 2017) in mln PL



Financial ratio analysis (2015 – 2017) in %



* ROE = net profit / average equity
** ROA = net profit / average assets
*** ROS = sales revenues / sales revenues and their equalisation
**** Net profitability = net profit/ revenues in general

Achieved financial ratios mean that Company manages its assets and capital effectively and financial situation of PCO S.A. is stable. Debt ratio is currently kept on low and stable level. The rise of the ratio in 2016 was caused by the investment credit and delay of the pre-payment for supplies in 2017.

Debt ratio (2015 – 2017) in %

Year	Debt ratio
2015	24,7
2016	43,3
2017	26,4

Ratios are on recommended level. They show company's ability to meet its obligations.

Liquidity ratios 2015 – 2017

2015			2016			2017		
I grade liquidity ratio	II grade liquidity ratio	III grade liquidity ratio	I grade liquidity ratio	II grade liquidity ratio	III grade liquidity ratio	I grade liquidity ratio	II grade liquidity ratio	III grade liquidity ratio
0,7	1,0	1,8	0,8	0,9	1,4	0,7	1,2	2,4

Our products combine modernity,
high quality and reliability,
and are adjusted to the Clients' needs.

- Individual equipment
- Equipment for combat platforms
- Consortium's offer

* *July 2018*

Individual equipment

NIGHTVISION GOGGLES

MU-3M Night Vision Monocular is currently one of the lightest night vision devices in the world. It weighs 265 g without batteries.
Thanks to modern aspherical optics the device is also much shorter than the previously produced monocular – the overall length of it is 97 mm. The MU-3M Night Vision Device can work with an infrared attachment ClipIR, thus allowing observation of scenery in fusion mode: night vision and thermal modes blended together. It is possible to mount two MU-3M devcices together and use them as goggles for drivers. Monocular may be mounted on any kind of helmet. MU-3M cooperates with CK-6 colimatoric sight creating night vision aiming system.

MU-3ADM Miniature Goggles is a modern passive night vision device. It is characterised with light construction, reliability and durability in field conditions together with high parameters of detection and identification.

PNL-2ADM Miniature Night Vision Goggles are light night vision instrument designed for performing tasks at night. PNL-2ADM is a noctovisor with two independent optical channels. PNL-2ADM goggles enable to observe binocularly and allow keeping natural shapes and sizes of the observed scenery. Night vision goggles are compatible with majority of currently used helmets. The battery box is a separate element fixed in the back side of the helmet, that is why the weight is evenly distributed keeping at the same time low weight of the structure. The goggles have built-in IR illuminator.

NPL-2 Night Vision Goggles are a small and lightweight night vision device designed for terrain observation when the visibility is limited and at night. The device is equipped with an additional source of infrared illumination, which enables operation in closed rooms.

NPL-2 Goggles may be used as a hand-held device or mounted on any type of helmet or directly on head with a harness. When using a magnifying clip-on goggles NPL-2 can be used as a manual observation instrument at greater distances.

PNL-4 Aviator's Night Vision Goggles are the newest night vision device designed for terrain observation and target detection during night flights performed by helicopter pilots and crew.

The design of the goggles is based on the newest INTENS Image Intensifier. Due to the modern design solution, the goggles are light and can be perfectly adjusted to the head and the individual characteristics of the pilot's sight. Goggles provide comfortable steoroscopic observation with preservation of the natural shapes and sizes of the observed scenery. Goggles have a special safety solution.

PNL-3M Aviator's Night Vision Goggles are high performance, ultra-light, passive stereoscopic night vision goggles for helicopter crew members. These goggles gained the European Aviation Safety Agency (EASA) certification enabling their use in civilian aviation.

PNL-3M goggles enable the rotary-wing aircraft pilots to perform air operations in a low light up to severe night conditions without any source of artificial light. The PNL-3M goggles can be powered from one of two alternative power supply sources – from the aircraft's on-board power supply network or from the battery pack that comprises of two independent AA size battery compartments. When goggles are tilted upwards and folded over the helmet their image amplifiers are disconnected from the power supply source.

BINOCULARS

NPL-1M Night Vision Binocular is a light night vision device designed for terrain observation in limited visibility conditions and at night at longer distances.

NPL-1T Thermal Binocular allows observation during day and night and in limited visibility conditions.

New constructional solutions and advanced methods of thermal image processing allowed for obtaining exceptional quality of thermal image while reducing weight and power consumption. Thermal image is presented on two OLED displays or can be sent via digital video output to an external helmet-mounted display or a monitor. NPL-1T allows to store pictures in internal memory with a possibility to copy the images to a computer.

Basic power supply are 4xAA batteries but binoculars can be powered from an external source of power in a wide range of voltages. NPL-1T is designed to work with the military TSO-1 receiver, allowing to display time and geographical coordinates on the screen.

Furthermore NPL-1T is equipped allow for an approximate measurement of the distance to the target with a height of at least 1.75 m.

SIGHTS

SCT Thermal Weapon Sight is designed for observation and firing from small arms during day and night, in normal conditions and during limited visibility, and in different climatic and weather conditions.

SCT sight is equipped with a handle for reliable and repeatable installation of the weapon sight on the rail, according to the standard STANAG4694, and on the rail according to the standard MIL-STD-1913 (Picatinny).

PCS-5/PCS-5M Passive Night Vision Sight is a lightweight telescopic sight which is ideal to use on portable weapons. Sight is used tor battlefield observation, detection and target recognition in natural night-light conditions.

PCS-5 sight is appreciated by users due to: its robust and precise design, as well as long range night vision. Night vision sight PCS-5 can be used on various types of weapons and antitank grenade launchers with side mounting system – a „dovetail". PCS-5M version is designed to be used on weapons with universal rail MIL-STD-1913 (Picatinny).

CKW BAZALT Day-Night Aiming Sight is designed for individual and team weapon – rifle, machine gun, sniper rifle, grenade launchers. The device enables destruction destruction of various single uncovered and hidden targets in good and limited visibility at night.

CKW gives ability to make shooting corrections both elevation and azimuth when changing aiming range in the act of firing. It may be easily mounted and un-mounted without disturbing fixed aiming axis.

DCM-1 Modular Day Sight is a light set of day sights designed for firing at short and medium distances. DCM-1 was designed for weapons used in Polish Future Soldier Program – MSBS -5.56 rifl es and assault rifles Beryl. DCM-1 comprises of a LDK-4 rifle scope and MK-1 – a miniature collimator of open type installed on it.

The LDK-4 sight may be used for ballistics of a particular type of weapon by using appropriate reticle.

The LDK-4 rifle scope is designed to work with thermal imaging sight and night vision instruments (e.g. MU-3/MU-3M monocular) installed in front of the sight that enable using it at night or under reduced visibility conditions.

Equipment for combat platforms

NIGHT VISION PERISCOPES

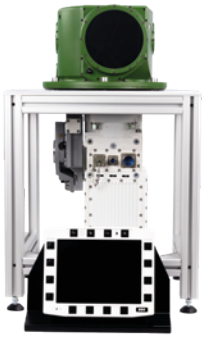
PNK 55/72 Night Driver's Periscope is a dual eye-piece night observation device designed for armoured fighting vehicles. It enables the driver to see the road or terrain features in night-time.

POD-72 is a binocular day and night observation device designed for different types of armoured vehicles (tanks, infantry fighting vehicles, armoured recovery vehicles).

POD-72 is used in T-55 and T-72 tanks as well as in special vehicles built on their chassis. POD-72 may be used also in BWP-1, BWP-2 and other infantry fighting vehicles. Due to its size the device is applicable to most of the post-Soviet fighting vehicles and tanks providing at the same time solutions based on the newest technology.

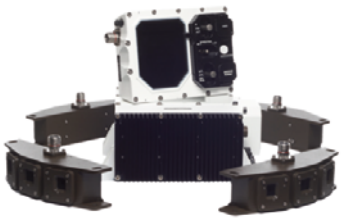
MODERNISATION SETS FOR ARMOURED VEHICLES

Modernisation Set for the Thermal Imaging Camera (ZMKT), with its main element – KLW-1 Thermal Imaging Camera, is designed for PT-91 tanks with SKO1T (DRAWAT) fire control system. ZMKT is a set of devices enabling replacement of TES thermal imaging camera with KLW-1 Thermal Imaging Camera.



PCT-72 Periscopic Thermal Vision Sight may be used in all tanks of the T-72 family in place of previously used TPN-1-23-11 sight. In this set additional armoured cover of the periscope fulfilling requirements of 2 wg. resistance STANAG norm, may be added.

LASER WARNING SYSTEMS



SSP-1 OBRA-3 Laser Warning System is destined for detection of vehicles and military objects' radiation from impulse range-finders or laser illuminators. The system can fire smoke-screen towards the direction of detected laser radiation. System can update the direction of detected radiation, taking into consideration the movement of the vehicle or its turret, can eliminate indications from the reflected radiation and gives possibility to communicate with fire control system or other vehicle systems.

The system has an optical and acoustic signal system of detected radiation. SSP-1 OBRA-3 can also identify laser source type (impulse range finder or laser illuminator), laser source direction and can update direction of the radiation source when it changes. The system is adapted to firing smoke grenades in the following models: manual, semi-automatic, automatic.

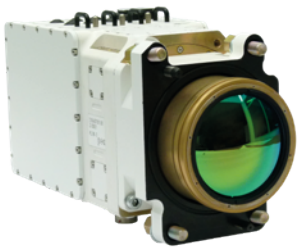
Depending on OBRA units arrangement inside the vehicle it can be operated by any crew member. When the additional display desk is used, the second member of the vehicle crew can observe the system indications.

NIGHT VISION, THERMAL AND DAY CAMERAS

KDN-1 Observation Camera is a day and night observation device designed for any wheeled or tracked vehicles.

The KDN-1 camera has a built in system of light level measurement, which protects night channel image intensifi er tube against accidental turning it on during the day. The camera communicates with any analogue monitor in CCIR monochrome standard.

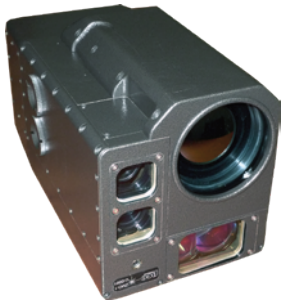
KDN-1T Observation Camera is a device combining day and thermal imaging sight and is destined for use in various military vehicles, including Leopard 2PL tanks.



KLW-1 Thermal Camera is designed for the fire control and observation systems. It is a thermal imaging cooled camera operating in 8 – 12 µm – MCT detector of III generation, screen resolution 640 × 512.

KMW-3 Thermal Camera is a camera with cooled detector operating in 3nm – 5nm spectral range is designed to be used in firing systems of the anti-aircraft sets.

KTVD-1M Day Television Camera is designed for detection and tracking of planes, helicopters and land objects in day conditions. The camera can be mounted on a self-propelled wheeled and tracked vehicles. KTVD-1M TV camera is designed to be used in a tracking and aiming optoelectronic head of a self-propelled anti-aircraft missile system of very short range POPRAD.



INTEGRATED OPTOELECTRONIC MODULES

ZMO-1 Integrated Optoelectronic Module is intended to be used in remote-controlled weapon modules and stationary observation systems. The modules enables the detection, recognition, identification and distance measurement to the detected target.

OPTOELECTRONIC HEADS FOR TURRETS AND ANTI-AIRCRAFT SYSTEMS

GOS-1 Optoelectronic Head for Observation and Tracking is a technically advanced product with a number of features enabling easy integration with weapon platforms (vehicles; armament modules and anti-aircraft sets). Its design allows using it on different types of land vehicles designed for detection, recognition, identifi cation of ground and air targets. The head is an element of SKO 23 mm anti-aircraft rocket and artillery set ZUR-23-2SP of PILICA system.

GOD-1 Stabilized Commander Optoelectronic Head for Observation and Aiming is a technically advanced product with a number of features enabling easy integration with weapon platforms (vehicles, armament modules, antiaircraft sets). Its design allows using it on different types of land vehicles designed for detection, recognition, identification of ground and air targets.

GOC-1 NIKE Stabilized Observation and Aiming Optoelectronic System is dedicated for operation in detection, observation, tracking and targeting systems for ground and air targets in day and night conditions. The head is composed of an integrated opto-electronic module located on the two-axis stabilized assembly platform.

OMNIDIRECTIONAL OBSERVATION SYSTEM

SOD Omnidirectional Observation System is intended for wide-angle observation of near vicinity of the vehicle. Allows day and night observation, as well as in limited visibility conditions.

The omnidirectional observation system provides the commander and the armored vehicle crew with possibility to observe the entire vehicle surroundings in the close vicinity, using television and thermal imaging mode. Information from SOD modules is displayed on a touchscreen. Single television-thermal imaging module includes 2 television circuits and 2 thermal imaging circuits. The system can display images from four modules as a panorama, in modular manner – selected from one of four modules, in directional manner – selected two modules out of four (front, back, right, left).

Offer as a Consortium

Future Soldier Program has been developed by the consortium for science and industry consisting of defence industry companies and military institutes of science and research. The role of the leader of the consortium is currently taken by PCO S.A. The main aim of the Future Soldier program is to equip a soldier to meet the requirements of the modern battlefield.
The program is of great importance to the Polish economy. Technologies developed increase safety, survivability and effectiveness of soldiers, but also enhance the safety of citizens.

SWPL-1 Flight Parametres Display System is designed to display information and the flight for the pilots of Mi-17 helicopters.

SWPL-1 system enables the pilot to control the flight without looking at the indicators on the board devices. The system is especially important during the flights at low altitude, when taking eyes from the surroundings of the helicopter by the pilot and looking at the obstacles is very dangerous. Data is presented on the transparent on-helmet displays of the flight data display system.

PCO S.A. is a leader of one of the strategic programs of the MoD, having crucial role for the State's security.


Strategic
projects

CIROP project

The CIROP project is implemented under the ESA's Polish Industry Incentive Scheme helping Polish companies.

The aim of the project is to investigate possible ways of and develop a conceptual model for interaction between the two infrared Earth observation systems owned by an Italian company and a Dutch company.

The necessary works include developing interfaces between the systems that would lead to their integration and, consequently, improved use of their Earth-observing capacities. One of the solutions designed to improve the system efficiency is to eliminate the observation areas covered by clouds and reduce the volume of any redundant information transmitted.

The project will be completed within eight months and fully financed by the ESA. After completing the conceptual phase and submitting the results to the European Space Agency, PCO will seek to enter the second phase which involves developing a technology demonstration.

HANEDA – Holographic Near-Eye Display

In December 2017 funding agreement for realization of the "HANEDA – Holographic Near-Eye Display" project, was signed with the Foundation for Polish Science.

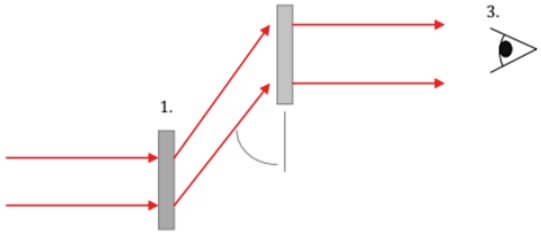
The HANEDA project received funding under the Team Tech programme organised by the Foundation for Polish Science (FNP) from the European Regional Development Fund under the 2014–2020 Smart Growth Operational Programme (SG OP), Priority Axis IV: Increasing the research potential, Measure 4.4: Increasing the human potential in R&D sector.

Project is realized by the Consortium of PCO S.A. and the Warsaw University of Technology in cooperation with the foreign research partner – Chiba University from Japan. Project is to last until 2020.

The aim of the HANEDA project is to prepare technology of near-eye color holographic displays –(RGB) that enable displaying signs seen by the operator with simultaneous viewing of real and virtual images without a need to change the visual field and focal distance, on 10–300 m distance.

The long-term objective is to obtain a range of holographic goggle products for observation or remote control systems with dual applications. This technology will be the base for development of observation and remote control systems for the operators of machines.

The project involves the recruitment and training for PCO S.A. of the engineering and scientific staff with the necessary expertise in the area of holographic design and production.



The main tasks realized by the PCO are:

- integration of technical requirements for the holographic goggles,

- integration of medical and physical requirements for the technical data, to project synthetic wide--range 3D display,
- project and construction of the miniaturized version of the near-eye holographic display in form of portable on head device.

The aim of these tasks is to demonstrate clear advantages of the lens less displays in cohesion and energetic efficiency compared with classical devices based on refractive optics. It will also be proving superiority of the 3D perception and observation compared with classical solutions.

The main tasks of the Warsaw University of Technology are:
- constructing model of the human eye's activity in defined conditions of practical uses of the display,
- preparing a study of ability to meet technical requirements in holography,
- preparation of the mumerical model and methodology of creation of the holographic view with taking account of the viewing corrections.

Support from the foreign partner includes:
- Extending software algorithms prepared by the Japanese scientists for use in real time calculation of holograms that will be shown on the display

The final users defined by the project team: firefighters, surgeons, special forces, flight controlers, micro-assembly, police forces, crane operators, drone operators, drivers.

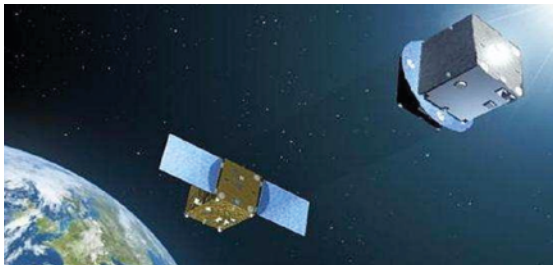
The new innovation in the project is optional construction of goggles for diagnostics and sight rehabilitation. Currently no similar device exists despite the needs.

PROBA-3

PROBA-3 is a project commissioned by the European Space Agency (ESA) and implemented under the agreement with the Centre Spatial de Liège – Université de Liège (CSL). The aim of the project is to prove formation flying technologies by demonstrating that two satellites can move as one single object. The paired satellites will form together a coronagraph in a large-scale science experiment to study the Sun's corona, with one of them covering the solar disk so that the other can observe the solar corona. There must be a relative movement between the satellites orbiting around the Earth. The experience gained during the project may be used for further ESA projects.

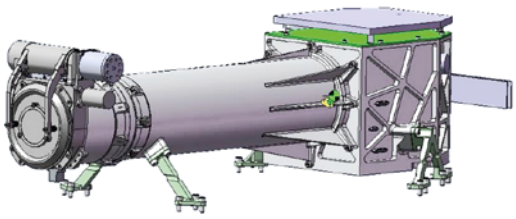
PCO S.A. is responsible for the following Baffle and Structure set.

Within the project, PCO is a subcontractor for the mechanical parts of the coronograph for the PROBA-3 satellite, in line with the design and documentation developed by CSL. Due to variable operating conditions, the development of an appropriate



source: www.esa.int

technology and the construction of a device case is a major challenge for the company which must be addressed in order for the mission to be successful.



CSL is responsible for the design, while PCO is required to provide relevant.

Polish Future Soldier

PCO S.A. also offers system solutions including the equipment for future soldiers.

The Future Soldier program is carried out by the scientific-industrial consortium, whose members are defence industry companies, military research science institutes, and the Military University of Technology.

PCO S.A. is currently a leader of the consortium. The goal of the company consists of the coordination of research and development activities, integration of products into systems, and the search for the application of R&D activities.

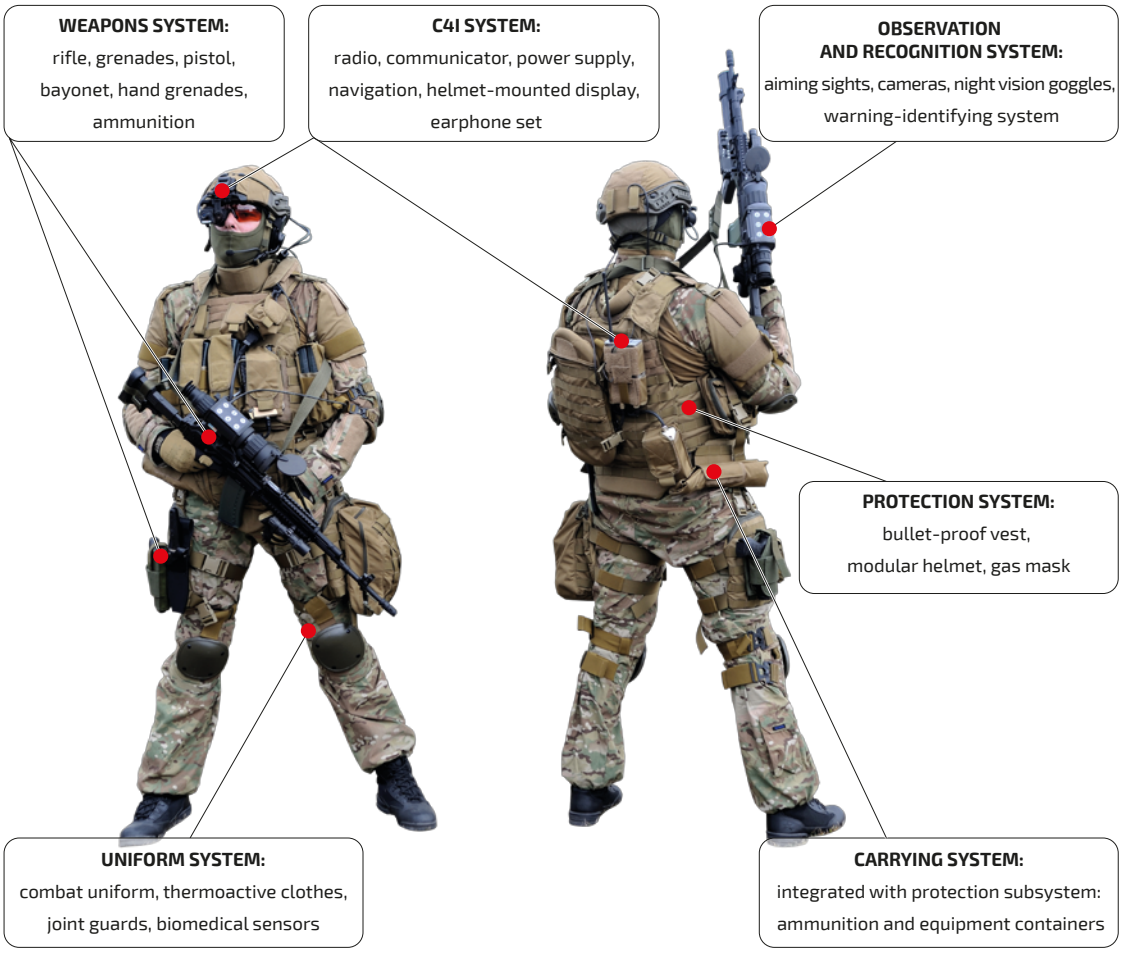
Moreover, the promotion of the program belongs to the leader of the consortium.

The main goal of the program is to supply soldiers with equipment fulfilling the requirements of the contemporary battlefield.

Guidelines of the system:

- modular solutions;
- ergonomics and simplicity of structure;
- integration of elements into system;
- immediate readiness;
- interdisciplinarity.

The Future Soldier program is of vital importance to the Polish economy. The technologies developed within the program have a huge influence on the effectiveness and safety of soldiers on the battlefield and the safety of citizens.



The offer of PCO S.A. includes elements for future soldier equipment: optoelectronic recognition devices (night vision devices, thermal cameras, laser rangefinders and laser radiation detectors) and aiming systems (night vision, thermovision and collimator sights).

Employees are the greatest value for the Company
and they influence its achievements.
High qualifications and strong motivation of employees
constitute the fundamental condition for the Company's success.

- Employment
- Work efficiency
- Staff recruitment

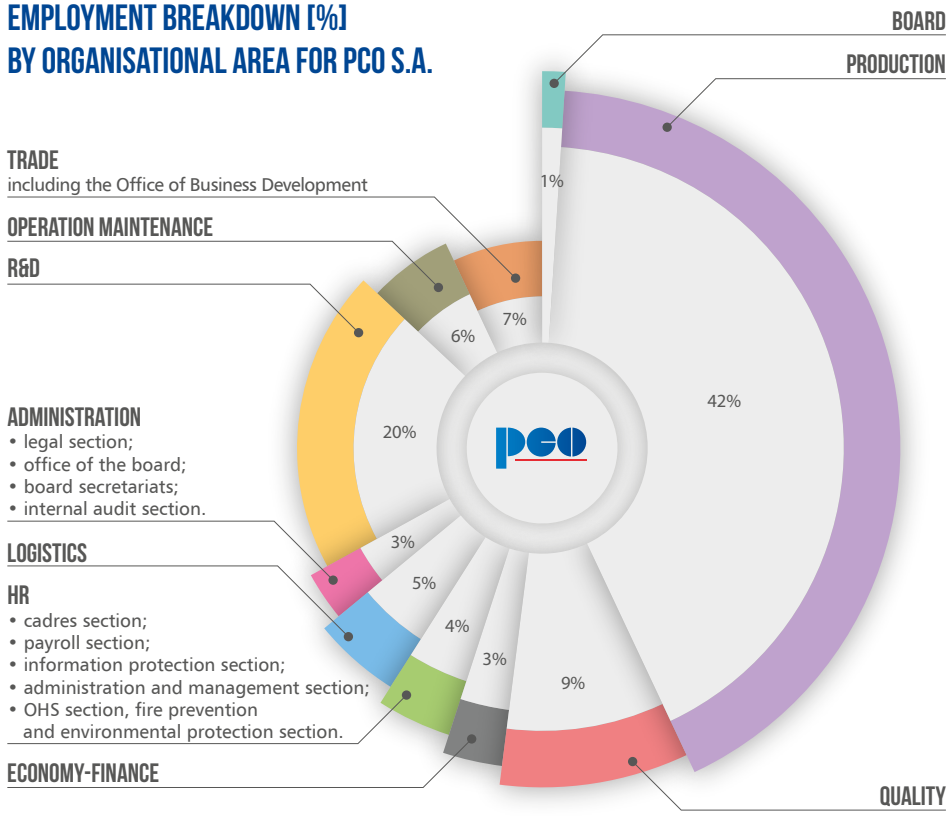
PCO S.A.'s strategic objectives for human capital management

Ensuring that Company's management staff and employees are able to meet its strategic objectives is one of the Company Board's top priorities. This is achieved by improving work efficiency, recruiting new staff and developing their professional competence.

Employment

Based on the results of staff assessment in terms of age and full-time structure, a generation gap could be avoided for another five years, if the PCO S.A.'s current employment structure is maintained in subsequent years.

The proven procedures in place for staff recruitment and professional competence development will safeguard the company against the risk of competency gap over the next five years.



Work efficiency

The work efficiency of the company's management staff and employees is being improved using the IT system designed to improve staff work efficiency, developed in 2017 and put into operation in 2018.

The system has a module for descriptive and quantitative assessment of staff performance and a competence assessment function. In 2019, the IT system will also be used for training registration and planning.

** On 6th of March 2017*

The assessment system for work efficiency covers all Company employees (except for physical workers in production departments), allows supervisors to assess the level of performance and professional competence of their subordinates and employees to carry out self-assessment once a year and assess the performance of their co-workers.

By implementing the work efficiency assessment system the Company will be able to annually record

and compile a list of achievements at work for managers and employees and plan its activities for the next year. Such assessment is useful in calculating the value of the work efforts and labour costs for a manager and his team, including for each employee individually. An assessment of work efficiency can also be used to learn about the training needs or development potential of the company staff, as well as their attitudes and skills necessary to recognise the opportunities and threats associated with their position within the company.

It also contributes to improved communication within the company in terms of clarifying and integrating the Company's strategy with existing management systems, as well as monitoring and verifying the effects of strategic actions taken by executives and employees.

Staff recruitment

In the area of human capital management, the Company continues its efforts to recruit graduates from universities and vocational schools for employment with PCO S.A.

The Company has a student programme in place which allows students or graduates from technical universities to attend internships or graduate apprenticeships and write engineer's, master's or MSc thesis relating to the Company's business profile.

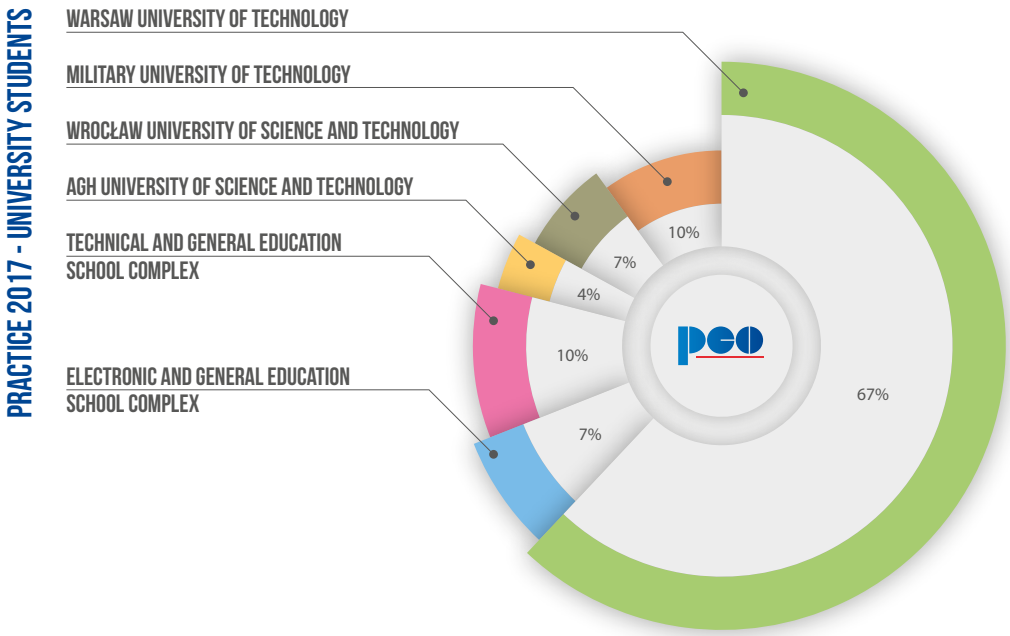
The Company has for many years taken part in job fairs organised by technical universities for recruitment of young staff.

In 2017, we attended job fairs at the Warsaw University of Technology and the Wrocław University of Science and Technology.

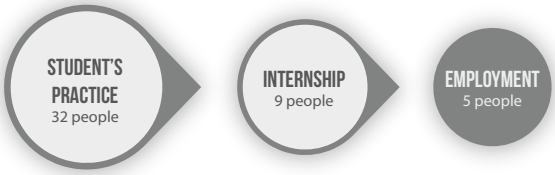
In 2017, 32 school pupils and students completed their internship courses, the majority of which came from the Faculty of Physics at Warsaw University of Technology, the Military University of Technology (2 students from the Faculty of Mechatronics and Aviation) and from the Wrocław University of Science and Technology (2 students from the Faculty of Fundamental Problems of Technology).

Three-month apprenticeships in R&D and marketing divisions were organised for nine university students.

Last year, five students defended their diploma thesis with assistance from PCO S.A. staff.



Under the student programme, five students/graduates found work in R&D and marketing divisions.



The students of Mechanical Engineering Secondary School No. 7, in consultation with Jan Kiliński Secondary

School Complex No. 31 in Warsaw, have been attending classes held at PCO S.A since September 2017.

This shows that the Company has adopted a dual education system, also known as an alternate or two-track system, which involves the provision of practical vocational training by the employer and the provision of theoretical and general training within the school framework or as part of out-of-school activities. This system has been widely applied in Germany, Austria, Switzerland, Norway and France, while in Poland it has successfully been used in the past, e.g. in the form of company schools and school workshops.

The aim of the existing collaboration between PCO S.A. and the School is to maintain high economic growth in Warsaw metropolis and make use of EU funds earmarked for investments in education. The system is also intended to meet the increasing demand for medium-level technical staff and, consequently, provide professional development opportunities in the area of optics and mechanics.

Such cooperation enables PCO S.A. to counter any shortage of young, qualified employees in production departments, whereas the School and its students may benefit from improved quality and attendance levels in vocational training, as well as increased employment opportunities.

The Company's success is driven by its personnel management policy (applied for several years) which is focused on developing professional competence and recruiting young and committed staff, maintaining long-term cooperation with universities and institutes with a view to recruiting a new generation of employees for R&D and production departments, and ensuring that employees nearing retirement are replaced with younger staff with no disruption to the Company's activities.

PCO S.A.

28 Jana Nowaka-Jeziorańskiego St.,
03-982 Warsaw
e-mail: pco@pcosa.com.pl

District Court of the City of Warsaw
13th Economic Division of the National Court
Register under KRS No. 0000169830
NIP No.: 525-00-00-825
REGON No.: 010743638
Authorized capital stock: PLN 30,610,790

President of the Board
Director General
tel.: (22) 515 75 01

Member of the Board
Financial-Economic Director
tel.: (22) 515 75 02

Member of the Board
Commercial Director
tel.: (22) 515 75 03

Management Board
and Ownership Supervision Office
tel.: (22) 515 76 44

Communication and PR Department
tel.: (22) 515 75 07

PCO S.A.
28 Jana Nowaka-Jeziorańskiego St.,
PL 03-982 Warsaw, Poland