COMARCH

2019

Annual Report

COMARCH

19

Consolidated financial results of Comarch Capital Group as of 31 December, 2019.

Table of Contents

Table of Contents

1. A Letter from Comarch CEO to Shareholders 6
2. Comarch Activity 8
Comarch in Numbers 9
Comarch - Worldwide Customers, Projects, Companies, Data Centers 10
Operations of the Comarch Group 12
Prospects of Business Development and Anticipated Financial Condition of the Group in 2020 13
Factors Material to the Development of the Group 15
History of Comarch 18
3. Financial analysis 20
Basic Economics and Financial Values 21
4. Company Bodies 26
Management Board 27
Supervisory Board 27
Audit Committee 27
Organizational and Competence Structure of Comarch Capital Group Comarch SA (Kraków, Poland) 28
Shareholders 29
Organizational Structure of Comarch Capital Group 30
Changes in Ownership and Organizational Structure in 2019 31
5. Research and Development Work 32
Research and Development Work 33
Subsidizing Projects 33
6. Comarch Products 42
Telecommunications Division 45
Financial Services Division 51
IoT Division 53
Public Division 57
Services Division 59
e-Health Division 63
ERP Division 67
Training Center 71
7. Sustainable Business 72
Statement of the Management Board of Comarch SA to the Company's Stakeholders on Non-financial Reporting 73
Integrated Management System 74
Comarch Group Code of Conduct 74
Internal Control System Policy 81
Security Policy 82
Sustainable Development Policy for Suppliers 82
Policy of Respecting Third-party Intellectual Property 83
Quality Policy of the Quality Management System for Medical Devices 85
Reporting on Environmental and other Factors 86
8. Material Events in 2019 88
9. Corporate Social Responsibility 92
10. Prizes and Rankings 104
11. Comarch Offices – Worldwide 108

A Letter from Comarch CEO to Shareholders

Krakow, 29th of April, 2020

Dear Shareholders,

The Comarch Capital Group achieved record financial results in 2019. Sales revenue increased by 5.0%, i.e. by PLN 67.8 million compared to 2018 and reached the value of PLN 1,437.4 million. Operating profit reached PLN 143.4 million, while net profit reached PLN 104.8 million. The operating margin in 2019 was 10%, and the net margin was 7.3%. A year ago, these values were 6.4% and 2.2%, respectively. Such a significant improvement in profitability was possible due to the increase in the scale of the Group's operations, extension of the market offer and continuous improvement of the effectiveness of the undertaken actions.

Last year, there was a further rapid increase in sales of Comarch proprietary solutions. The demand for Comarch Group's software, as well as services related thereto, increased especially on foreign markets. Solutions for telecommunications, loyalty, EDI and ICT, as well as ERP systems enjoyed particular interest of customers. Due to the wide and comprehensive offer of modern IT solutions and high quality services, the Comarch Group is the largest Polish software producer and one of the leading IT suppliers in the world. In 2019, the Group successfully continued its growth strategy based on developing its own products for many industries and selling them on international markets. I would like to emphasize that, for many years, the Comarch Group has incurred significant expenditure on the development and maintenance of the global sales network, thanks to which the international brand recognition and range of the Comarch offer are increasing, which effectively supports the sales of the Group's solutions on new markets. Last year, a new subsidiary, Comarch Pty. Ltd. in Australia, joined the Group.

In 2019, the Comarch Group made significant investments in developing new and improving existing IT products. Expenditures for research work exceeded PLN 230 million, which represents 16% of the Group's sales revenue. I would like to point out that these key investments are financed primarily from the company's own funds. The Comarch Group has intensively developed a new generation of telecommunications systems dedicated to 5G technology, loyalty systems, ERP systems, IT solutions for medicine and in the field of Internet of Things. In 2019, the Group invariably focused on the development of IT solutions in the services model – Comarch is one of the market leaders in this field. Last year, the Comarch Group launched a comprehensive offer in the field of Comarch Cloud computing, with the highest security standards, based on the Comarch Data Center infrastructure. Thanks to Comarch Cloud, customers can use software, store data and run their businesses without their own IT infrastructure, while ensuring high performance, reliability, security and scalability of resources.

Last year, the Comarch Group strengthened its position as one of the fastest growing employers in the IT sector. In 2019, the employment volume increased by 308 employees, at the end of the year the Group employed 6,348 people worldwide. As every year, the program of summer student internships was very popular, thanks to which the Comarch Group is perceived as the first choice employer on the labor market in the IT industry.

The Management Board of the Comarch Group strives to effectively implement the mission of spreading worldwide innovative technical thought created in Poland. In addition to business activities, the Comarch Group implements a policy of corporate social responsibility and is involved in activities for environmental protection and the preservation and reconstruction of national heritage, actively supports non-governmental organizations and charity campaigns and is a patron of culture, art and sport.

Given the current situation in Poland and in the world, I emphasize that the Comarch Group is very well prepared to operate also in the conditions of the expected economic slowdown caused by the Covid-19 pandemic. I am convinced that, due to the very good financial situation, significant products, industrial and geographical diversification of its offer and the commitment of employees, Comarch will be able to strengthen its market position as a global provider of IT solutions in the coming periods, to the satisfaction of customers, employees, shareholders and the whole social and economic environment.

Professor Janusz Filipiak, President of the Management Board of Comarch S.A.

2

Comarch Activity

Comarch in Numbers

1991
Comarch onset

1993
Founding year

1999
First publicly traded on the Warsaw Stock Exchange

6500+
employees

USD 400 mln
The total value of Comarch's shares on the Warsaw Stock Exchange

57
Subsidiares

Added Value
Comarch is a software house which sells its own software products tolarge corporations and provides implementation and managed services

93%
of revenues from sales of own software and products

Headquarters
Kraków, Poland

Worldwide Customers, Projects, Companies, Data Centers

57
SUBSIDIARIES

91
OFFICES

IN
67
CITIES

IN
34
COUNTRIES

ON
5
CONTINENTS

EUROPE

1 **Poland**
Białystok, Bielsko-Biała, Częstochowa, Gdańsk, Gliwice, Katowice, Kielce, Kraków HQ, Lublin, Łódz, Opole, Płock, Poznań, Rzeszów, Tarnów, Toruń, Warsaw, Włocławek, Wrocław

2 **Austria**
Innsbruck, Vienna

3 **Belgium**
Brussels

4 **Finland**
Espoo

5 **France**
Montbonnot Saint Martin, Lille

6 **Germany**
Berlin, Bremen, Dresden, Düsseldorf, Hamburg, Hannover, Munich, Münster

7 **Italy**
Milan, Rome

8 **Luxembourg**
Luxembourg

9 **Russia**
Moscow

10 **Spain**
Madrid

11 **Sweden**
Stockholm

12 **Switzerland**
Arbon, Zug

13 **The Netherlands**
Rotterdam

14 **UK**
London

15 **Ukraine**
Kiev, Lviv

ASIA

16 **China**
Beijing, Shanghai

17 **Japan**
Tokyo

18 **Malaysia**
Kuala Lumpur

19 **Singapore**
Singapore

20 **South Korea**
Seoul

21 **Thailand**
Bangkok

22 **Turkey**
Istanbul

MIDDLE EAST

23 **Saudi Arabia**
Riyadh

24 **United Arab Emirates**
Dubai

NORTH AMERICA

25 **Mexico**
Mexico City

26 **Canada**
Saint John, Montreal, Toronto

27 **USA**
Atlanta, New York, Rosemont, Chicago, Columbus, Tyrone

SOUTH AMERICA

28 **Argentina**
Buenos Aires

29 **Brazil**
Sao Paulo

30 **Chile**
Santiago

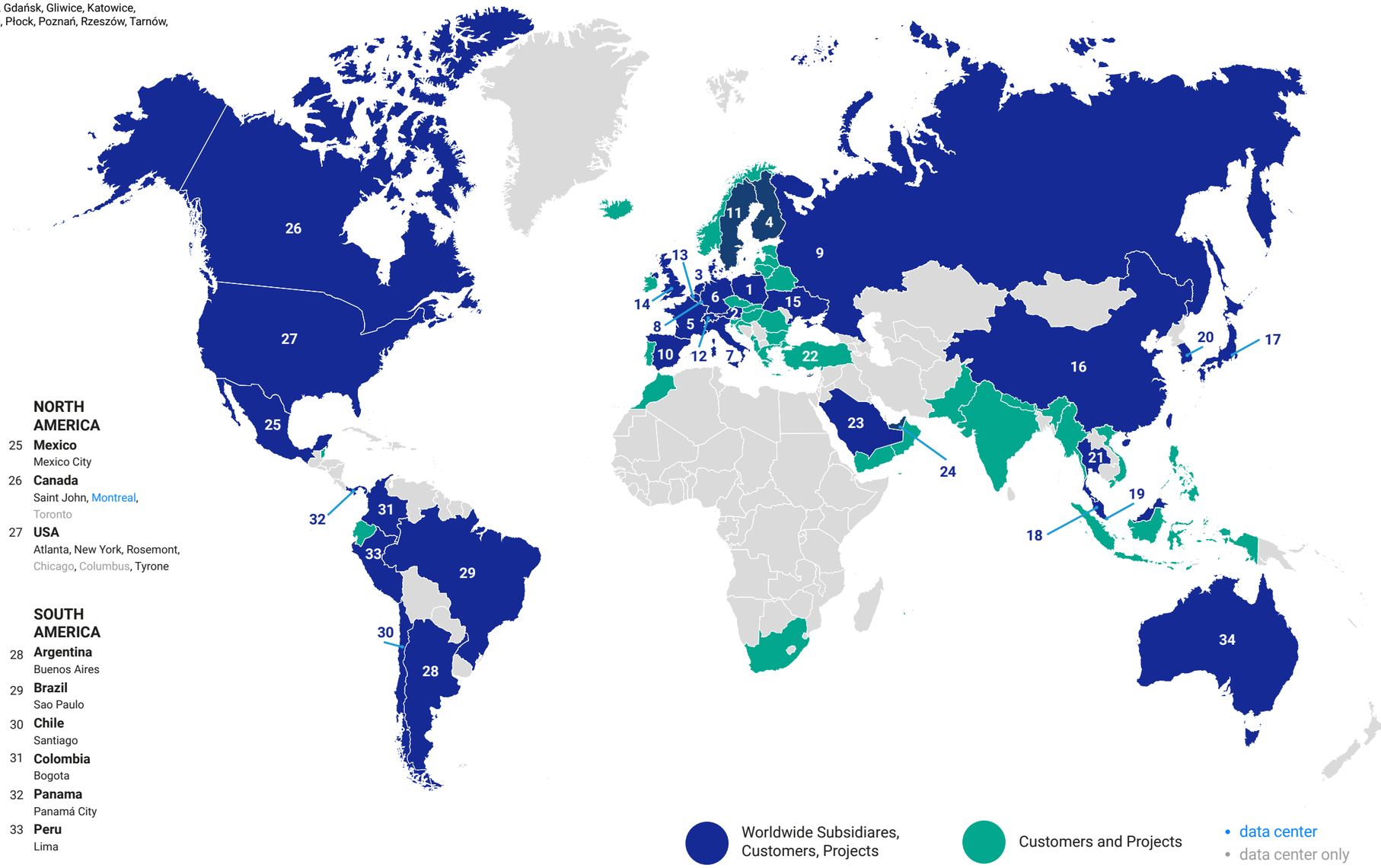
31 **Colombia**
Bogota

32 **Panama**
Panamá City

33 **Peru**
Lima

AUSTRALIA

34 **Australia**
Sydney, Melbourne



Operations of the Comarch Group

The Comarch Group is a manufacturer of innovative information technology systems for key sectors of the economy, both in Poland and abroad. The core strategy of Comarch is to provide customers with comprehensive information technology solutions based on their own products, including in the service model. With high class specialists and professional infrastructure, Comarch is able to provide information technology products, implement these, deliver maintenance services, and offer consulting and integration services for customers all over the world. As a result, buyers of products and services offered by Comarch have full access to the possibilities offered by modern information technology systems and can optimize their business processes.

The broad range of Comarch's offer covers ERP class systems, financial and accounting systems, CRM systems, loyalty software, systems supporting sales and electronic document exchange, electronic banking systems, ICT network management systems, billing systems, business intelligence software, security and data protection management services, and many other solutions. Comarch is a provider of solutions for, among others, public administration entities, banks, accountancy offices, FMCG enterprises, airlines, automotive companies, the medical sector, manufacturing companies, utility companies, capital markets, telecom and insurance companies, universities, trading and service companies, transportation companies, fuel suppliers, and entities involved in brokerage services, e-commerce and factoring services.

In planning its development strategy, Comarch provides for social and environmental aspects and consciously limits the impact of its operations on the natural environment, minimizing the consumption of natural resources and the production of waste as a result of its ongoing operations.

Comarch is a member of important IT organizations, such as ETIS, PIKOM, and TeleManagment Forum, owing to which it has continuous access to the latest standards emerging in these areas (e.g. concerning TAP/RAP). Comarch also belongs to international chambers of commerce, such as the German-Polish Chamber of Industry and Commerce and the French-Polish Chamber of Industry. It is also a member of Związek Maklerów i Doradców (ZMiD) (Association of Stock Brokers and Counsellors) which is an organization associating licensed stock brokers, investment advisers, and commodity market brokers, and a member of the Polish of Listed Companies. In Spain, Comarch is a member of Confederación de Empresarios de Málaga (CEM), or the Confederation of Employers of Málaga. CEM is an organization that associates entrepreneurs from the confederate and inter-sector with a reach covering the province. In Japan, Comarch belongs to the 21c Club supports companies in creating and developing new B2B businesses and serves as a platform for exchanging expertise and experiences. Comarch is also a member of the LF Networking Fund, a new initiative of The Linux Foundation which strengthens cooperation among partners and improves operational effectiveness in network development projects.

SCOPE OF THE COMARCH GROUP'S OPERATIONS WORLDWIDE

Comarch SA has 17 branches in Poland and one in Albania, and the whole Comarch Group is made up of 57 companies located on five continents, in 34 countries, in 91 locations all over the world. Last year, the Group successfully continued its growth strategy consisting in diversification of its operations across various sectors, developing its own products and selling them in the global market. For many years, a core strategic objective of Comarch has been to develop sales of an increasing number of products in foreign markets, particularly in Western Europe, both Americas, and in Asia. Last year, the following new subsidiaries joined the Group – Comarch (Thailand) Limited based in Bangkok and Comarch Pty. Ltd from Sydney. The plans for 2020 provide for other capital investments, both on the domestic market and foreign ones.

CUSTOMERS

In view of the type of IT systems offered by Comarch, the core group of buyers is composed of medium-sized and large enterprises that on a global scale are the largest customers of advanced information technology solutions. Most of the Comarch products are addressed to specific buyer groups, whereas IT services are offered to each group of buyers due to their universal nature. The Comarch offer is addressed to both Polish entities and foreign customers. For many years, a core strategic objective of Comarch has been to develop sales of an increasing number of products in foreign markets, particularly in Western Europe, both Americas, and in Asia. Sales by the Comarch Group are much diversified and the Group is not dependent on any single buyer. Similarly to Comarch SA, in 2019, sales to a single counterparty in the Comarch Group did not exceed 10% of the total sales.

The fundamental principles of the Comarch Group include responsibility for customers' success, as well as respect and openness to their needs. Comarch provides its customers with innovative highest quality IT products that are a result of exceptional skills, experience, and competencies of its employees, and cooperation with leading research and scientific centers in Poland and abroad. It makes every effort to ensure that delivered IT solutions are compliant with the highest standards and customers' expectations.

Prospects of Business Development and Anticipated Financial Condition of the Group in 2020

In 2019, there was an increase in demand for the Comarch Group's IT services and products, accompanied by changes in its structure. The Group recorded a significant increase in demand for solutions for telecommunications, industry, trade and services sectors and for ERP products, simultaneously accompanied by a drop in sales to public and finance and banking sectors. The Group's order portfolio now ensures full utilization of its production potential over several future periods.

In 2020, the business activities of the Comarch Group will be significantly affected by the pandemic situation in the world related to the spread of SARS-CoV-2 and COVID-19 illnesses, which exerts an impact on the Comarch Group's operations and also the financial standing of its customers and their demand for IT products and services. As at this Report's preparation date, the Group's operations were being carried out without disruption. The Comarch Group has implemented all guidelines recommended by the Chief Sanitary Inspectorate and other state authorities in the countries of the Group's operations with special attention to recommendations concerning security, occupational health and safety of its employees. Business trips have been suspended to countries specified by the Chief Sanitary Inspectorate as high risk counties, direct relations among employees within the organization have been limited, a remote work mode for office staff has been launched on a broader scale. Remote communication is commonly used in business relations. The Management Board emphasizes that the Group's activities are well diversified in terms of industries, products, and geographic locations, and the current situation poses no threat to the enterprise's financial stability.

As concerns revenues from sales generated in individual countries in which the Comarch Group conducts its activities, due to an increase in the number of illnesses and recommendations issued by state authorities relating to restrictions on movement, there is a potential for decline in revenues generated from sales of offered services and products. However, the value of such decline is impossible to predict now. Financial performance achieved in the following periods will also be affected by the duration of the pandemic, further administrative restrictions imposed in countries, restrictions imposed on entrepreneurs, possibility of using assistance packages offered in individual countries, the volatility of exchange rates, and the financial standing of the Comarch Group's customers.

Comarch business and financial performance in 2020 will, too, be impacted by political and economic developments in Poland and world-wide, and also by the labor market situation. Having consistently followed its positioning strategy in the market for years as a technological and product company, the Comarch offer is very well diversified. The group of customers keeps expanding and many of them are international companies, which supports further development of the Company. The dynamically growing business of the Comarch Group in foreign markets additionally contributes to growing sales and enhances the image of Comarch among customers, thus consolidating its competitive position. The above also requires numerous capital investments outside Poland (mainly by setting up foreign subsidiaries). Strategies of enterprises are largely subject to macroeconomic conditions independent of Comarch, and particularly dependent on investment levels in IT made by medium-sized and large companies in Poland and abroad and on the intensifying competition in the IT labor market. Additionally, effective management of operational risks is another condition required to implement strategies. Opportunities of the Group include its innovative nature and growing demand for the provision of IT services in the service model, and with its broad range of its own products, its infrastructure, human and capital resources, the Comarch Group is able to flexibly adjust to business models demanded by customers.

The major operational risks inherent in the Group's business include:

- risks related to R&D work (development of its own software products),
- risks related to the performance of long-term contracts,
- risks related to default on contracts and counterparties drawing on good performance bonds and contractual penalties they are entitled to,
- risks related to foreign economic, legal, and political environment in the context of export contracts,
- credit risk related to sales with deferred payment and often a long period of contract performance,
- risk of staff turnover, risk of lack of an adequate number of qualified staff of rising labor costs,
- foreign exchange risk and interest rate risk,
- risks related to international terrorism which affects business trips to various regions of the world,
- risk related to the outbreak of SARS-CoV-2 and COVID-19 illnesses which affects the possibility of conducting business activities by the Group and the financial standing of its customers and their demand for IT products and services.

The Group anticipates no material changes to its financial condition and to risks inherent in its business.

Factors Material to the Development of the Group

Internal factors

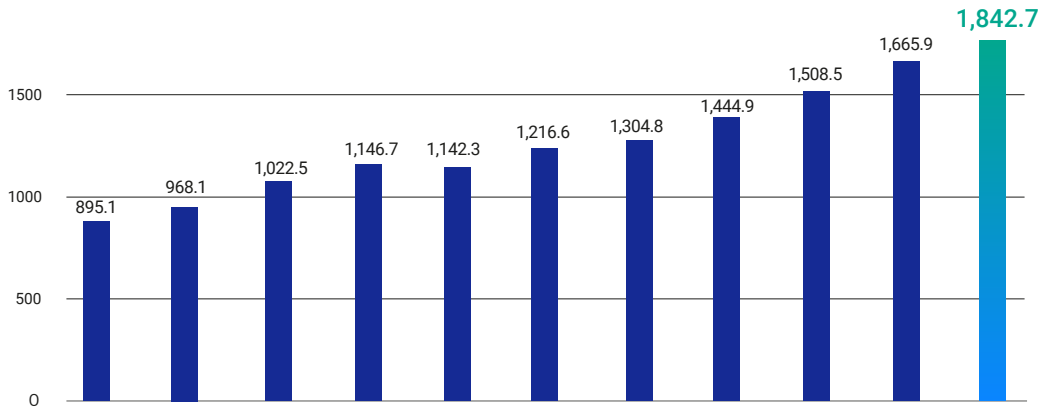
- continuous growth of sales and importance of foreign business,
- position and reputation of the Comarch Group affecting the type of attracted customers,
- activity of the Comarch Group in the Special Economic Zone in Kraków, Poland,
- significant share of standard (recurring) products on sale, which means:
  - lower costs, especially variable expenses related to a single contract,
  - possibility of a material increase of profitability on individual contracts while reducing charges to customers (licence fees),
  - broader and more diversified customer group meaning growing scale of business,
- attractive training policy and attractive employment conditions offered to the staff of Group companies,
- improved recognition of the Comarch brand among potential customers as a result of marketing campaigns (including sports marketing) and social activities,

- need to make ongoing investments in human capital in order to keep the Company competitive in the future,
- high level of investments for R&D activities and development of new information technology products and services,
- high level of investments related to the development of production facilities in Poland and abroad (tangible investments) and to foreign expansion (capital investments).

External factors

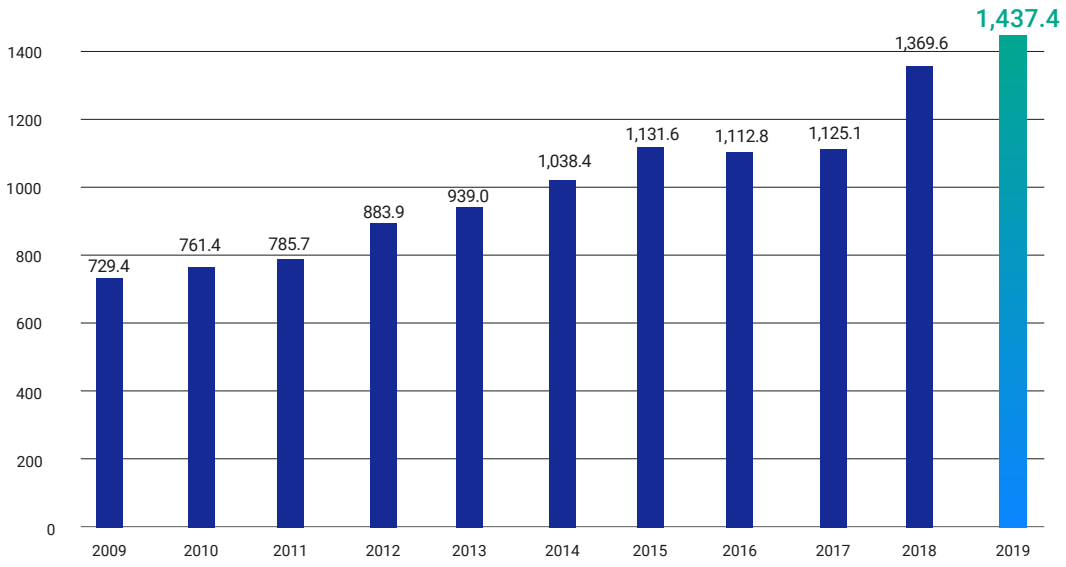
- increasing requirements for IT systems on the part of customers. Demand has been growing for large, complex IT systems dedicated to specific users. This better positions larger IT companies such as the Comarch Group, which offer a number of various technologies and products and are able to provide technologically advanced solutions,
- growing importance of mobile technologies, now commonly applied in IT solutions for all user groups,
- change in business models in many sectors and changing business strategies of many companies related to technological progress and economic growth, which shapes demand for new IT systems, more software sales in the cloud computing model, meaning, for IT businesses, increased capital and resource requirements,
- access by Polish companies to EU structural funds that are partly addressed to support development of IT systems and to finance R&D work,
- growing competition resulting in lower margins; competition among IT companies,
- constant pressure on salary raises in IT; decreasing number of university graduates with IT education,
- intensifying competition in the local IT labor market in Kraków and other places where the Group operates,
- international economic situation, with special focus on the condition in financial markets that affects the volume of demand for IT products and services,
- volatility of exchange rates, in particular EUR/PLN and USD/PLN, GBP/PLN, CAD/PLN, CHF/EUR, BRL/PLN and RUB/PLN, affecting returns on foreign sales,
- global economic condition, particularly in Europe, that affects the volume of demand for IT products and services in the market and financial reliability of local customers,
- international political situation, including, growing risk of terrorist attacks at locations where projects are carried out making their execution more difficult,
- the pandemic situation in the world related to the spread of SARS-CoV-2 and COVID-19 illnesses, and which exerts an impact on the Comarch Group's business activities and also the financial standing of its customers and their demand for IT products and services.

Balance Sheet Total



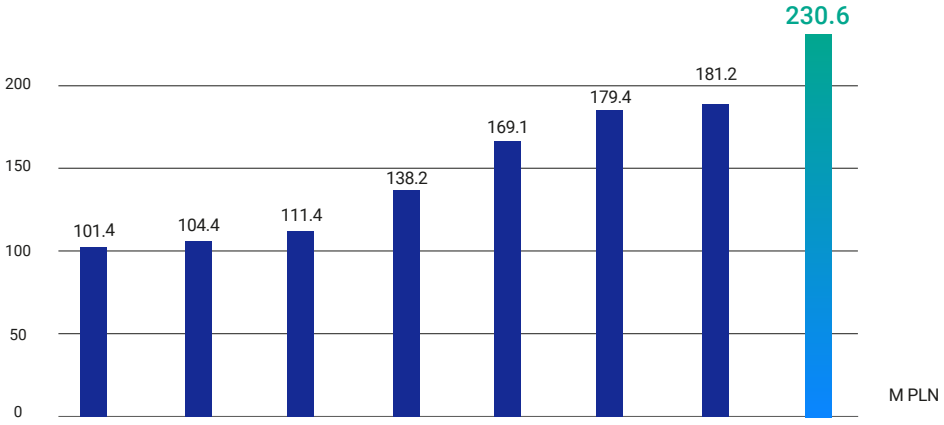
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
M PLN	895.1	968.1	1,022.5	1,146.7	1,142.3	1,216.6	1,304.8	1,444.9	1,508.5	1,665.9	1,842.7
M EUR	217.9	244.5	231.5	280.5	275.4	285.4	306.2	326.6	361.7	387.4	435.3
M USD	314.0	326.6	299.2	370.0	379.3	346.9	334.5	345.7	433.3	443.1	488.1
M GBP	194.6	210.7	194.1	228.8	229.2	222.6	225.5	280.9	320.9	347.8	371.0

Sales Revenue



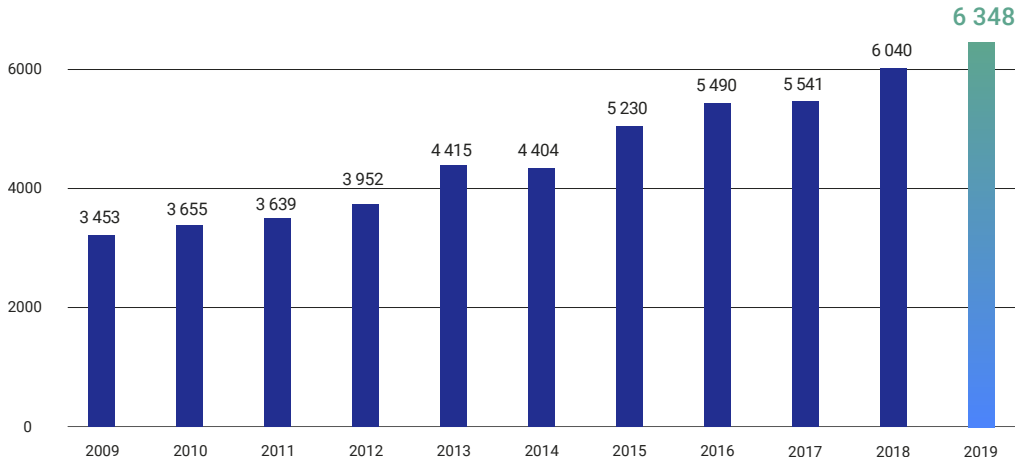
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
M PLN	729.4	761.4	785.7	883.9	939.0	1,038.4	1,131.6	1,112.8	1,125.1	1,369.6	1,437.4
M EUR	168.0	190.1	189.8	211.8	223.0	247.9	270.4	254.3	265.1	321.7	334.2
M USD	233.5	250.4	264.7	273.5	296.6	326.7	298.3	280.4	300.5	382.7	374.1
M GBP	149.5	162.3	165.3	171.8	189.6	198.8	195.6	208.6	232.2	284.5	292.8

Research and Development Expenditure



2012	2013	2014	2015	2016	2017	2018	2019	
24.3	24.8	26.6	33.0	38.7	42.3	42.6	53.6	M EUR
31.4	33.0	35.0	36.4	42.6	47.9	50.6	60.0	M USD
19.7	21.1	21.3	23.9	31.7	37.0	37.6	47.0	M GBP

Employment



History of Comarch

1991
- Creation of Computer and Communications Consultants Ltd. Sp. z o.o. (9/05/1991). Incorporation of CCC Ltd. with Companies House on 16/05/1991

1993
- As a result of the merger of EJ Filipiak with CCC Ltd. (28/10/1993), Comarch Sp. z o.o. is established in room 415., building B5 of the University of Science and Technology AGH in Kraków

1994
- Comarch's first contract (5/10/1994) with its first client Telekomunikacja Polska SA – Comarch. implemented the SEZtel system

1998
- Comarch becomes the first Polish partner of Oracle

1999
- Stock Exchange debut in Warsaw
- Entering the USA market
- Comarch and RMF FM establish Interia.pl portal

2000
- Comarch recognized by the World Economic Forum in Davos as the "Technology Pioneer"

2001
- Start–up of a company in the Special Economic Zone in Kraków
- Company shares included in the WIG20 index

2002
- Beginning of a business development in Central America – contract signed with
- Enitel, a national operator in Nicaragua Contract signed with British Petroleum

2003
- MKS Cracovia SSA becomes part of Comarch Capital Group
- Opening of branches in Moscow and Wrocław
- Acquisition of CDN – Software House of ERP

2004
- Start–up of a company in Dubai Internet City
- Start–up of Comarch Panama Inc. in Panama City

2005
- Establishment of Comarch Data Center in Kraków
- Start–up of Comarch AG in Brussels

2006
- Contracts with T–Mobile Germany (currently Telekom Deutschland) and T–Mobile Austria to provide the Network & Service Inventory System
- Contract signed with Auchan

2007
- Sale of Interia.plt

2008
- Acquisition of German MSP Software House with operations in Austria, Germany and Switzerland – SoftM Software und Beratung AG Company listed on the Frankfurt am Main Stock Exchange
- Start–up of the first company under Comarch Corporate Finance FIZ dedicated to iMed24 SA telemedicine
- Introduction of loyalty programs on the American market

2009
- Opening of the Training & Conference Center and the Administration Division of Comarch in SSE4 in Kraków
- Signing a framework agreement with ING Bank Slaski,
- Starting cooperation with Alior Bank

2010
- In the 2010/2011 season, Comarch is the main sponsor of the TSV 1860 Bavarian football team
- Contract signed with Diageo
- Comarch chosen by E–Plus to be the supplier of the Next Generation Network Planning solution
- Launch of Wszystko.pl – a virtual shopping center (first B2C project in the ERP Division)

2012
- Opening of iMed24 Medical Center
- Comarch logo on shirts of the French AC Nancy football team
- Acquisition of Swiss A–MEA Informatik AG company
- Start–up of a company in London
- Acquisition of ESAProjekt – a medical software house
- Contract signed with the Italian UniCredit

2013
- 5 000 network devices and 2 000 servers operating for 100 clients in 17 countries under the supervision of Comarch Network Operations Center
- Professor Filipiak as a guest of Gartner Mastermind Interview
- Contract signed with Síminn, a leading Icelandic operator
- Contract signed for Podlaski e–Zdrowie IT System
- 20th anniversary of Comarch
- Start–up of a company in Santiago, Chile.

2014
- Lunch of Comarch ERP Society, the first platform for B2B knowledge exchange in Poland
- Contract signed with Air Austral
- Comarch with "Black Shirts" of Polonia Warszawa
- Further expansion of Comarch in the Middle East
- Contract with TVCable from Ecuador
- Contract with BGK Bank (Bank Gospodarstwa Krajowego)
- Start–up of a company in Spain

2015
- Launch of Comarch Beacon
- Start–up of companies in Argentina, Brazil, Canada, Malaysia, Sweden, Turkey and Italy
- Creation of the new entity Comarch Healthcare S.A.
- Comarch as the main sponsor a Swiss football club Zug 94
- Business development in Scandinavia: SAS and Norwegian sign contract with Comarch
- BP chooses Comarch Loyalty Management to enrich loyalty program in Spain
- Opening of the SSE6 office building in the Kraków Special Economic Zone
- Cracovia ice hockey team wins the Polish Cup

2016
- Comarch Cracovia wins the Polish ice hockey league 2015/2016
- Comarch develops the "Pilgrim" application for mobile devices to support the pilgrims in Kraków for the World Youth Days 2016
- Specialists from Comarch take second place in the NATO Hackathon competition

2017
- Opening of a modern laboratory –production hall "IoT Lab" at Comarch campus in the Special Economic Zone in Czyzyny
- Opening of the office building in Łódz Acquisition of Polish company - Geopolis
- Comarch Cracovia ice hockey team wins the Polish ice hockey league 2016/2017
- Opening of a new subsidiary in Saudi Arabia and Japan

2018
- Comarch celebrates its 25th anniversary
- Inauguration of data centre in France
- New office building in Kraków Economic Zone
- Opening offices in Mexico, South Korea and the Netherlands
- Contract to help Korean LG U+ to launch one of the first 5G networks worldwide

2019
- Opening an office in Australia
- Sponsoring of the football club OSC from Lille, France

2020
- Comarch acquires 100 per cent of shares in the French company 2CSI, which specializes in providing IT solutions and services to medical entities on the French market.

Financial Analysis

Basic Economics and Financial Values

Selected Financial Data (in thousands of PLN)

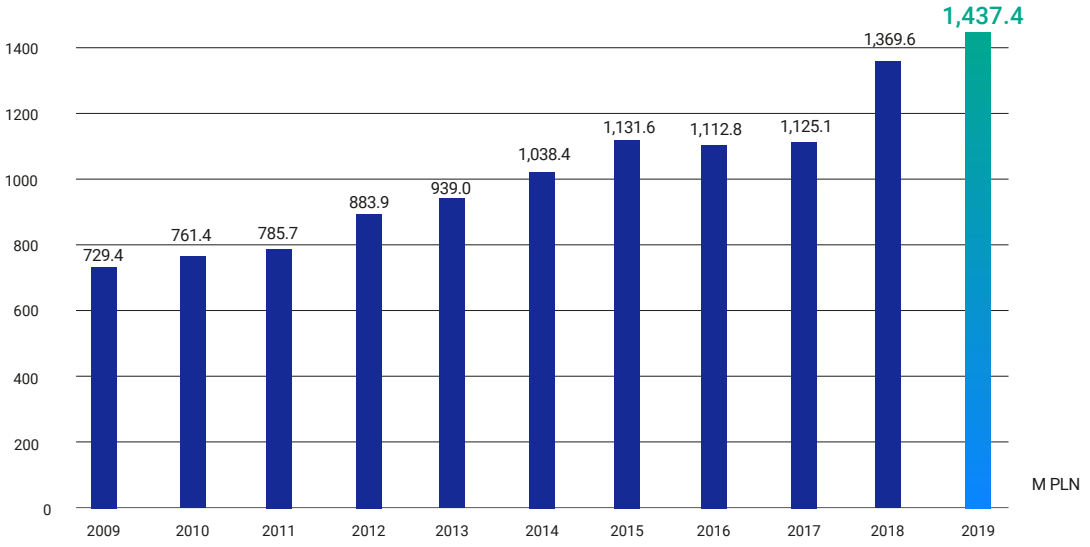
	2019	2018	2017**	2016	2015
Revenues from sales	1,437,423	1,369,619	1,125,110	1,112,813	1,131,580
Revenues from sales of proprietary IT solutions	1,336,083	1,242,114	1,047,393	1,041,133	994,152
Operating profit	143,383	87,543	58,364	116,893	113,028
EBITDA*	228,312	152,748	122,673	179,901	166,511
Profit before income tax	142,369	62,480	87,149	104,777	108,129
Net profit attributable to the Parent Company's shareholders	104,846	30,616	64,626	73,034	79,651
Profit per share	12,89	3,76	7,95	8,98	9,80
Assets	1,842,711	1,665,945	1,508,452	1,444,875	1,304,828
Equity	970,756	876,108	851,190	862,064	780,581

*Operating profit + Depreciation
**From 1st of January, 2018, the Group started using the principles resulting from IFRS 15 for sales revenues. For comparative purposes, the data for the 2017 was also restated in accordance with IFRS 15. Data for 2014-2016 have not been restated in accordance with IFRS 15.

In 2019, the revenue from Comarch Group sales were higher by PLN 67,804 thousand, i.e. 5.0% compared to the previous year. Operating profit amounted to PLN 143,383 thousand and was higher by PLN 55,840, i.e. 63.8% compared to that achieved in 2018. Net profit attributable to the Parent Company's shareholders in 2019 amounted to PLN 104,846 thousand and was higher by PLN 74,230 thousand, i.e. 242.5%. Operating margin amounted to 10.0% (in the previous year 6.4%), net margin was 7.3% (2.2% in 2018).

The value of assets of the Comarch Group at the end of 2019 increased by PLN 176,766 thousand compared to the previous year, i.e. by 10.6%. The value of equity increased in 2019 by PLN 94,648 thousand, mainly as a result of the transfer of retained profit for 2018 to supplementary capital and development of net profit in 2019.

REVENUE FROM SALES



2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
168.0	190.1	189.8	211.8	223.0	247.9	270.4	254.3	265.1	321.7	334.2	M EUR
233.5	250.4	264.7	273.5	296.6	326.7	298.3	280.4	300.5	382.7	374.1	M USD
149.5	162.3	165.3	171.8	189.6	198.8	195.6	208.6	232.2	284.5	292.8	M GBP

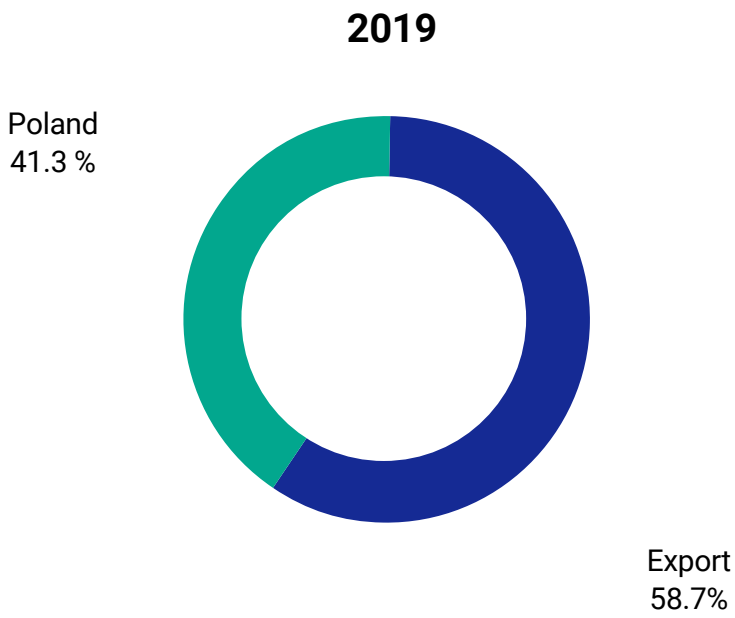
Sales Structure

REVENUE FROM SALES – GEOGRAPHICAL STRUCTURE
(IN THOUSANDS OF PLN)

	2019	%	2018	%	2017	%
Domestic	594,021	41.3%	632,372	46.2%	462,922	41.1%
Export	843,402	58.7%	737,247	53.8%	662,188	58.9%
Total	**1,437,423**	**100.0%**	**1,369,619**	**100.0%**	**1,125,110**	**100.0%**

In 2019, the Group generated PLN 594,021 thousand of revenue from domestic sales, by PLN 38,351 thousand PLN (i.e. by 6.1%) less than in the corresponding period of 2018. This was due to a significant drop in sales in the public sector in Q2 and Q3 of 2019, partly covered by very good business development in the ERP area in Poland. The value of revenue from export sales in 2019 amounted to PLN 843,402 thousand and were higher by PLN 106,155 thousand (i.e. by 14.4%) than in the previous year. This is mainly due to the increase in sales revenue to clients from the telecommunications, trade and services sectors, as well as in the industry and utilities sector. In the 12 months of 2019, export sales accounted for 58.7% of the total revenue of the Group. The geographical structure of sales remained stable during the financial year.

THE GEOGRAPHICAL STRUCTURE OF SALES

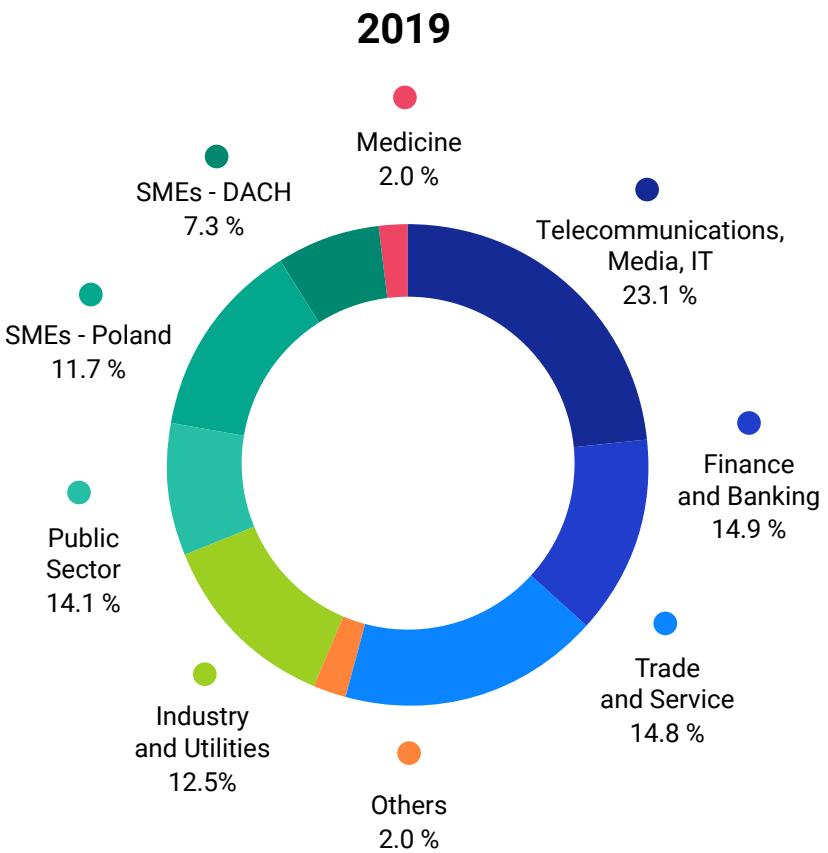


REVENUE FROM SALES – MARKET STRUCTURE (IN THOUSANDS OF PLN)

	2019	%	2018	%	2017	%
Telecommunication, Media, IT	335,846	23.4%	316,416	23.1%	264,866	23.5%
Finance and Banking	191,054	13.3%	204,532	14.9%	187,168	16.6%
Trade and Services	251,743	17.5%	202,406	14.8%	187,367	16.7%
Industry & Utilities	179,336	12.5%	138,344	10.1%	143,105	12.7%
Public Sector	130,352	9.1%	193,000	14.1%	64,018	5.7%
Small and Medium Enterprises – Poland	190,421	13.2%	160,874	11.7%	136,085	12.1%
Small and Medium Enterprises – DACH	100,411	7.0%	99,568	7.3%	99,771	8.9%
Medical Sector	25,919	1.8%	27,351	2.0%	16,020	1.4%
Others	32,341	2.2%	27,128	2.0%	26,710	2.4%
Total	**1,437,423**	**100.0%**	**1,369,619**	**100.0%**	**1,125,110**	**100.0%**

In 2019, sales revenue of the Comarch Group to clients from the TMT sector amounted to PLN 335,846 thousand, which means an increase of PLN 19,430 thousand (i.e. by 6.1%) compared to 2018. Customers from the finance and banking sector purchased products and services in the amount of PLN 191,054 thousand, lower than in the previous year by PLN 13,478 thousand, i.e. by 6.6%. Sales to customers from the trade and services sector recorded a significant increase (by PLN 49,337 thousand, i.e. by 24.4%), also revenue from sales to recipients from the industry & utilities sector recorded a significant increase, by PLN 40,992 thousand, i.e. by 29.6%. Revenue from sales to recipients from the public sector decreased significantly, by PLN 62,648 thousand, i.e. by 32.5%. This was the result of a much lower value of deliveries of finished goods and third party hardware to customers from this sector than in 2018. A slight decrease in revenue was recorded in the case of sales to the medical sector (by PLN 1,432 thousand, i.e. by 5.2%). Customers from the SME-Poland sector purchased products and services worth PLN 29,547 thousand, i.e. 18.4% higher than in the corresponding period of last year. Sales to customers from the SME sector in the DACH region remained at a level similar to that achieved in the previous year (PLN 100,411 thousand, i.e. +0.8%). Revenue from sales to other customers increased by PLN 5,213 thousand, i.e. by 19.2%.

REVENUE FROM SALES – MARKET STRUCTURE



The structure of sales remained stable during the financial year. The business situation in 2019 confirmed that the diversity of the offer and maintaining the industry and geographical diversification of revenue sources is beneficial for the stable development of the Comarch Group's activity.

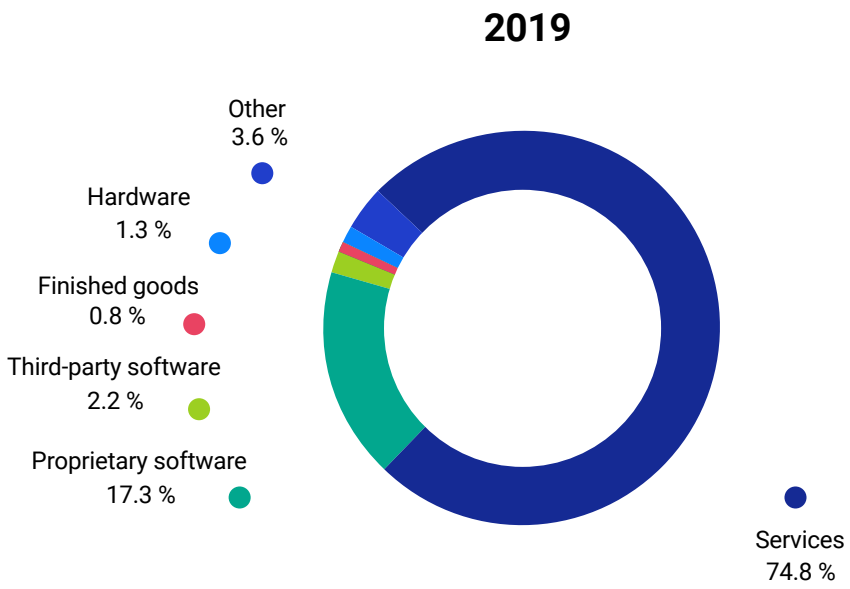
REVENUE FROM SALES – PRODUCTS STRUCTURE (IN THOUSANDS OF PLN)

	2019	%	2018	%	2017	%
Services	1,074,965	74.8%	992,627	72.4%	871,415	77.4%
Proprietary Software	249,442	17.3%	207,271	15.1%	175,174	15.6%
Third-party Software	30,997	2.2%	24,041	1.8%	13,475	1.2%
Finished goods	11,676	0.8%	42,216	3.1%	804	0.1%
Hardware	19,134	1.3%	55,728	4.1%	10,096	0.9%
Others	51,209	3.6%	47,736	3.5%	54,146	4.8%
Total	**1,437,423**	**100.0%**	**1,369,619**	**100.0%**	**1,125,110**	**100.0%**

During the 12 months of 2019, the products structure of sales revenue of the Comarch Group changed significantly compared to that recorded in 2018. Revenue from sales of IT services increased by PLN 82,338 thousand, i.e. by 8.3%. Revenue from sales of proprietary software also increased significantly, by PLN 42,171 thousand, i.e. by 20.3%. The increase in the value of revenue from services and proprietary software was the result of the acquisition in 2018 and the implementation in 2019 of contracts of significant value, especially in the telecommunications and trade and services areas (contracts converted according to IFRS 15). Revenue from sales of third-party software increased by PLN 6,956 thousand, i.e. by 28.9%. The sales of own finished goods significantly decreased compared to last year (by PLN 30,540 thousand, i.e. by 72.3%). The sales of third-party hardware behaved similarly, with a decrease in revenue of PLN 36,594 thousand (i.e. of 65.7%). In both cases, this was the result of a lower value of deliveries of finished goods and third-party hardware to the public sector in 2019. In the 12 months of 2019, other sales increased by PLN 3,473 thousand, i.e. by 7.3%.

Over the whole 2019, sales structure by products remained stable.

REVENUE FROM SALES – PRODUCTS STRUCTURE



4

Company Bodies

Management Board

PROFESSOR JANUSZ FILIPIAK
Founder, President of the Management Board
Chief Executive Officer of Comarch SA

PAWEŁ PROKOP
Vice-President of
the Management Board
Director of Public Sector Division

ANDRZEJ PRZEWIĘŹLIKOWSKI
Vice-Presidentof
the Management Board
Director of Financial Services Division

ZBIGNIEW RYMARCZYK
Vice-President of
the Management Board
Director of ERP Division

KONRAD TARAŃSKI
Vice-President of
the Management Board
Chief Financial Officer

MARCIN WARWAS
Vice-President of
the Management Board
Director of Services Division

Supervisory Board

ELŻBIETA FILIPIAK
Chair of the Supervisory Board

ANDRZEJ RYSZARD PACH
Deputy Chair of
the Supervisory Board

ŁUKASZ KALINOWSKI
Member of the Supervisory Board

ANNA PRUSKA
Member of the Supervisory Board

DANUTA DROBNIAK
Member of the Supervisory Board

JOANNA KRASODOMSKA
Member of the Supervisory Board

TADEUSZ WŁUDYKA
Member of the Supervisory Board

Audit Committee

JOANNA KRASODOMSKA
Chair of the Audit Committee

ANDRZEJ RYSZARD PACH
Member of the Audit Committee

DANUTA DROBNIAK
Member of the Audit Committee

Organizational and Competence Structure of Comarch Capital Group Comarch SA (Kraków, Poland)

prof. Janusz Filipiak

Founder and CEO of Comarch SA
Strategy, HR, Marketing

Konrad Tarański

Finance, Administration and Internal IT Systems, CFO, Vice-President
of the Management Board

Paweł Prokop

Vice-President of the Management Board, Director of
PUBLIC SECTOR DIVISION

Andrzej Przewięźlikowski

Vice-President of the Management Board, Director of
FINANCIAL SERVICES DIVISION

Zbigniew Rymarczyk

Vice-President of the Management Board, Director of
ERP DIVISION

Marcin Warwas

Vice-President of the Management Board, Director of
SERVICES DIVISION

Piotr Janas

Director of
IoT DIVISION

Marcin Romanowski

Director of
e-HEALTH DIVISION

Jacek Lonc

Director of
TELCO SALES&BUSINESS STRATEGY

Paweł Workiewicz

Director of
TELCO OSS

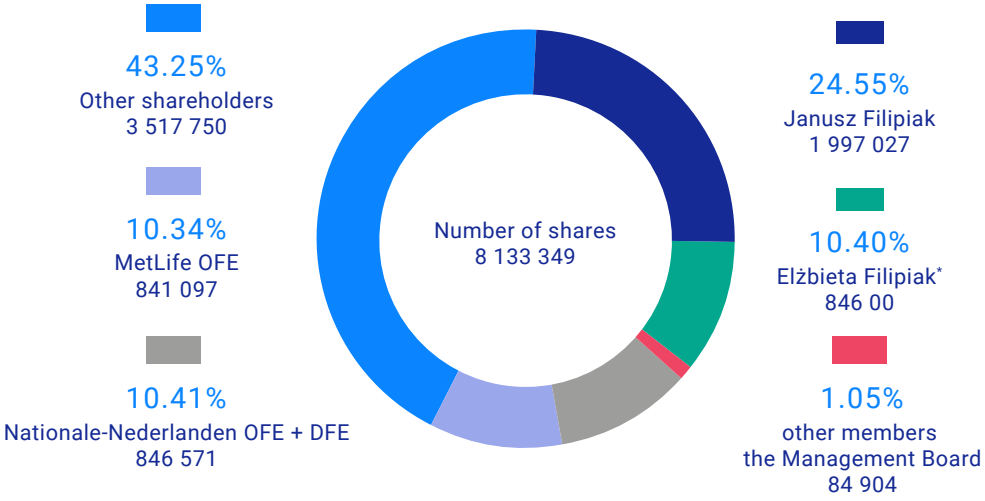
Andrzej Zasadziński

Director of
TELCO BSS

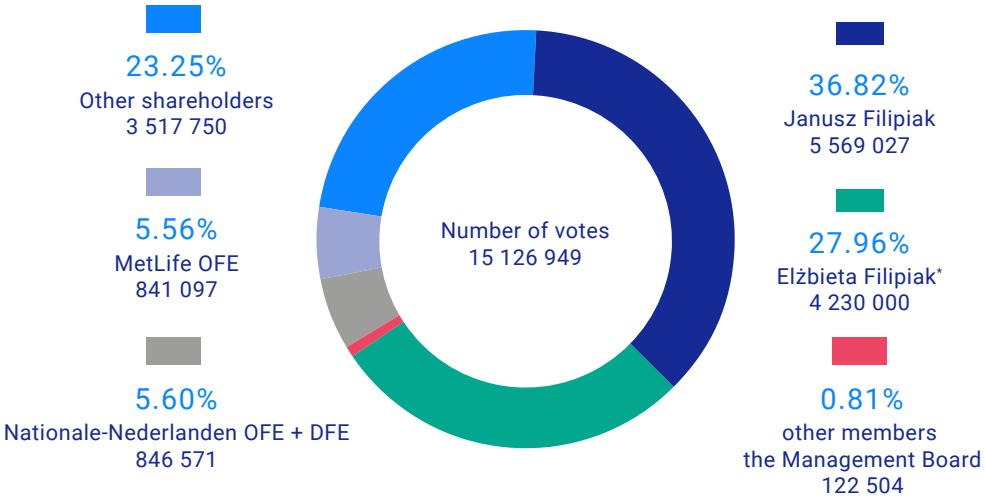
DIVISIONS

Shareholders

Comarch S.A.'s share capital consists of 8,133,349 shares at total nominal value of PLN 8,133,349. According to the information possessed by Comarch S.A., as at 31st of December, 2019, shareholders holding at least 5% of votes at the Company's AGM are Janusz Filipiak, Elżbieta Filipiak, Nationale-Nederlanden OFE (open pension fund) + DFE (voluntary pension fund) and MetLife OFE (open pension fund).



Shareholding Structure. Number of shares 29.04.2020



Shareholding Structure. Number of votes. 29.04.2020

*) On the 27th of January, 2020, the Management Board of Comarch S.A. received from person acting as a managing person, a notification of transactions referred to in Article 19 par. 1 of the Regulation of the European Parliament and the EU Council No. 596/2014 dated the 16th of April, 2014, on market abuse. These transaction concerned a disposal on the 27th of January, 2020, of 335,926 ordinary bearer shares on regulated market at the weighted average price of PLN 198.00 per 1 share (the value of the transaction amounted to PLN 66,513,348.00). The Company announced details in current report no. RB-2-2020 ENG: RB-2-2020, dated the 27th of January, 2020.
In addition, the Management Board of Comarch S.A. received from Mrs. Elżbieta Filipiak a notification referred to Article 19 par. 2 point 1) indent a) Act on Public Offering and Conditions for Introducing Financial Instruments to Organized Trading, and on Public Companies on a change in the share in the total number of votes in Comarch S.A. The current number of votes held by Mrs. Elżbieta Filipiak is 4,230,000, i.e. 27.96% of all votes at the GSM. The company announced details in current report no. RB-3-2020 ENG: RB-3-2020, dated the 27th of January, 2020.

Organizational Structure of Comarch Capital Group

POLAND
- Comarch SA
- Comarch Technologies sp. z o.o.
- CA Consulting SA
- Comarch Management sp. z o.o.
- Comarch Corporate Finance Fundusz Inwestycyjny Zamknięty
- Comarch Management sp. z o.o. SK-A
- Bonus MANAGEMENT sp. z o.o. Cracovia Park SK-A
- Bonus Management sp. z o.o. SK-A
- Bonus Development sp. z o.o. SK-A
- Bonus Management sp. z o.o. II Activia SK-A
- Bonus Development sp. z o.o. II Koncept SK-A
- Comarch Healthcare SA
- Comarch Polska SA
- Comarch Comarch Cloud SA
- Comarch Infrastruktura SA
- iComarch24 SA
- CASA Management and Consulting sp. z o.o. SK-A
- Geopolis Sp. z o.o.
- Opso sp. z o.o.
- MKS Cracovia SSA

EUROPE
- Comarch Software und Beratung AG – Germany
- Comarch Swiss AG – Switzerland
- Comarch Solutions GmbH – Austria
- Comarch AG – Germany
- CAMS AG – Switzerland
- Comarch Luxembourg S.à r.l – Luxemburg.
- Comarch S.A.S. – France
- Comarch R&D S.à r.l. – France
- Comarch UK Ltd. – United Kingdom
- Comarch LLC – Ukraine
- Comarch OOO – Russia
- Comarch Yazilim A.S. – Turkey
- Comarch Technologies OY – Finland
- Comarch s.r.o – Slovakia
- Comarch Software Spain S.L.U. – Spain
- Comarch S.R.L. – Italy
- Comarch AB – Sweden
- Comarch BV – The Netherlands

NORTH AMERICA
- Comarch, Inc. – USA
- Comarch Pointshub, Inc. – USA
- Comarch Canada Corp. – Canada
- Comarch Espace Connecté Inc. – Canada

CENTRAL & SOUTH AMERICA
- Comarch Panama, Inc. – Panama
- Comarch Sistemas LTDA – Brazil
- Comarch Chile SpA – Chile
- Comarch Colombia S.A.S. – Columbia
- Comarch Argentina S.A. – Argentina
- Comarch Peru S.A.C. – Republic of Peru
- Comarch Mexico S.A. de C.V. – Mexico

ASIA
- Comarch Software (Shanghai) Co. Ltd – China
- COMARCH MALAYSIA SDN. BHD. – Malaysia
- Comarch Japan KK – Japan
- Comarch Yuhan Hoesa (Comarch Ltd.)
- Comarch (Thailand) Limited

MIDDLE EAST
- Comarch Middle East FZ LLC – United Arab Emirates
- Comarch Saudi Arabia Co. – Saudi Arabia

AUSTRALIA AND OCEANIA
- Comarch Pty. Ltd – Australia

Changes in Ownership and Organizational Structure in 2019

On the 22th of March, 2019, a subsidiary company Comarch Pty. LTD was registered in Sydney. The share capital of the company amounts to AUD 100 (i.e. PLN 266) and consists of 100 shares with nominal value of AUD 1 each. Comarch S.A. owns 100% in share capital and votes of Comarch Pty. LTD

On the 5th of July, 2019, has been registered the capital increase in Comarch (Thailand) Limited in the amount of THB 10,500,000 (i.e. PLN 1,334,750), i.e. from THB 8,000,000 (i.e. PLN 1,020,000) to THB 18,500,000 (i.e. PLN 2,358,750).

On the 23rd of September, 2019, AGM of Comarch BV passed the resolution related to capital increase by issuing 100,000 shares (EUR 1 per share), which were acquired by Comarch S.A. The above mentioned increase was paid by Comarch S.A. at the 27th of September, 2019

On the 28th of October, 2019, the change of the company's name was registered, from Comarch Pointshub S.A. to Comarch Cloud S.A.

On the 8th of November, 2019, a resolution was passed to increase the share capital at Comarch Pty. Ltd (Australia) from AUD 100 (i.e. PLN 266) to AUD 100,100 (i.e. PLN 266,506)

On the 13th of November, 2019, the general meeting of shareholders of Comarch Peru S.A.C. passed a resolution to increase the share capital of Comarch Peru S.A.C. by PEN 1,435,000 (i.e. PLN 1,643,362) from the amount of PEN 165,000 (i.e. PLN 188,958) to the amount of PEN 1,600,000 (PLN 1,832,320) as a result of a contribution from Comarch AG and Comarch SA. As a result, Comarch AG owns 95% shares / votes (1,425,000 shares) and Comarch S.A. 5% shares / votes (75,000 shares) at the general meeting of shareholders of Comarch Peru S.A.C.. The above capital increase was registered on the 7th of January, 2020.

On the 25th of November, 2019, the capital of Comarch S.A.S. was changed up to the amount of EUR 1,000,000 (i.e. PLN 4,258,500) after a simultaneous reduction and increase of capital.

On the 6th of December, 2019, Comarch Pointshub Inc. has concluded a contract for the sale of shares in an associate, Thanks Again LLC. The contract value was USD 500,000 (i.e. PLN 1,898,850 PLN). As a result of the transaction, Thanks Again LLC as at the 31th of December, 2019 was not an associated company with the parent company.

On the 10th of February, 2020, the share capital of Comarch Pty. Ltd. was increased from the amount AUD 100,100 (i.e. PLN 266,506) to AUD 1,300,100 (i.e. PLN 3,461,386), i.e. by AUD 1,200,000 (i.e. PLN 3,194,880). The above capital increase was registered.

On the 21st of February 2020, has been registered the capital increase in Comarch BV from the amount of EUR 200,000 (i.e. PLN 851,700) to the amount of EUR 500,00 (i.e. PLN 2,129,250), i.e. by EUR 300,000 (i.e. PLN 1,277,550). The above capital increase was registered.

On the 24th of February, 2020, a resolution was adopted to increase the share capital in Comarch SRL from the amount of EUR 900,000 (i.e. PLN 3,832,650) to the amount EUR 2,000,000 (i.e. PLN 8,517,000), i.e. by EUR 1,100,000 (i.e. PLN 4,684,350).

5

Research and Development Work

Research and Development Work

The globalization of the world economy and the liberalization of trade result in disappearance of barriers for companies and their products. The IT market becomes an open and global market where prices and quality of available products are continuously compared against each other. Along with increase in the presence of foreign capital in Poland, even IT companies conducting operations solely in the Polish market must offer competitive products from the point of view of the global market. Comarch, since the very beginning of its operations, has had a reputation as a technological company developing and successfully selling products competitive internationally. Therefore, the main strategic objectives of the Company are still the development of new competitive products to enable further development of Comarch and, as a result, increase its value. Maintaining dynamics of sales requires expenditures for the development of products as well as their proper promotion and marketing. This applies to modifications of products and techologies, and to the development of new products.

The present policy of Comarch assumes running research and development work related to the implementation of new products and standardization of products from the very beginning of their preparation for the client. Thus, even in cases when a product was developed for the needs of a particular client, part or all of the software / code may be then used for preparation of a standard product. This results in higher profitability of particular contracts and expansion of the client base. Expenses for research and development works amounted to PLN 230,568 thousand, thus reached 16.0% of revenue in 2019. Comarch allocated their internal funds, as well as actively acquiring European funds.

Subsidizing Projects

COMARCH SA

In 2019, as part of Measure 1.1 of the **Intelligent Development Operational Program 2014-2020** co-financed by the European Regional Development Fund, a contract was signed for co-financing the project "Production of technology" IoT Mesh "and supporting tools".

The "Healthy City" Project was also implemented under Priority 1.1. Support for R&D Activities of Enterprises", Subpriority 1.1.2 „R&D Work Related to Manufacturing a Pilot/ Demonstration Installation".

Under the **Horizon 2020** Program, a contract for financing the "LIVING INNOVATION - Implementing RRI through co-creation of smart futures with industry and citizens" - LIV.IN." project was implemented.

COMARCH HEALTHCARE SA

In 2019, a contract for the co-financing of the project "SOS for LFS - implementation of modern medical telecare for the inhabitants of the Łódź Metropolitan Area" from the European Social Fund under the **Regional Operational Program of the Lodz Region** for the years 2014-2020 was implemented.

At the end of the first half of 2019, "Non-invasive monitoring for early detection of atrial fibrillation (AF)" - NOMED-AF project ended, implemented as part of Strategic program of scientific research and development "Prevention and treatment of civilization diseases" – **STRATEGMED II**.

Research and Development Activities in the Telecommunications Division

BUSINESS SUPPORT SYSTEMS (BSS)

In the BSS area, supporting the business activity of telecommunications operators in direct contact with end customers, the largest investments into the development of own solutions are made in such directions as:

- Following delivery of the latest version of online digital sales to first customers, intensive development of solutions is continued to offer self-operation in the direct sales channels (Comarch's Digital Sales platform and SelfCare application, including mobile versions for iOS and Android compliance with the Mobile First approach),
- Expansion of possibilities supporting sales staff in SFA (sales force automation), mainly to provide support to the key business customer market through expansion of after-sales processes and quick pricing mechanisms,
- New modules to manage the solution and performed processes by back-office teams, made available over web browsers,
- Delivery of new reporting and analytical tools,
- Further expansion of the standard API in compliance with market standards (e.g. TMF Open API) which translates into reduction of the time of implementation and increase of integration potential of Comarch solutions with third-party elements,
- Support by latest technologies and market standards in terms of provided services preparing for dissemination of the following technologies: 5G (including support for N28 and N40 standards), network slicing, and SDN/NFV,
- Significant changes in architecture aimed at further improvement of efficiency and scalability of individual solutions, and primarily providing for launching a BSS solution when using in full the possibilities of highly-efficient cloud environments.

INTERNET OF THINGS (IOT)

In the area of IoT (formerly M2M – machine to machine) providing solutions for mass management of functions and communication of the Internet of Things there is further intensive development of the IoT Connect product:

- The latest version is fully developed using cloud technologies, which increases a number of possible variants of implementation and improves scalability with the growth of customers' business,
- The first production implementation of IoT Connect in the cloud has already been completed for a large customer in Switzerland,
- A sales support module has been developed for IoT Connect dedicated to IoT services, together with margin calculation and agreement cycle management,
- The entire IoT Connect solution has been equipped with a modern UI agreed with new guidelines of Comarch, standardizing UX for all Comarch applications,
- Currently, all functionalities of the system are already available through a highly efficient and modern API.

INTEGRATED ASSURANCE & ANALYTICS (IAA)

Within the currently executed projects it has been possible to build and apply network and service maintenance systems for the customer, which use functionalities of ML (machine learning) in two areas:

- **Automated Situation Detection** – a machine learning system it is used to detect correlations among events from various telecommunications domains. Based on that, models are developed to accelerate detection, and by collecting relevant recommendations it is also possible to mitigate the impact of events on the availability and quality of provided services. With such development work, the most efficient models of AI (artificial intelligence) will be searched for and knowledge is collected on ways to prevent consequences.

- **Automated Baseline Generation and Anomaly Detection** – in this case, models are developed using the data on indicators and indices to predict such values in the future. Another element of the project is to

correlate unexpected instances when such predicted values have been exceeded and anomalies have occurred. Like in the previous point, actions are concentrated on looking for effective models and collecting knowledge on ways to resolve anomalies. The work will be intensified next year.

Within future research and development work, a note must be made of Comarch's participation in the Catalyst project: AI-Driven Autonomous Service Assurance – C20.0.22 within the Telecommunication Management Forum.

The project shows the achievements of Comarch in the application of artificial intelligence for solving tasks relating to maintenance of networks and telecom services. There will also be intensive work conducted into the application of machine learning in situations related to preventing customer complaints about service functioning. The project's goal is to check usefulness and acquire skills of applying graph database technologies and libraries related to machine learning and to improve the use of big data technology (Hadoop). It is planned to demonstrate a prototype solution at an international digital conference

OPERATIONS SUPPORT SYSTEMS (OSS)

The objective of R&D work in network systems is to continue the transformation of OSS into a comprehensive tool to manage hybrid networks, particularly in light of 5G and the growing role of NFV/SDN (network functions virtualization and software-defined networks). The goal is to demonstrate maximum automation of such network management processes, allowing cost reductions and enabling the provision of new types of services for the operator's end customers and/or shortening the time required for the launch of new services and technologies. As a result, the OSS system could be able to manage virtualized and non-virtualized networks (or hybrid networks combining both types), following similar rules in planning, network passporting, network configuration and quality assurance. With the assistance of Comarch OSS, it will also be possible to develop and orchestrate services, and to allocate hardware resources effectively.

A new activity in the area of 5G networks is to allow the implementation of network slicing, which will enable telecom operators to introduce new services. Network slicing is based on the concept of providing business customers with dedicated network sections that act as a virtual network that may be optimized and adjusted to specific requirements, for example various sectors of Industry 4.0. At the same time, a number of such network sections is based on shared network infrastructure, which may substantially limit costs and the delivery time of such services for a telecom operator's customers.

One of the major revolutions in designing OSS-class systems is AI/ML by design. This means that Comarch products may be designed with the broad use of artificial intelligence and machine learning in mind. The goal of such an approach is to significantly increase the level of automation and intelligence of systems that can enable telecom operators to make substantial savings and, simultaneously, to remove barriers to introduction of new services requiring an intelligent network. Emphasis on on AI/MI technologies is all the more significant, since organizations must already prepare for the implementation of 5G, which will necessitate pervasive AI. In this area, Comarch will seek to build a competitive advantage for its products.

FIELD SERVICE MANAGEMENT SYSTEM

FSM R&D includes the continued development of a new Automatic Dispatcher functionality, which uses a heuristic algorithm for task scheduling. Work has been accelerated within projects executed for newly acquired customers. Etisalat – an operator from the Middle East – will be the first customer for a new solution and FSM Cloud.

There is also work under way that is related to adapting individual parts of the systems to the requirements of the Comarch Design System. Adjustment of FSM mobile applications has already been much advanced and changes in the backend applications have been scheduled for the second half of 2020.

We are also starting integration of FSM with Comarch BI Point to improve the functionality of the reporting module and deliver a higher number of inbuilt reports and allow cross-selling of both systems.

Within projects that are under way, the dispatcher view will also change, combining the calendar, map and the option to filter information into a single interactive screen that is the basic tool of the dispatcher's work.

Research and Development Activities in the Services Division

As part of the research and development work for the group of Comarch Loyalty & Marketing products, an innovative approach to detecting fraud has been implemented in loyalty programs using artificial intelligence and machine learning (AI / /ML), algorithms have been designed to find anomalies in the behavior of loyalty program members. Work is also underway on the use of AI / ML algorithms to generate personalized offers for customers, taking into account the transaction history of the customer as well as global purchasing patterns.

The loyalty mobile application is currently being expanded to support mobile payments, enabling payments for purchases directly from the application without the need to use other forms of payment, such as payment cards.

In order to improve the customer service area of the loyalty program, we have introduced a ChatBot based on machine learning algorithms, integrated with popular communication channels such as instant messengers (e.g. Facebook Messenger and WhatsApp).

To meet the constantly growing demand for applications in the SaaS model, a new version of the loyalty program service – Comarch Loyalty Cloud – has been released. Customers can now use a wide range of functionalities just a few weeks after signing the contract, without the need for a time-consuming system implementation process.

To meet the new guidelines of the company in terms of the visual and technological aspect of our solutions, we have implemented the Comarch Design System in selected applications. The priority development activity for Comarch e-Invoicing is the provision of our services in the full cloud model. Our goal is to enable the exchange of B2G electronic invoices in the countries which implemented such a requirement (e.g. France, Italy, Denmark, and Germany from November 2020).

The above goal is in line with the main direction of Comarch e-Invoicing, which is to meet legal requirements in individual countries regarding the exchange of electronic invoices in the post-audit and clearance models. We've focused on expansion to European markets as well as global expansion, including India. Particular emphasis was placed on self-onboarding capabilities.

In order to reach new industries in the EDI area, reporting tools have been upgraded and Web-EDI has been adjusted to automotive sector requirements.

As part of the development of Comarch Master Data Management, we focused on modules expanding the standard GDSN model, such as "call for tenders" and "referencing request" for collecting offers from the market and expanding the method of collecting and updating data. We have also expanded the GDSN model to other countries, such as Germany, Belgium, Italy and the USA. The functionality for private labels products management has been implemented.

As part of the R&D ICT activities, Demo Cloud has been implemented, which consists of a simple wizard. The tool explains and guides you step by step on the creation of a three-layer architecture. http://cloud.comarch.pl/

Integration was carried out between SmartBSS and Open Stack (Kraków, Dresden and Lille), and SmartBSS was named Cloud Management Portal. The tool enables automation of the user registration process, and allows observation of currently used resources, costs, invoices.
https://management.infraspace-comarch.com/sc

A Cloud calculator has been created that allows easy calculation of the cost of resources in the Comarch Infraspace Cloud http://infraspace.comarch.com/kalkulator-cloud ICT support regions have been launched in the United Arab Emirates (Dubai) and Australia (Sydney).

A new service called Load Balancer was launched in Comarch Infraspace Cloud, and a lot of work on new services was carried out and continues in 2020. As part of the R&D activities implemented for the PowerCloud product, BU Information Communication Technologies established a business model and hardware concept of the solution. In December 2019, the Management Board's approval was obtained to launch project financing and an order for the necessary elements from suppliers was placed. Planned pickup of the equipment took place in January 2020, with planned installation at CDC Dresden in February 2020 (completed February 26, 2020).

The PowerCloud solution is a platform enabling virtualization and sharing in the cloud model of the IBM Power Systems platform. This is an IaaS and PaaS solution that enables virtualization of IBM i as well as AIX and Linux on Power operating systems. A self-service portal for infrastructure management is also planned. The entire solution can be managed by Comarch system engineers.

Research and Development Activities in the e-Health Division

Comarch's e-Health sector provides comprehensive solutions for the medical industry. It runs numerous research and development (R&D) projects aimed at creating innovative technologies for, among others, medical facility management, electronic health records and remote patient monitoring (using telemedicine solutions). A part of the sector is the iMed24 Medical Center, which is a natural environment for the development of IT products for medicine.

The e-Health sector, as a leading provider of solutions in the field of remote medical care in Poland, undertakes many initiatives to popularize and increase the availability of telemedicine.

THE "HEALTH CITY" PROJECT

Comarch specialists have developed an innovative solution, delivered to local governments. It is the Analytics and Reporting platform, which is the key component of the "Health City" project. It enables the implementation of healthcare services and prophylaxis for residents, especially in cardiology, obstetrics and senior care. Pilot projects under the "Health City" program have been run in Łódź, Zabrze, Suwałki, Płock, Brzeg, and others. More than 3 000 patients have already used remote services within the pilot projects in Poland.

COMARCH E-CARE PLATFORM

One of the company's products is Comarch e-Care, a telemedicine platform that allows continuous remote monitoring of patients' health. It is used in various specialties, including cardiology, obstetrics, pulmonology and senior care. The research and development work is aimed at extending the platform, from the alarm system to the comprehensive service system, offering short-term and long-term monitoring, test management, reporting, process automation, and more. We currently have more knowledge about services on the telemedicine market, which has resulted in work related to the reconstruction of the graphical interface and the method of service management. The changes introduced will enable the service of many more patients (achieving economies of scale and cost optimization). An additional factor that allows the expected effect to be obtained is the support of continuously developed algorithms.

COMARCH DIAGNOSTIC POINT

Comarch Diagnostic Point is a product that was intensively developed in 2019. Comarch Diagnostic Points are equipped with measuring equipment (such as blood pressure monitor, ECG event recorder, thermometer, scales and pulse oximeter), using which patients can measure vital signs at or away from medical facilities. The tests are performed independently by the patient or with the support of medical staff, and then evaluated by physicians via a telemedicine platform. Comarch Diagnostic Points are also available in the form of a mobile suitcase, which facilitates the transport of equipment and health monitoring, for example in nursing homes or patients' own homes.

Research and development works included the expansion of the application used to operate Comarch Diagnostic Point, the addition of new measuring devices, and the improvement of stationary and mobile forms.

COMARCH HEALTHNOTE

In 2019, the company released the first free mobile application for patients – Comarch HealthNote. It is an Internet health diary, that allows collecting complete and up to date health history directly in a mobile application. The user can enter measurements and test results, monitor symptoms, scan and view medical documents, and share data with physicians. Comarch HealthNote also has a web version with a component for physicians, used to receive patients' data. The solution is completely free for patients and doctors.

Research and development included the creation of a mobile and web application with the function of entering and sharing various types of data (symptoms, documentation and measurements). Functions related to the addition of new modules and integration with our own and external companies' solutions are constantly developed.

PLATFORMA ANALIZ MEDYCZNYCH (CMAP)

An important element of the e-Health ecosystem is Comarch Medical Analysis Platform, which receives ECG test records. The implemented algorithms carry out advanced ECG analysis, automatically detecting the most serious disorders, enabling an earlier reaction to detected disturbances.

The solution significantly shortens the time of long-term ECG monitoring, and performs full verification of recording without manual processing of the signal. Comarch Medical Analysis Platform uses algorithms that allow early detection of, among other things, tachycardia, bradycardia, cardiac arrest and atrial fibrillation.

In recent years, there have been major developments of algorithms based on ML (machine learning). We've reached the stage when ML algorithms are equal to traditional methods of digital signal processing (DSP). This paved the way for more effective recognition of disorders, and improved the analysis of test results.

In terms of **algorithms**, research and development work includes, among others:

- Preparation of machine learning algorithms for recognition of atrial fibrillation in the ECG signal
- Preparation of algorithms to assess the quality of the ECG signal
- Preparation of algorithms for classification of morphological types of beats in the ECG signal
- Use of ECG signal bases collected during project implementation to teach algorithms (semi-supervised and supervised learning)
- Development of machine learning algorithms for diagnosing disorders in the ECG signal, with particular attention paid to arrhythmias (atrial fibrillation, conduction blocks, and tachycardia). The results of the work will be used in the Comarch CardioVest system for long-term ECG monitoring
- Preparation of an expert system supporting the prediction of potential problems based on the information collected in the Electronic Health Records database
- Preparation of the system for automatic detection of anomalies in the signal from the digital stethoscope
- We are working on the structuring of medical documents to enable the presentation of the most important information and data sets, and to facilitate searching through patients' health records.

In terms of **software**, research and development work includes, among others:

- Preparation of Comarch Medical Analysis Platform to work in a service model, finalizing the certification of CMAP as an ECG analyzing platform
- Preparation of a uniform platform for remote monitoring based on sets of complementary tests
- Validation of the Comarch CardioVest system, enabling long-term ECG monitoring, and certification of the system as a medical product

DEVICES

In terms of **devices**, research and development work includes, among others:

- Further development of Comarch's smart-watch wristband for remote monitoring of elderly or disabled people
- Continuing work on the new version of the PMA (Personal Medical Assistant – remote monitoring for patients with cardiovascular problems)
- Continuing work on the new mPMA device (Mobile Personal Medical Assistant), enabling long-term cardiac monitoring and event ECG
- Further work on the new version of Comarch CardioVest
- Improvement and development of Comarch Diagnostic Points

Research and Development Activities in the IoT Division

Comarch IoT focuses on intensive research and development (R&D) in the field of Internet of Things (IoT). More than half of the 200-strong team is working on R&D projects. The difference between Comarch and others is the development of both software and hardware solutions not only for our own needs, but also for other entities. Created devices and technological solutions enable to expand product functionalities of other departments.

A team of specialists develops its own communication modules and IoT devices as well as medical devices. The strategy is to produce HW & SW blocks that will allow the delivery of Internet of Things solutions. It is a kind of synergy of specialization and competence, which results in the creation of innovative solutions.

IOT PLANT & IOT LAB

These form the research and development center of the Internet of Things, where R&D activities are carried out on the broadest scale, starting from the prototyping of EMS electronic devices (in terms of industrial design, electronics design, development software, mechanical prototyping, vacuum casting with the use of 3D SLA laser printing technology and CNC milling) through their production (selective coatings and environmental tests) to the installation and post-production quality control of the offered products.

COMARCH IOT PLATFORM

This is a cloud solution allowing for the implementation of various IoT solutions. Within the project, elements are created and developed that are part of the offer of solutions such as Comarch Smart Metering. Research and development work is conducted on products such as Comarch IoT Hub — IoT Gateway, Comarch communication modules (IoT MESH, BLE, 3G/4G, LPWAN: NB-IoT, LTE-M LoRa), and Comarch Smart Lighting modules (which is an intelligent lighting controller).

Research and Development Activities in the Financial Services Division

Research and development projects that are carried out by the R&D Department primarily focus on using artificial intelligence (AI), or strictly speaking "deep learning", or the use of neural networks in decision-making. Below is a more detailed description of activities in that respect:

FINANCIAL FRAUD PREVENTION AND DETECTION

Goal: software that limits the risk of financial crimes, especially concerning anti-money laundering, prevention of compensation fraud, and unauthorized transactions.

SCORING FOR INVESTMENT FUNDS

Goal: new module for the Comarch Wealth Management platform that supports recommending investment products in terms of future return rates.

TOOLS SUCH AS ROBOTIC PROCESS AUTOMATION (RPA)

Goal: tools automating repeated back-office operations:

- KYC – supporting the process of collecting and verifying data on bank customers, mainly businesses
- Automated data collection and interpretation – natural language understanding
- Generation of reports on reviewed customers

CYBERSECURITY

Goal: supporting Comarch products in the area of cybersecurity: biometry and behavioral analysis

Reseach and Development Activities in the Public Administration Sector

In recent years, there has been an increase in expenditure on the development of digital services for the public administration sector in Poland. Particular emphasis is placed on the design and implementation of functional and useful e-services for citizens and entrepreneurs, as well as the adaptation of the infrastructure of units to carry out tasks and handle matters electronically. At Comarch, we run many activities in the field of R&D of our products for central and local administration. The development works of the Comarch e-Office platform and Comarch Workflow are carried out towards embedding the product in the cloud (containerization technology) and further close integration with other products from our portfolio, including Comarch Ergo and Comarch ERP Egeria. The development of a new electronic forms engine is a big innovation. A team of designers simultaneously conducts usability tests and works on improving UX systems. An important element is the adaptation of products for the visual identification of the Comarch Capital Group and the design system to provide a fully coherent and user-friendly product.

As part of the development work program, investments in the extension of the Comarch ERGO software functionality were intensified – which is an integrated IT platform for the spatial management at the gmina, powiat and voivodeship levels. It is the only system in Poland to integrate over 60 public registers of spatial management. This system can function as an electronic platform of a shared services center of many public administration units. The main directions of development work focused on the development of the Comarch ERGO platform in public cloud technology in the SaaS model, as well as in the private cloud model for provincial and powiat-gmina local governments. Research and development works are also focused on the preparation of Comarch Ergo software modules in the hybrid cloud model, which will allow customers to flexibly integrate within the functionality they use, both modules installed on their own equipment at the customer's location, as well as those provided as part of cloud services. At the same time, in order to meet the requirements of public administration in the field of management and sharing of spatial data, development work was undertaken related to the creation of interfaces with built-in WWW technology, with the help of which they can build their own public Geoportals and their services without the need to use commercial GIS-class solutions.

An extremely important area of development work was undertaking conceptual and analytical works ensuring the integration of Comarch products addressed to public administration: the Comarch e-Office platform, Comarch Workflow (electronic document management) and the Comarch ERGO platform. Their goal is to provide public administration with comprehensive e-services ensuring full electronic service for citizens and entrepreneurs.

Research and Development in the ERP Sector

Work under R&D in the ERP sector primarily involves the implementation of artificial intelligence (AI) in products.

Automation – Comarch Artificial Intelligence uses machine learning methods to automate working with Comarch ERP systems based on repeated actions performed by the user.

A system has been created within machine learning development work that allows the automatic creation and suggestion of a default template of analytical description for an ERP XL system. It frees users from the need for manual input into the creation and selection of analytical templates while describing a document. The solution has been equipped with an intelligent system that selects the most probable template.

The Comarch ERP WMS solution is a program for warehouse management. A graphic configurator of processes has been prepared in it under development work. It is a tool that provides for quick and easy performance of work without specialist IT expertise relating to the creation and change of subsequent steps in processes in the warehouse. Previously, such change was possible by making modifications in a database and writing processes directly in SQL. It is a tool compared to a process configurator in workflow tools that are used in ERP systems. Currently, work is under way, too, on a tool that predicts peaks of sales for goods and advance relocation of goods in the warehouse, so that goods sold most frequently are located closer to the release zone.

Another automated solution is a system that suggests subsequent stages of document processing for Comarch DMS. It automates the process of searching for a relevant stage, owing to which the user may work faster and more comfortably. Additionally, expanded mechanisms of process modelling have been implemented in DMS to include a built-in C# compiler, where a compiled code is automatically configured and made available for the system in the form of DLL libraries. Besides process modelling expansion, the mechanism offers unlimited possibilities of integration with any external system.

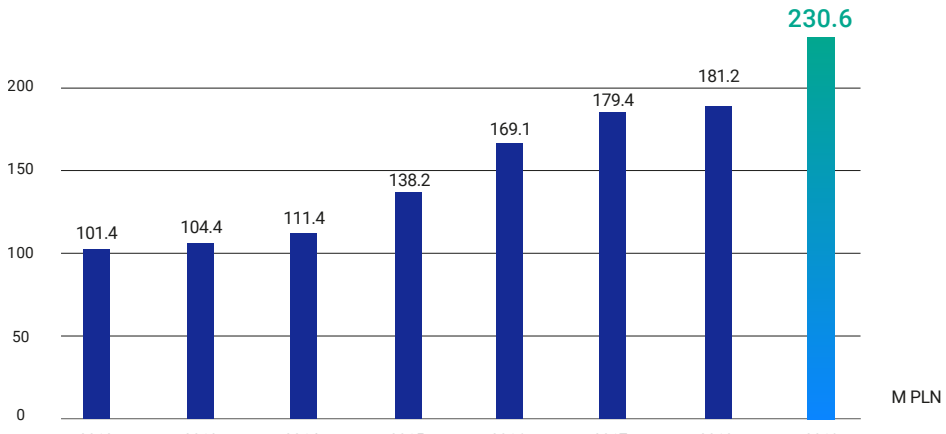
Another developed solution is a system detecting cyclicality in issued invoices. With the system, the user may more conveniently automate invoice issuing via a method for proposing recurring invoices. It provides for more convenient and faster automation of work using information on parties to a financial transaction, document issue date, or products for which an invoice has been issued. The mechanism may be used in many ERP systems.

Comarch OCR is also a dynamically developed tool, offering automatic reading of invoices. The system reduces the amount of manual labor required for entering data from paper invoices into accounting systems. By using modern machine learning methods, the user may receive data such as business partners' details, or a table of products that is in an sale invoice or a purchase invoice, and also issue dates of documents and the bank account number from the document. Comarch OCR is also used in many ERP systems, and, additionally, a workflow system is provided with automatic (non-personal) retrieval of documents from the disk and their dispatch for processing according to defined recurring tasks.

Within R&D activities, two new applications have been developed, as well: Comarch e-Reporting and Comarch ESEF. They are a response to the existing demand for modern, intelligent IT solutions. Comarch e-Reporting is an application that is used to create and manage reports and reporting documents in a business. Comarch ESEF is a tool that is required by businesses that will soon be faced with the necessity of building their consolidated financial statements, in compliance with the new ESEF regulation, using the XBRL standard. The Comarch ESEF application allows intuitive report construction under this standard.

Collection support through automatic setting of a transaction limit is another idea that is being developed. Relying on customers' payment habits and sales data, a decision-making system is implemented that automatically sets a credit limit.

Research and Development Expenditure of Comarch Capital Group



	2012	2013	2014	2015	2016	2017	2018	2019	
	24.3	24.8	26.6	33.0	38.7	42.3	42.6	53.6	M EUR
	31.4	33.0	35.0	36.4	42.6	47.9	50.6	60.0	M USD
	19.7	21.1	21.3	23.9	31.7	37.0	37.6	47.0	M GBP

6

Comarch Products

Products and Services Offered by Comarch

Comarch is a producer of innovative IT systems for key sectors of the economy, including telecommunications, finance and banking, public administration, medical, as well as large, small and medium-sized companies. A wide range of the Comarch offer includes ERP-class and financial and accounting systems, CRM systems and loyalty software, sales support, electronic document exchange, electronic banking, IT network management and billing systems, business intelligence, security and protection of data, electronic devices and many other solutions. Apart from providing innovative IT solutions to its customers, Comarch is focused on professional customer service and on providing consulting, advisory and integration services as a uniform package, with which our customers can take full advantage of the possibilities offered by modern IT systems.

Comarch Innovation Space, Kraków

MORE THAN
50
TELECOM COMPANIES WORLDWIDE
ARE USING COMARCH BSS/OSS

90 000 REPORTS
GENERATED MONTHLY BY PERFORMANCE MANAGEMENT,
IN LESS THAN ONE MINUTE (ON AVERAGE)

IMPLEMENTATION OF THE WORLD'S FIRST ASSURANCE
SYSTEM FOR THE 5G NETWORK

300 TB
OF DATA PROCESSED DAILY
IN OSS/BSS DATA ANALYTICS

COMARCH SYSTEMS ENRICHED WITH BUILT-IN ARTIFICIAL
INTELLIGENCE MODULES USING MACHINE LEARNING
ALGORITHMS

Telecommunications Division

Since 1993, Comarch's Telecomunications Sector has specialized in providing IT solutions for telecommunications operators around the world. Our customers in this industry include Telefónica, LG U +, Deutsche Telekom, Vodafone, KPN and Orange. Comarch BSS and OSS products help operators in transformations that are designed to increase business revenues and efficiency, simplify the IT environment, reduce costs, increase customer satisfaction, and quickly create innovative services. The group has also been awarded many times for its activities in the telecommunications industry, by analytical companies such as Gartner, Forrester, Informa, and Frost & Sullivan.

IOT CONNECT

Comarch IoT Connectivity Management enables mobile operators to provide managed connectivity in multinational, multi-level and multi-operator environments. The system is an M2M/IoT connectivity management platform that helps launch IoT offers for vertical industries such as automotive, consumer electronics, retail, energy and utilities, finance and banking, healthcare, manufacturing, public services, security, and transport and logistics.

Comarch IoT Analytics Platform is a module that focuses on delivering measurable business value, using intelligent big data processing and real-time data analytics for M2M/IoT business purposes. It provides thorough information about the way in which customers are using your IoT products. Additionally, it handles some issues related to quality of service (QoS) within operations, by helping discover which devices (or types of device) generate issues, revealing data patterns and trends, and providing reports and analysis of anomalies.

Comarch IoT Billing is tailored to the needs of your IoT operations. It enables you to charge not only for connectivity, but also for IoT devices, vertical applications and bundled services. IoT customers are looking for solutions in this field that best meet their business needs in the most appropriate way. The system supports all kinds of multi -level business relations (B2B, B2B2C and B2B2B).

Comarch IoT Solution Management helps businesses function in today's IT world. It includes comprehensive support for selling, storing and managing IoT connectivity services, devices and applications.

ENHANCING DIGITAL CUSTOMER JOURNEYS

Real-time Data Control and Presentation calculates service charges, controlling buckets, balances, and limits in real time. The module improves customers' digital experience by providing readable and easily digestible visual cues, giving a clear view of current bundle consumption, data usage, balances and limits. It is also a source of data for multidimensional reporting, 360-degree customer views, analytical actions, recommendations and personalization engines – all of which greatly impact the entirety of the customer journey.

Digital Sales and Customer Care enables you to introduce, recommend, sell and maintain traditional telco and advanced digital services with the pace and simplicity required by today's market. Customers are guided through the digital shopping and buying process, which includes offer browsing and comparison, online availability checks, customer onboarding, omnichannel shopping cart support and the check-out process.

DIGITIZING ENTERPRISE CUSTOMERS

Comarch Enterprise Billing, Charging & Revenue Management is a telecom invoicing software product that addresses the needs of even the most complex corporate environments by providing features such as multi-branch and multi-department organizational structure support, split billing with flexible definition of rules based on time of connection or service type, ad hoc reporting of data with current bucket consumption, charging based on thresholds, shared bundles at the level of company or branch, closed user groups, availability of usage data and financial data in the middle of the cycle.

Comarch Telecom B2B Self-enablement Platform is a system for managing telecommunications services for business clients. The telecom B2B platform delivers a single and comprehensive 360-degree view where the customer can see data and statistics related to orders, cases and financial information. Business customers can easily manage even the most complex hierarchies, representing their own organizational structure, access detailed reporting in context, and set up real-time control or split bill policies over service use.

B2B Sales & Ordering is a proven tool that provides a full lead to cash experience within a single package. It ensures accurate, automatic and nearinstant quotes which, thanks to the product catalog-driven mechanism, become agreements seamlessly upon approval.

PROVIDING ENTERPRISE SERVICES GLOBALLY

Comarch Enterprise Product Catalog enables simple and flexible storage of the entire CSP product portfolio in one place. The system sets up several slave catalogs per domain or business line. These are used for selling offers to end customers and driving appropriate charging and billing systems.

Comarch Digital Billing and Revenue Management delivers multi-currency and multi-taxation handling as well as generating financial documents not only for customers, but also for partners involved in the entire process of service delivery.

Comarch Partner Management provides flexibility in liaising between enterprises and various third parties by allowing the modeling of any type of service from SLAs and offers up to central Product Catalog. The system is secure and easy to deploy, with multi-currency, multi-tenancy and multi-national support.

Comarch Wholesale Billing allows service and content providers to exchange billing data and invoices, and to share revenue or cost information with partners. The product facilitates the management of relations with domestic and international business partners, and supports various business models which include revenue sharing, wholesale and roaming services. The easily scalable product is fully prepared to support the newest services, and is open to business evolution. Comarch Wholesale Billing processes high volumes of any kind of services (voice, data, messaging, content and others) within any kind of agreement, including bilateral, hubbing, revenue sharing, roaming, MVNO and contentbased.

5G NETWORK OPERATIONS

Comarch Zero-touch Network Provisioning is a product to meet IoT and 5G demands for rapid, automatic implementation of telecom network elements. The system allows devices to be connected, pre-configured and updated.

Real-time OSS for SDN/NFV Orchestration is a platform for provisioning and managing services over VNFs, PNFs and SDN-controlled networks, facilitating comprehensive orchestration of complex multi-domain topologies.

Comarch Self-organizing Network (SON) introduces true network automation, enabling mobile network operators to implement RAN optimization that will significantly reduce OPEX, shorten time to market for new services, and improve customer experience.

Comarch Intelligent Assurance & Analytics is a system that was created as a result of extending the Integrated Assurance product with the functions of OSS/BSS data analysis, the ability to process large data sets, an artificial intelligence module using machine learning algorithms to enable predictive maintenance, as well as automatic knowledge-gathering in the field of good practices in preventing and counteracting network problems and incidents. Comarch IA&A is part of the Comarch OSS product range, which supports comprehensive orchestration of hybrid networks (consisting of physical and virtualized elements) and is one of the pillars of Comarch's broad strategy for embedding artificial intelligence in all products.

INTELLIGENT ASSURANCE & ANALYTICS

Comarch AI Service Desk is a dedicated part of Intelligent Service Desk, focused on the supervision of results of machine learning use cases realized by the AI module in different Comarch products. AI Control Desk supports the following use cases: automated situation detection, automated problem detection, automated baseline generation and anomaly detection, and knowledge accumulation.

Comarch Customer Experience Management (CEM) plays an overarching role in service monitoring and service quality management, transforming service management by providing an insight into customers' perceptions of services provided by telecoms operators. It helps network providers make the leap from network/resource-centric operations to customer-focused ones, delivering effective telecom customer experience management tools.

Comarch Service Quality Management (SQM) transforms traditional network-centric telecom monitoring into customer-centric telecom service quality management. Telecom service quality management delivers insight into customers' perceptions of service quality.

Comarch Service Monitoring lets you monitor services implemented over various network technologies and management domains. Events originating from different sources are correlated and processed in Comarch Service Monitoring to perform impact analysis for the service. The results are presented graphically on a service tree to give the operator rapid insight into the prevailing situation at any time.

RESOURCE MANAGEMENT

Comarch Real-time Network Inventory Management stores complete information about physical, logical and virtual network resources. It is a shared, central fixed-access inventory to capture all details of a very complex IT/telecom environment with advanced micro-services technology underneath.

Comarch Network Planning & Design enables CSPs to manage telecom network planning, design and optimization processes comprehensively and efficiently. Process-orchestrated planning is a future-proof way of making network investments, where the business value of the investment becomes ever more important in response to developing telecom opportunities.

Comarch Network Auto-discovery & Reconciliation provides a comprehensive and up to date insight into the multi-vendor, multi-domain network, enabling effective network management. The system supports reconciliation of RAN, transport, core, access and IT domains. Thanks to integration with Network Inventory, it also provides a single, comprehensive and integrated view of the live state of the network.

Comarch Configuration Management enables service providers to automate network provisioning for all network domains. It is a product that manages configuration in a manner that goes beyond the traditional radio access network (RAN) approach, implementing network provisioning in the transmission, core and access domains too.

Comarch Network Consolidation for M&A helps telecoms efficiently organize and streamline network planning and consolidation processes in merger and acquisition (M&A) projects.

SERVICE DESIGN & FULFILLMENT

Comarch Service Catalog acts as a placeholder for defining service rules and enables the centralization of service specification management, which aims to increase automation of the end to end service fulfillment and service assurance processes. The system is compliant with the TMF SID standard and enables the management of customer-facing service (CFS) specifications, as well as their decomposition and mapping into resource-facing service specifications. In this way, the product enables customer services to be translated into supporting technical services.

Comarch Service Inventory facilitates the end to end management of your network and all related products from the ser-vice perspective. It is a product that can be pre-integrated with the Comarch Service Catalog system, in a manner that enables you to fully describe the services and products offered via your network. In this way, Comarch Telecom Service Inventory acts in accordance not only with the TMF SID (addressing customer facing services (CFS)) model, but also with the resource-facing ser-vices (RFS) one.

Comarch Service Fulfillment & Orchestration is a product designed to reduce time to market and automate the telecom service fulfillment process for customer service delivery on top of a hybrid network. The system employs the mod-el-driven (catalog-driven) concept, which enables the orchestration of hybrid networks where virtual network functions and network services are modeled consistently, with physical network functions and legacy network services employing the TMF SID model. SFO (using ETSI NFV ISG terminology) can implement end to end service and MANO orchestration, and manage the VNF instantiation process.

Comarch Field Service Management (FSM) is a comprehensive workforce management system for scheduling, staffing, managing, and sup-porting the workforce in the field, which results in significantly increased efficiency of opera-tions. Thanks to this tool, customer and network operations can utilize the available resources more efficiently and improve the team's coordination. The system selects the most suitable resources for each task, considering all aspects and bearing in mind KPIs according to the com-pany's business model. Comarch FSM addresses the

needs of field workforce managers, allowing them to manage resources, tasks, time and knowledge effortlessly. Full mobility support for all on-site activities allows the time needed for task execution to be shortened, work quality to be improved, and changes to be performed in real time.

PROFESSIONAL SERVICES

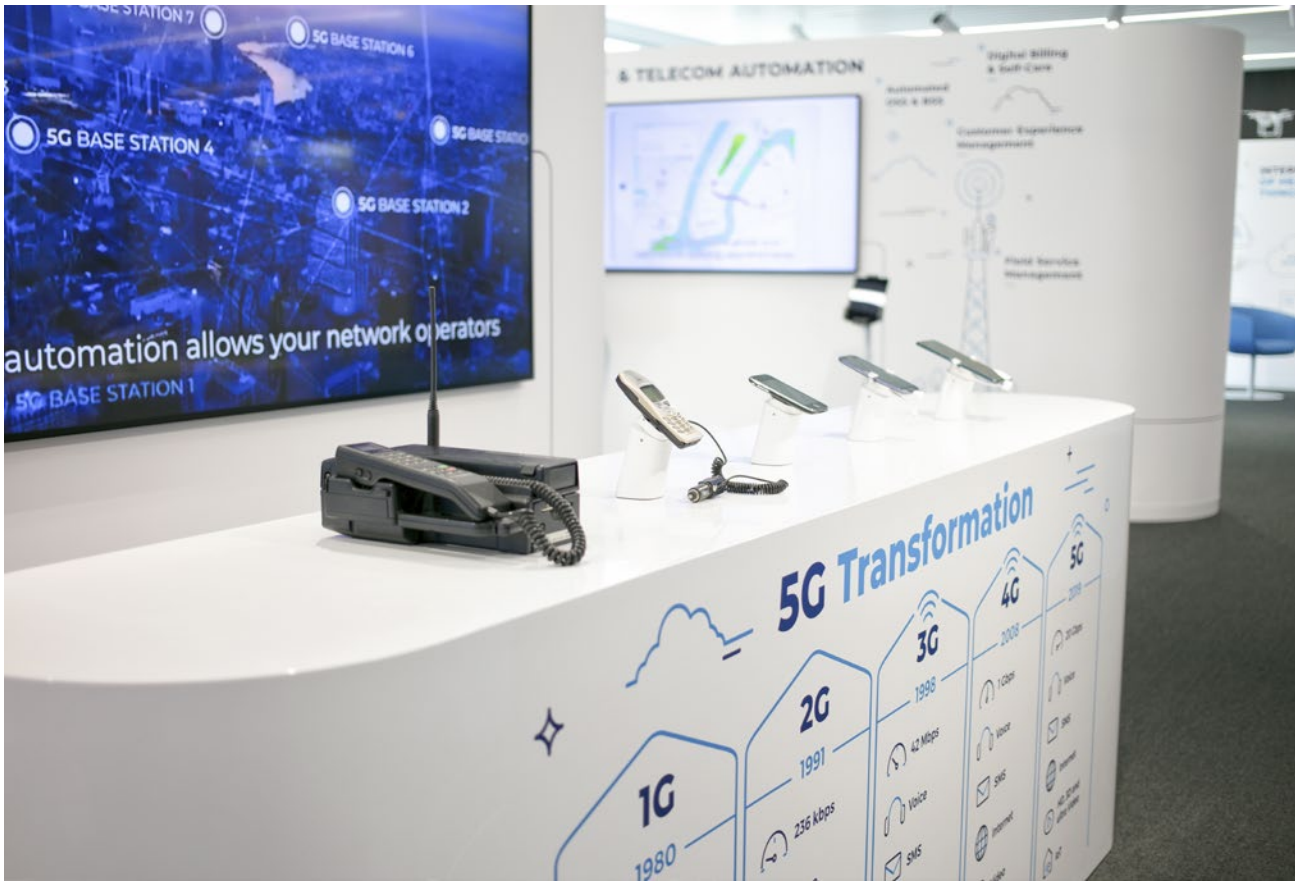
Business Consulting is a service that helps telecoms optimize and automate their business processes and increase their efficiency in OSS and BSS, by eliminating multi-vendor and cross-organization redundancy and by rethinking IT architectures and configurations.

Managed Services offer telecom operators the opportunity to outsource system and/or process management, enabling them to optimize the delivery of services to customers and increase their availability, while decreasing the workload and business costs without compromising process quality or business/technology independence.

BSS/OSS Transformations – as a software vendor and a business partner for global telecoms companies we understand the nature and complexity of telecom transfor-mation projects. Based on our experience, we have developed a comprehensive offer of products and services to support local and multi-country transformation projects in the OSS and BSS domains.

End to End Project Delivery adds extra value on top of delivering a system to the customer, and encompasses the following services: requirement analysis and system design, training, implementation and integration, maintenance and support.

BSS/OSS Cloud Transformation – is one of the foundations of digital reinvention that telecoms are going through. It is designed in the spirit of agile, microservice-based architecture that ensures full automation of platform integration and delivery, rapid deployment, and cloud-readiness from the start.



Comarch Innovation Space, Kraków

OVER
18 YEARS
OF EXPERIENCE IN IMPLEMENTING
CREDIT SYSTEMS

MORE THAN
50
ENTITIES MANAGING ASSETS
ALL AROUND THE WORLD

MORE THAN
2.5 MILLION
OPERATIONS ON SECURITIES
PROCESSED ANNUALLY

OVER
300
SUCCESSFULLY COMPLETED
SECURITY-RELATED PROJECTS

OVER
3 000
ACTIVE USERS ON FRONT-OFFICE
DIGITAL INSURANCE PLATFORM

Financial Services Division

Comarch Financial Services specializes in developing sophisticated software and IT systems for major financial institutions in banking, insurance and capital markets. We help enterprises and institutions increase customer satisfaction by creating and implementing state-of-the-art IT solutions and services, building on over 20 years of experience. Our portfolio of satisfied clients includes financial institutions in more than 30 Countries. Among those clients are: Raiffeisen, ING, TMB Bank, Alior Bank, Pekao, AXA, Allianz, UniCredit.

PRODUCTS

Comarch SME and Corporate Banking is an omnichannel platform designed for the specific needs of large and medium-sized companies, and offered to banks providing services to such companies. It's a transactional banking system, a financial management tool, and a solution to facilitate handling of bulk payments – all rolled up into one. It also supports corporates in managing accounts of different types, buying currencies, making local and international payments, or consolidating balances across the world.

Comarch Small Business Mobile Banking is an application for small business owners to facilitate their daily tasks. It is based on cash management, invoicing and financing possibilities. Comarch Small Business Mobile Banking is a comprehensive solution that helps banks to reach micro and small enterprises with digital services.

Comarch Factoring is a cloud platform that lifecycle factors and their customers to manage the whole lifecycle of receivables. Comarch Factoring is a customer service tool which has an advanced billing engine and multi-channel access to factoring services.

Comarch Trade Finance is an application that allows entrepreneurs to manage the lifecycle of such products as guarantees, collections and letters of credit. The solution helps to automate and digitize the whole process of trade finance.

Comarch Wealth Management is an integrated, multi-module platform dedicated to retail, affluent and private banking client segments. The system supports different recipients: relationship managers – in advisory and financial planning processes, end-clients – in self-driven robo-advisory processes and bank-client communication with the use of newest technologies, wealth managers – in discretionary portfolio management in line with regulations and investment mandates, and analysts – in running performance and risk calculations to assess client portfolio efficiency.

Comarch Loan Origination enables more efficient control of credit risk and allows for a significant reduction of the time needed to grant a loan. The system automates the work of client advisors, managing the credit-granting process at its every stage. It allows banks to optimize the most vital elements of credit management: loan simulation, application verification, analysis of customer financial situation (including database checks), decision-making and fund disbursement.

Comarch Digital Insurance is, on one hand, a system dedicated to insurance agents, brokers or intermediaries. It helps them not only advise on and sell insurance products, but also provide post-sales support, manage their tasks and monitor their own business performance. On the other hand, Comarch Digital Insurance allows individual customers to smoothly purchase a policy online and manage their insurance product portfolio.

Comarch Anti-Money Laundering allows banks to significantly decrease the time and increase the precision of transaction monitoring – a routine task requiring much knowledge and experience. The system takes the burden of performing routine tasks off bankers' shoulders, reduces the total time it takes to analyze alerts, and lets the bankers focus on more demanding and complex challenges.

Comarch Identity and Access Management (IAM) is a solution that allows full control over access to company's applications, VPNs and workstations. It comes with world-class methods for identity lifecycle, authentication, authorization and accountability. Its modular architecture makes it easy to adapt to specific types of organizations across hierarchies and geographies.

Comarch tPro ECC is an innovative USB token for digital signature. The token is driverless, OS-agnostic and browser-independent thanks to a connectivity mechanism that is unique in the market. Furthermore, the presence of a built-in button that the user has to press and release in order to authorize transactions makes tPro ECC an extremely effective device in countering remote attacks.

Comarch tPro Mobile is a mobile solution for strong customer authentication and transaction authorization based on two factors: what the user has – a mobile phone with an app, and what the user knows, a PIN or pattern. The application also supports biometry on mobile devices with a fingerprint scanner.

27

TRADE MARKS THAT HAVE BEEN APPLIED FOR
AND REGISTERED WORLDWIDE

DIGITAL TRANSFORMATION PARTICIPANT

SMART HOME AND IOHT
LIFE-SAVING SOLUTIONS

PIONEER ON THE EUROPEAN MARKET
AND THE SECOND COMPANY GLOBALLY
IN THE WORLD OF INTEGRATING SPOTIFY
WITH THE INFOTAINMENT SYSTEM

IoT Division

Comarch IoT activities include the development of Internet of Things (IoT) products and services. Based on rapidly evolving IoT technology, specialists provide hardware and software solutions, while ensuring the highest quality standards, which provides an opportunity not only for technological development, but also for the implementation of new, efficient business models. Given the great importance of digitization, a complete IoT ecosystem has been created, operating in a cloud environment (IoT Platform), providing a wide range of communication, processing and data exchange capabilities.

The area includes not only IoT products, but also building blocks architecture of these solutions, adapting to many industries, including heavy industry, telecommunications, utilities, medicine, e-mobility, automotive, transport, and many others, where there is a need for the implementation of IoT.

Focusing on high technological development and the requirements of a competitive market, the IoT sector also carries out R&D and short-series production of electronics in its own factory floor infrastructure – IoT Plant along with IoT Lab.

Another segment of the sector is professional services, addressed to international customers and encompassing a wide range of industries, in particular the demanding automotive industry. In addition to maintaining safety and quality standards, service activities are in line with the latest trends such as e-mobility and digitization.

INTERNET OF THINGS

IOT SOLUTIONS

Comarch Smart Metering – a solution dedicated to the monitoring of municipal infrastructure (water, electricity and gas). The solution consists of a dedicated Comarch device for reading data from the meters in a standardized way, wireless data transmission using LPWAN technology (4,5G) through the network of a telecommunications provider (NB-IoT or LTE-CatM) to the Comarch cloud computing, and a Smart Metering application based on the Comarch IoT Platform.

Industry 4.0 – a set of dedicated products and solutions based on IIoT (Industrial Internet of Things) technology. The use of IIoT components allows digitization in production, including the automation and optimization of processes.

Digitization – through the digitization process, IoT technology streamlines and automates processes in enterprises. IoT solutions provide the capability of communication between devices, collecting of data with sensors and processing them in a dedicated Platform. By replacing inefficient systems with those based on IoT, an intelligent environment is created that applies to the spaces of houses, urban infrastructure, factory floors and health services.

Internet of Healthcare Things (IoHT) – a set of devices and systems dedicated to the medical industry, based on IoT technology. The IoHT architecture consists of "things" (devices), connectivity modules, and a cloud platform. IoHT solutions allow integration with existing systems.

Comarch CareMate – is a digital caregiver, available as an application in conjunction with an integrated Life Bracelet (used to monitor patients, with a GPS locator and the capability to call for help). It offers a modern solution dedicated to the elderly and chronically ill people who need constant monitoring.

Comarch IoT Button – a small, battery-powered device communicating with the IoT Platform, with three types of response (via the button: short, long and double). Its functionalities allow it to adapt to the countless tasks and needs of a given enterprise, while providing the possibility of integration with already existing systems for digitization. Based on communication protocols: LTE Cat-M1 / NB-IoT / EGPRS.

Comarch Asset Tracking – a solution for locating devices, things, and people in logistics, industrial, medical and many other spaces. The hardware-side system is based on Comarch radio equipment and modules, processing the collected data in the IoT Platform.

Comarch Smart Lighting – a solution based on Comarch IoT Platform, which enables rapid quick configuration and management of intelligent lighting in the city, public buildings or industry. This solution also uses the Smart Lighting module, which allows transformation of the existing lighting infrastructure into a smart system.

COMPONENTS (BUILDING BLOCKS) OF IOT SOLUTIONS

Comarch IoT Platform – the Internet of Things platform operating in a cloud-based environment. The IoT platform enables the configuration, management and monitoring of communication between devices in the network. Thanks to its functionalities, the Platform is able to collect data from billions of devices, then analyze and process information, which translates into increased efficiency of process management and reduction of costs of both operations and used resources.

Comarch IoT Hub – a versatile gateway with a modular architecture used to provide connectivity between devices and the IoT Platform. The solution offers secure and stable short-range communication based on various communication protocols, remote control and management of connected electronic devices.

Comarch BLE Module – a certified radio module for Bluetooth Low Energy 4.1 (BLE) technology with Comarch software stack, in the form of a PCB for use in a variety of applications, including IoT as a BLE interface.

Comarch Radio Module (IoT MESH) – a certified radio module in MESH technology operating on the 2.4GHz sub-GHz band, based on IEEE 802.15.4. The PCB module for use in a variety of applications, including IoT as a radio interface.

Comarch Smart Lighting Module (CSL) – a certified module for wireless control of lamps, including those made in LED technology. It uses various Comarch radio modules as transport layer. The product is available in several functional variants with different radio interfaces.

SHORT-SERIES PRODUCTION OF ELECTRONICS AND RESEARCH AND DEVELOPMENT (R&D)

Comarch IoT Plant – a factory floor, which offers high quality services in the field of rapid prototyping and assembly of electronic devices (EMS). It provides customers with comprehensive support at every stage of the production process, from design, through mechanical prototyping, to assembly and post-production quality control. The innovative production line enables short-series production of consumer electronics prototypes in a very short period, with particular emphasis on the quality of products and services offered. IoT Plant factory floor has been created in response to the needs of assembly of electronics, i.e. EMS services, and operates within the Integrated Management System of Comarch S.A.

Comarch IoT Lab – IoT Lab builds prototypes that meet the highest industry standards in terms of security and user experience. The services offered by IoT Lab include the process of creating an industrial mould design, 3D visualization, electronics and software design, technical design and documentation, and preparing the final prototype. Comprehensive services provided by Comarch IoT Plant and our experience in R&D slso include the development of products for the medical industry This is where modern medical devices are made, such as Comarch CardioVest (a vest for remote ECG monitoring and cardiac diagnostics).

PROFESSIONAL SERVICES

SERVICES FOR THE AUTOMOTIVE INDUSTRY

Software development – the scope of activities includes the design of applications, backends and the integration of third-party content and service providers (such as Google Alexa Assistant, parking, payment, music and smart home). Services are carried out in accordance with customer requirements, using knowledge and experience in the field of network security and logic and intuitiveness in contact with the recipient.

In-car infotainment – participation in the development of embedded information and entertainment systems (Infotainment). It includes the development of applications for OEMs (e.g. web embedded) in the field of dedicated Infotainment systems. As an example of our activities, we were the first in Europe and the second in the world to integrate Spotify with the infotainment system.

Integration with smartPhone:s – the capability to connect applications installed on the smartphone, and control them from the car headunit allows you to focus fully on driving, increasing the level of safety and responsiveness. The use of these applications is intuitive, and you can control them using, for example, a button on the steering wheel or voice commands, without performing additional activities that distract attention (e.g. MirrorLink, CarPlay and Android).

E-mobility – combining project experience with other Comarch sectors, IoT provides solutions and services that are a part of the development of the e-mobility concept, which not only concerns economic and ecological transport, but also supporting applications and user services (software services). With e-mobility provided by Comarch, users can use vehicle-integrated voice assistants when planning their work through the application of in-car office (calendar integration) or save time to find the parking spot using the integrated smart parking system (integration with OEMs).

UX / UI – these services rely on a comprehensive study of user behavior and profiles to design intuitive and user-friendly applications.

CERTIFICATION

Certification tools for standardization organizations support effective management of the certification process for devices and applications. In addition, they allow for checking compliance with current standards, especially in the area of Internet of Things communication standards. In addition, Comarch provides certificate authority tools to issue and verify certificates to confirm the identity of a given entity.

EMBEDDED SYSTEMS

Comarch offers comprehensive system and product solutions in the area of embedded systems. The experience gained in the implementation of international projects in the field of consumer electronics and automotive, medical and financial-banking industries is a guarantee of compliance of the technology with current trends and industry standards applicable to the offered solutions.

OUTSOURCING

It is provided within the scope of outsourcing of processes, R&D, systems and know-how (human resources). Cooperation with Comarch reduces the cost, time and risk of projects.

KSI ZUS ABOUT

500 MILLIONS

INSURANCE DOCUMENTS
PROCESSED DURING A YEAR

8 MILLION

COURT CASES HANDLED

143

E-SERVICES READY FOR USE ON
THE COMARCH E-OFFICE PLATFORM

20 000

USERS USING THE COMARCH EZD
ELECTRONIC DOCUMENT MANAGEMENT SYSTEM

NEARLY

200

LOCAL GOVERNMENT UNITS USING
THE COMARCH ERGO SYSTEM
COMARCH FAULT MANAGEMENT

Public Administration Division

Comarch specializes in the design, implementation and integration of modern IT systems for public administration, companies and public sector institutions. The company has experience in creating comprehensive turnkey solutions and in developing hardware and network infrastructure. Comarch has created a number of e-government solutions that meet the needs of public sector entities. The solutions are based on international standards. The most important solutions implemented in the public administration sector include:

Comarch ERGO – system supporting the realization of public tasks connected with land management. It enables more than 60 registers and records to be run in the areas of geodesy, cartography, real estate management, spatial planning, road infrastructure management, construction, environmental protection, agricultural and forest land protection, protection of historical monuments and geoportals. The system has modular construction enables the exchange of information between local government units and cooperating parties, their faculties and employees. Comarch ERGO is a comprehensive solution allowing the launch of the Spatial Economy SSC electronic platform.

Comarch Workflow – the platform supports the electronic (as well as paper) workflow of documents in enterprises and institutions (industry-specific versions were created for individual entities). The solution enables institutions to manage documents in accordance with the guidelines, and to define and operate any workflow processes and documents. For this purpose, a mature business process editor based on BPMN is used, which, in cooperation with components enabling the creation of dedicated registers and forms, is able to provide each institution with a coherent and fully configurable workflow-class system.

Comarch e-Office – is an online public service platform that allows the implementation of tasks of local government units and central offices. Intuitive tools enable autonomous application management, providing support for content creation and publication processes. The platform includes components: Digital Office, Resident Profile with electronic payment services for obligations to institutions, Public Information Bulletin, Information Portal and Intranet, as well as elements supporting social activity related to servicing the civic budget or issuing opinions on legal acts.

Comarch ERP Egeria – this ERP-class integrated IT system supports organization management and decision-making processes. It features a high configuration capacity and flexibility, which allows it to be adjusted to the individual needs of each client. The system is offered to different types of companies and institutions (government and local level administration, utilities, healthcare, etc.).

Comarch Security Platform – a solution that combines elements of physical and cyber security. The physical security management system is an innovative solution supporting the security of various types of facilities and protected areas. Our solution integrates multiple security systems such as anti-theft alarms, CCTV, fire alarms and access control, allowing users to manage all the security measures throughout one central security system. Additional elements related to image analysis, information correlation and defined operating procedures allow increased automation of system operation, and greater security of the protected object or area. Information and threat analysis modules in cyberspace allow the detection and analysis of physical and virtual threats.

Comarch Smart Parking – is a platform that detects free parking spaces with intelligent video analysis (IVAs) or a sensor network. It also integrates many parking systems in one place. The system supports outdoor, indooor, park & ride, city and private parking lots. It enables the generation of operational and management reports as well as statistics on the occupancy of parking spaces thanks to the management portal.

Comarch eRecording – is a comprehensive and coherent solution that combines the convenience of using classic audio/video recorders with public address systems and a dedicated application to control the audio/video recording process. The system allows registration of meetings, sessions or public appearances along with related metadata and comments that enable efficient searching of the recording during playback. Additional sources of recorded data may be external multimedia data and remote transmissions via video terminals. Comarch eRecording provides (along with recording) a platform-independent multimedia multi-track player.

Comarch Video Terminal – is a video conference client that supports popular connection standards and audio-visual transmission. It is also a suitable complement for Comarch eRecording, as it provides point-to-point connection, and compiles multi-party calls based on the standards and infrastructure of video conferencing bridges of leading suppliers.

OVER

290 MILLION

MEMBERS OF LOYALTY PROGRAMS
IMPLEMENTED BY COMARCH

8,1 BILLION

TRANSACTIONS PROCESSED
THROUGH LOYALTY SYSTEMS
SUPPORTED BY COMARCH

650 MILLION

DOCUMENTS PROCESSED BY COMARCH'S EDI
SYSTEM IN 2019

15 BILLION

DOCUMENTS STORED
IN COMARCH ECM

20 MILLION

GENERATED DELIVERY ORDERS
IN THE COMARCH SFA SYSTEM

20 DATA CENTERS

AROUND THE WORLD

Services Division

In the Services Sector Comarch designs, implements and integrates modern IT solutions to support loyalty programs, manage marketing campaigns, manage employee motivation, electronic data exchange and business information, manage the flow of documents within the company, and manage sales processes using support systems and mobile applications. The offer also includes a comprehensive range of IT infrastructure management services for enterprises.

The Services Sector currently implements projects on five continents in 40 countries. Our customer portfolio includes, amongst others: Media Saturn Holding, European Organisation for Astronomical Research in the Southern Hemisphere (DE), OMV, BP Europa SE, TabCorp Limited, Livelo S.A., Valeo Schalter und Sensoren GmbH, Costa Coffee, JetBlue Airways Corporation, Heathrow Airport, Turkish Airlines, Brussels Airlines, Etihad Airways, Auchan and Carrefour.

Loyalty Management and Marketing Solutions

The offer is addressed to medium and large enterprises. It involves a comprehensive set of IT services that helps build and manage loyalty programs, create customer relations, automate marketing processes and increase profits. Furthermore, we develop tools for Big Data analysis and gamification-based systems for building engagement, increasing profits and strengthening the relationships between clients, partners and the brand.

AVAILABLE SOLUTIONS:

Comarch Loyalty Management – system for managing loyalty programs, which supports B2C and B2B operators enabling launching of many programs on one platform and service of all areas related to running the program (customer registration, profile management, promotions based on various conditions, communication with participants, rewarding gifts and offers). The product is also targeted at transport and travel companies, in particular airlines. The platform supports loyalty programs of all types of carriers, both for individual clients (Frequent Flyer Programs) and in the B2B model. The system supports the creation of rules for calculating points, defining rewards and privileges.

Comarch Loyalty Cloud – is an advanced loyalty system with a modular structure that allows companies to comprehensively manage the loyalty program lifecycle. The application is available in the service model, based on monthly subscription fees. Comarch customers can use the range of application functionalities after a few days from signing the contract, without a time-consuming process of system implementation. The premise of the Comarch Loyalty Cloud service is to regularly provide clients with functional updates implemented in accordance with the Comarch roadmap.

Comarch Campaign Management – is the solution enabling quick and cost-effective design and launch of customer-oriented marketing campaigns. The system optimizes the campaign planning process, simplifies the management and creation of personalized messages, automates multi-channel communication with customers, and allows you to track the progress of campaigns and dispatch statistics. The solution also helps to coordinate and track the tasks of employees involved in the preparation of the campaign.

Comarch Location Based Services – a modern technology platform enabling highly personalized marketing communication directed through mobile application channels to people, customers, residents or passengers in a given location at a given moment. The solution uses data from geolocation and micro-locations and on this basis sends notifications through native iOS and Android applications. The platform is also equipped with navigation module which allows the user of the mobile application to find the way inside the building. This is very helpful for large facilities, such as shopping malls, hospitals, city offices. Comarch Location Based Services is integrated with the beacons produced by Comarch which enables the user's microlocation to be determined through a Bluetooth channel.

Comarch Business Intelligence – the solution supports companies that want to build loyalty strategies through in-depth analysis of large amount of collected data and provide a detailed picture of purchasing patterns, the value of the shopping basket, campaign efficiency and statistics related to the program.

Loyalty Consulting – services creating complete, innovative programs, attracting clients, increasing profits and building a stronger bond between the client and the brand (development of the strategy and concept of the program, ways of rewarding, marketing communication, development of procedures and analysis of IT requirements).

Program Management Services – support in the processes of program organization, creation and selection of marketing service providers, management of relations with strategic partners, day-to-day administration of applications, monitoring of key program performance indicators and activity reports, detection and prevention of fraud, communication management.

Customer Analytics – a set of BI expert or data scientist team support services in collecting, cleaning and auditing customer data, improving and maintaining data quality and their analysis, creating advanced customer segmentation models, migration analysis and customer activation strategy, predictive and scoring models, marketing databases and analysis of customer satisfaction levels.

Data Exchange and Document Management

As part of its offer, Comarch enables effective document management and automation of sales and business processes in the supply chain. A comprehensive approach to communication with partners from around the world, including the electronic exchange of product, commercial, logistics and financial data, allows companies to achieve measurable benefits such as faster access to information and significant cost reduction.

AVAILABLE SOLUTIONS:

Comarch EDI (Electronic Data Interchange) – a B2B2G platform based on cloud technology, which enables fast and secure data exchange between a company and its trading partners. Provides streamlined data-flow processes throughout the entire supply chain, regardless of geographic region or business sector. More than 650 million documents processed annually.

Comarch MDM (Master Data Management) – a cloud-based, certified product data catalog (GDSN) that allows you to easily organize, verify and manage product information relevant from the business point of view. It also provides various methods for entering and completing data.

Comarch e-Invoicing – a cloud-based product that complies with the latest legal regulations and streamlines and automates the processes of AP and AR invoicing. By supporting many document formats (including exchange with public administration entities) and distribution channels, it enables the secure and efficient exchange of e-invoices.

Comarch Online Distribution – a modern reporting and communication platform used by manufacturers to improve cooperation with a network of distributors. It automatically creates detailed reports on inventory and resale, using data collected on an ongoing basis from distributor systems.

Comarch e-Invoicing Cloud – a web application, based on the latest cloud technology, for sending structured B2G invoices. It enables intuitive creation of invoices, searching for business partners from the public sector connected to the PEPPOL network, and the ability to send additional files (e.g. attachments). E-invoices created with this solution are in line with the latest EU regulations and adapted to the general national requirements (adaptation of the e-invoice format, e.g. X-Rechnung in Germany).

Comarch ICT

Comarch ICT solutions facilitate control of a company's IT infrastructure in the area of telecommunications, outsourcing or data centers based on global standards and technological partnerships with IT market leaders while ensuring secure data storage.

Comarch ICT products / solutions are designed so that the latest technologies serve business development. In the era of rapid changes in market and customer requirements, an experienced technology partner who will adapt the strategy and provide appropriate services in the field of IT infrastructure, outsourcing, data center and security is a must.

AVAILABLE SOLUTIONS:

Comarch Cloud Infraspace – is a unified and flexible cloud infrastructure with the highest security standards. The platform contains a wide range of tools supporting applications built on the basis of microservices. The cloud solution provided by Comarch was created to help solve problems related to a lack of computing power, enabling performance adjustment with real demand for IT resources. The solution allows client to take full advantage of all the benefits of the cloud, such as lower IT costs, increased company performance and full control over their IT resources

while optimizing the reliability of company data and maximizing flexibility. All this in a secure IT environment located in the Comarch Data Center.

Comarch PowerCloud – is a ready-to-use platform that provides all the benefits of cloud solutions with the support of the expert IBM Power Platform and management services. Utilizing advanced tools, it provides simplified virtualization management and cloud deployment for AIX, IBM and Linux virtual machines.

Comarch IT Services – Due to dynamic changes on the IT infrastructure market, an experienced technology partner is of key importance for business development today. The company's IT environment in the hands of Comarch engineers and analysts is a guarantee of continuity of services tailored to individual customer needs and the required system availability.

Digital (r)evolution is still underway. Joining forces with an experienced technology partner has become a necessity. Putting the IT environment in the hands of Comarch engineers and analysts is a guarantee of the highest efficiency and availability of all systems and applications. As a company with over 25 years of experience, we provide a wide range of IT services designed to meet the needs of our clients – to provide them with appropriate technical and business support.

- **Comarch IT Integration** – services tasked with adapting the client's IT environment to new business and technical requirements. We support clients from the analysis and design stage of a new IT platform, through the delivery of appropriate devices and software, to the implementation phase.
- **IT outsourcing services** – a set of services aimed at optimizing the costs associated with servicing the IT area. The services provide full end-user support (service desk and stationary support), administration of LAN / WAN networks, server infrastructure and security infrastructure, as well as management of IT processes in accordance with good practices and the latest recommendations (e.g. ITIL) and agreed SLA parameters. As part of IT Outsourcing, Comarch provides services related to advanced server, matrix and database systems both remotely and directly at customer locations.
- **Network and Security Operations Center** – a solution constituting a Single Point of Contact with a customer, providing comprehensive technical support in the field of IT infrastructure monitoring and business applications for all types of enterprises and institutions. It provides customers with current knowledge about the availability and performance of individual components of their IT infrastructure, and helps detect interference before it affects the customer's business.
- **Comarch Network Managed Services** – solutions for creating and maintaining data transmission networks (including WAN / LAN / WLAN). CNMS is a comprehensive product in the area of construction or modernization of existing transmission networks, management and administration of these networks as well as their security.
- **Comarch Service Desk** – available 24/7 multi-channel (and multilingual) single point of contact with a team of IT specialists from Comarch. Providing full support to end users, it is responsible for handling requests, reporting (according to the guaranteed level of service agreement) and solving problems related to your IT infrastructure.

Comarch Data Center – advanced technological centers with high availability and TIER III and TIER IV architecture. They are an alternative for clients to expand their own IT infrastructure resources. Comarch SA has 20 Data Centers centers around the world.

- **Hosting Managed Services** – transforms the management of data centers and IT departments, providing the necessary technological flexibility and maximizing application performance and availability. We guarantee the suitable specialists, processes, security and technology in the local cloud and networks to optimize data center services.
- **Comarch PowerHosting** – fully managed services for the IBM Power platform. The comprehensive service in the scope of supplying and maintaining the IBM Power platform is carried out in three models – a virtualized cloud, hosting client equipment in the Comarch Data Center and remote services implemented on existing client equipment at its headquarters.
- **Mainframe Services** – provides fully managed support and services for Mainframe class systems. Provides technical and business assistance in the process of installation, configuration and maintenance of Db2 products. In addition, we provide consultancy services in the field of capacity management, progress tracking and migration to higher versions of data management software.

MORE THAN
90 HOSPITALS
USE OUR SYSTEMS

ABOUT
40 000
USERS A DAY BENEFIT
FROM OUR SYSTEMS

MORE THAN
200
OUTPATIENT CLINICS
USE OUR SOFTWARE

IN 2018, ALMOST
20 000
PATIENTS WERE INCLUDED IN OUR
REMOTE MEDICAL CARE PROJECTS

WE SUPPORT
HEALTHCARE
24/7/365

The e-Health Division

Comarch e-Health offers a comprehensive ecosystem of products, consisting of EHR, Telemedicine, Hospital and Medical AI Clouds. Integration of these platforms ensures coordinated healthcare, and supports patients, their families, and medical personnel. The offer includes, among other things, mobile applications for patients, IT systems for hospitals, and software for health record management in medical facilities, cities, and regions. Comarch e-Health is a provider of innovative remote medical care solutions, based on our own software, devices and medical infrastructure.

EHR CLOUD

Comarch EHR Cloud is a secure data archive created to provide efficient, coordinated healthcare. Information is uploaded from medical facilities (hospital information systems), laboratories, diagnostic points, telemedicine platforms and patient applications. Data are collected in one place, regardless of their origin. Comarch EHR Cloud is an interoperable platform, open to third-party solutions. Free integration is possible by the use of IHE profiles for data transfer and documentation standards based on HL7CDA and PIK HL7CDA.

COMARCH HEALTHNOTE

Comarch HealthNote is an Internet health diary that allows the collection of complete and up to date health history directly in a mobile application. Users can enter vital signs, measurements and test results, monitor their symptoms, scan and view medical documents, and share this information with physicians.

HOSPITAL CLOUD

Comarch Hospital Cloud is a set of systems for the comprehensive management of medical facilities, regardless of their specialization and size - from small offices to multi-hospital complexes. Interoperable, integrated IT systems are tailored for each stage of patient care. These are intuitive tools that coordinate staff activities, increasing work ergonomics. They have been designed for all employees of medical facilities, taking their roles, duties, and entitlements in the organization into account. All data are stored in a secure Comarch cloud, so there is no risk of loss or unauthorized access.

COMARCH MEDNOTE

A modern, intuitive application for managing any doctor's office. It organizes medical records, provides necessary information about the patients, and minimizes the time taken by formalities and paperwork. The system allows for, among others, creating prescriptions, referrals, and other types of medical documents.

COMARCH OPTIMED NXT

An advanced IT system for medical facility management (HIS), allowing holistic organization. It has six basic modules and more than 30 additional modules, covering all specializations. It provides integration with healthcare providers, services and peripheral systems. The system can be operated on tablets, which allows access to information about the patients directly at their beds. Comarch Optimed NXT is dedicated to all medical facilities, regardless of the structure and type of services provided. It supports, among others, the management of electronic health records, patient visits, issuing prescriptions, and referrals. It is also a functional tool for facility managers.

COMARCH EHR

A system for managing electronic health records in all types of medical entities, as well as at the regional level. Central access to documents from different systems enables the efficient collection and processing of medical data. The solution allows the exchange of information between institutions, which speeds up the diagnosis process and avoids redundant testing. It is an interoperable tool in accordance with IHE, HLF CDA, and XDS.b standards, allowing integration with external solutions.

COMARCH CONCIERGE

An online patient portal that provides multi-channel communication and continuity of medical care. Comarch Concierge facilitates the exchange of information between medical facilities, physicians, and patients. It enables remote registration, ordering prescriptions, receiving test results, and medical consultations.

TELEMEDICINE CLOUD

Comarch Telemedicine Cloud is an open cloud platform that enables remote monitoring of patients. All information from systems, applications, and measuring devices is transferred to the Comarch e-Care platform, then analyzed and made available to medical personnel. Thus, the process of diagnosis, treatment, and prophylaxis is optimized and coordinated. What is more, some services are transferred outside medical facilities. Comarch Telemedicine Cloud is a flexible and scalable solution that allows existing elements to be modified and new devices, procedures, and operation schemes to be added.

COMARCH E-CARE PLATFORM

The basis of Telemedicine Cloud is the Comarch e-Care platform, which receives and processes medical data. Analysis is based on artificial intelligence (AI) learning algorithms, which immediately recognize and mark irregularities even among an immense amount of information. AI, in combination with the developed procedures, support medical staff in providing effective care. The Comarch e-Care platform also enables online consultations and remote descriptions of test results, significantly increasing access to high-quality medical services.

DIAGNOSTIC POINTS

Comarch Diagnostic Points are stations equipped with measuring devices (blood pressure meters, event ECG recorder, thermometer, scales and pulse oximeter), where patients can perform measurements of vital signs outside medical facilities. Measurements are taken independently by the patient or with the support of medical staff, and then evaluated by physicians through a telemedicine platform. Comarch Diagnostic Points are also available in the form of a mobile suitcase, facilitating the transport of the devices, and monitoring patients' health at, for example, nursing homes or on board aircraft.

REMOTE CARDIAC CARE

Remote Cardiac Care enables the detection of abnormalities such as tachycardia, bradycardia, ventricular tachycardia, ventricular fibrillation, flutter, and more. It allows long-term diagnostics outside the hospital environment. Remote Cardiac Care can be implemented for hospitalized patients, and in overseeing the process of home rehabilitation.

REMOTE PULMONARY CARE

Remote Pulmonary Care allows monitoring of patients suffering from asthma, COPD, and other pulmonary disorders. Regular spirometry, pulse oximetry and peak expiratory flow measurements are taken. These, along with constant specialist control, increase patient safety and comfort.

REMOTE SPECIALIST AND SENIOR CARE

Remote Specialist Care allows patients to consult specialists about their health condition. Measurements of vital signs can be performed by patients, their carers or medical staff. Based on the results, the patient can consult with the attending physician remotely or arrange for a home visit. The physician can also call an ambulance if required.

TELEMEDICAL DEVICES

Comarch has its own R&D center, where innovative measuring devices are designed, tested, and manufactured. Among them are portable heart rate recorders (Comarch PMA and CardioVest). New telemedical solutions are being constantly developed.

REMOTE MEDICAL CARE CENTER

Comarch Remote Medical Care Center, where medical staff monitor patients' health 24/7, plays a pivotal role in our telemedicine offer. Remote Medical Care Center:

- Brings together qualified medical personnel, including paramedics, midwives, physicians of various specialties, dietitians and physiotherapists
- Monitors patients' health around the clock, including weekends and holidays
- Intervenes in cases of automatically detected anomalies, parameterized individually for each patient (exceeded norms and worrying measurements), as well as in the event that a patient makes a call for intervention
- Uses medical procedures that allow faster and more targeted intervention

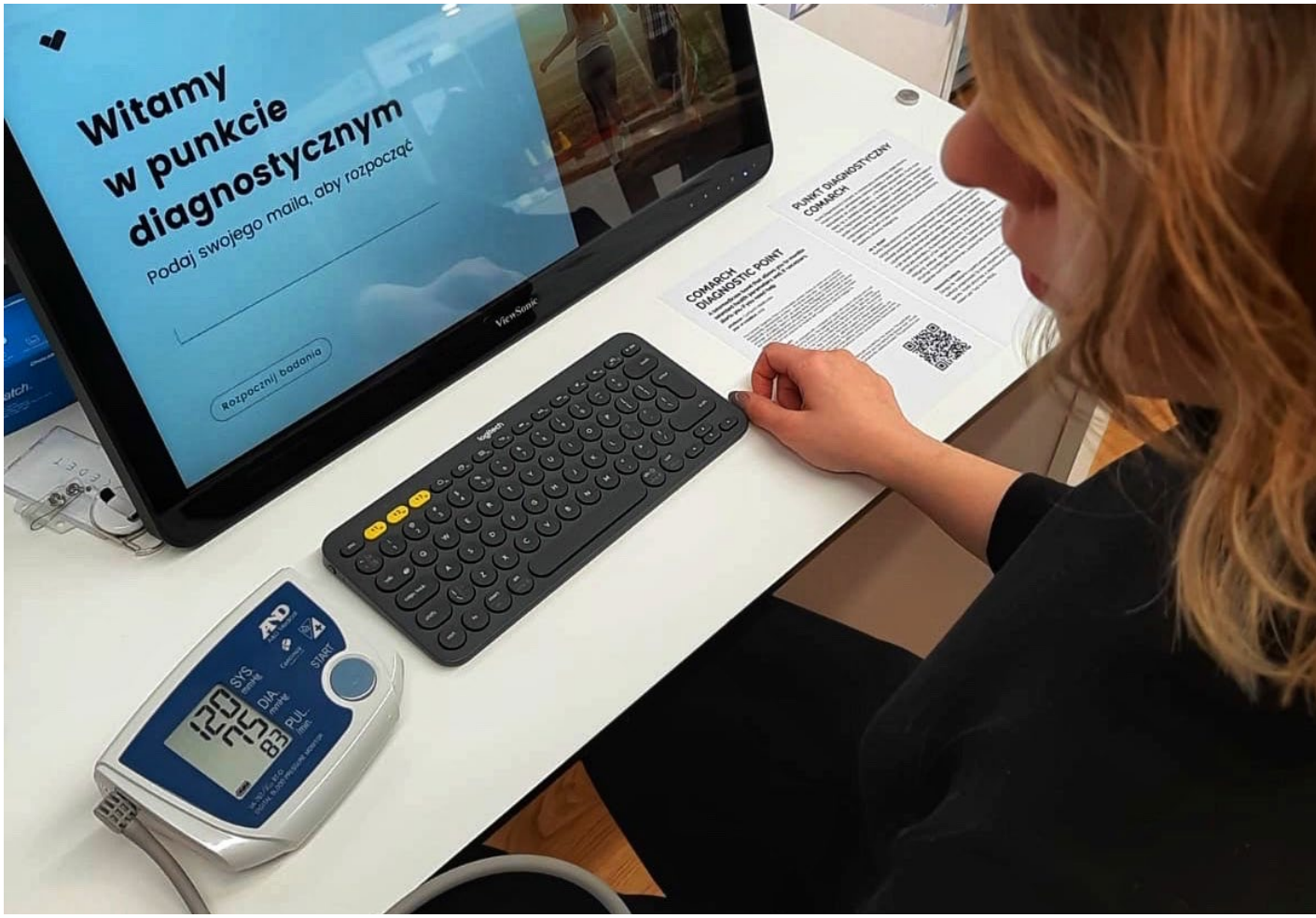
Comarch Healthcare S.A. has implemented and certified ISO 13485 quality management system for medical devices. The Comarch e-Care platform is a class IIa medical device certified for compliance with Directive 93/42/EEC.

MEDICAL AI CLOUD

Comarch Medical AI Cloud is a set of solutions based on big data and machine learning algorithms that enhance our products with artificial intelligence. Machine learning and artificial intelligence process an unlimited amount of information, looking for correlations and irregularities. They automate processes and structure medical knowledge, thus reducing costs and increasing the efficiency of monitoring, diagnostics, and treatment. Comarch Medical AI Cloud has a wide range of application possibilities, from electronic medical records to ECG signal analysis.

iMed24 MEDICAL CENTER

As a part of Comarch Healthcare S.A., this medical facility is a natural environment for the development of services dedicated to the health sector. iMed24 was the first medical center in Lesser Poland to offer remote medical care (the number of people covered by those services exceeded 6 000). The facility employs approximately 100 physicians, from over 30 specializations.



The iMed24 Medical Center

MORE THAN
7 500
COMPANIES USE BACKUP SERVICES
AND DATA EXCHANGE IN COMARCH IBARD.
THESE COMPANIES ESTABLISHED **190,000** PAID ACCOUNTS

MORE THAN
88 000
CLIENTS USE COMARCH ERP XT

MORE THAN
2 200
CLIENTS BUILT ONLINE STORES BASED ON
COMARCH E-SHOP

MORE THAN
2 500
ACCOUNTANCY OFFICES IN THE IKSIEGOWOSC24 SOCIETY

MORE THAN
26 600
COMPANIES USE PAID SOLUTIONS
COMARCH CLOUD

MORE THAN
100
IMPLEMENTED WITH SUCCESS
BUSINESS INTELLIGENCE DEDICATED PROJECTS

300 THOUSAND
MONTHLY DELIVERED REPORTS
UNDER BUSINESS INTELLIGENCE

ERP Division

Comarch ERP Enterprise – a new generation ERP system for active enterprises operating on international markets using the Internet. It operates an ergonomic user interface, an in-built WorkFlow module and it is optimized to best reflect business processes and the organization's structure. The system is also available in the service model (SaaS).

Comarch ERP XL – for years the most frequently selected ERP class system in Poland, used by over 5,500 companies from various sectors; annually, 400 companies decide to implement it to manage their core business processes. The solution meets specific requirements of manufacturing companies as well as trading companies and those involved in services. The system is also available in the service model (SaaS).

Comarch ERP Optima – a program for micro, small and medium-sized enterprises supporting sales, management, accounting, and HR and payroll. Along with the additional Accountancy Office module and the portal of Accounting Office Communities iKsięgowość24, Comarch ERP Optima is a tool to operate and promote accountancy offices and tax advisory firms. The program is available in the service model (SaaS).

Comarch ERP XT – an innovative application for online invoicing, warehouse operating and keeping simplified and full accounting made available over a web browser or mobile applications for Android and iOS. The solution is dedicated to micro and small businesses in Poland and Germany. The core advantages are the following: simplicity of use, full process automation, a possibility of integration with an accountancy office, Comarch e-Store, and Comarch BI Point. The application is provided with a POS module for fast support of retail sales. The program is available solely in the service model (SaaS).

Comarch OCR – a device for optical character recognition from scanned invoices, and then for transferring recognised data to accounting software, e.g. VAT records.

Comarch Retail – this is a standalone system to carry on retail sales in a full omnichannel model. It supports effective and comprehensive management of retail networks, starting from the head office through the store's back office to points of sale (POS).

Comarch Mobile – is a solution dedicated to management teams and mobile staff, e.g. trade representatives, maintenance technicians, or sales assistants, who perform their tasks outside offices, using their smartphones or tablets. The packet is composed of: Comarch Mobile Management, Comarch Mobile Sales, Comarch Mobile Service, and Comarch Mobile Procurement. The individual applications in the Comarch Mobile packet provide for management of mobile staff and their sales, for monitoring of results of their performance and current location of staff on a map and the routes registered by them. They provide for effective vanselling and preselling directly during visits paid to customers, as well as registration of offers and purchase orders with suppliers, e.g. at specialised fairs. Additionally, Comarch Mobile provides for execution of maintenance orders, e.g. during inspections, assembly, or repair of devices.

Comarch WMS – a solution providing for comprehensive handling of high-storage warehouses. The packet is composed of: Comarch WMS Management and Comarch WMS Warehouse Manager. Comarch WMS Management is a tool addressed to warehouse managers to control storage operations and manage flows of goods within warehouses. Comarch WMS Warehouse enhances the performance of staff operations directly in warehouses by applying data collectors operating online.

Comarch Warehouse Manager – application used for mobile support of simple warehouse processes. With it the user may execute tasks of goods acceptance and release from the warehouse, record movements of goods among warehouses and perform stock-taking.

Comarch Business Intelligence – a system based on data warehouse technology, addressed to large and medium-sized enterprises and international corporations. The solution supports decision processes and reporting tasks. It is destined for the following industries: financial and insurance institutions, trade, services, and manufacturing.

Comarch BI Point – a web business intelligence reporting tool that supports generation, exploration, and provision of comprehensive reports and interactive managerial cockpits. An integrated repository and an embedded rights management mechanism allows supporting management of users' access to the selected reports and individual data models. As a result of its responsiveness, the application can also be used on mobile devices. With its intuitive interface and many interesting forms of data visualization, even less experienced users can develop attractive dashboards with this application. The tool is used by all types

of enterprises or varying size. It is addressed primarily to analysts, controllers, and managers.

Comarch MyPoint – an analytical tool offering quick and transparent verification of users' work who use Comarch ERP systems. It allows monitoring working time in the system, effectiveness at specific times and average productivity of operators.

Comarch mPOS – Comarch Mobile mPOS is an application for sellers and sales assistants in brick-and-mortar stores and in pop-up stores, too. It offers support for the store's back office allowing recording receipts and issues on a mobile device, and also execution of sales directly on a store's floor without sending a customer back to the check-out.

Comarch IBARD – is an easy to use, multi-functional tool that can be used for instance to perform and schedule back-ups of file, directories, and databases from PCs, laptops, and servers, to perform backups of mobile devices, to transfer and safely store data in cloud. The service ensures uninterrupted 24h access to data from any device and place. Comarch IBARD is available in five languages (Polish, English, German, French, and Spanish). The service is universal and may be used by both small and medium-sized enterprises, as well as service providers like telecoms that offer services to their customers under their own brands (White Label model).

Comarch TNA (Time and Attendance) – is a modern system to record and manage working time, business trips, annual leaves, and other processes focused on company employees. It is a tool that facilitates manual recording of hours of remote working both on a web and mobile application. With it the employer knows what time an employee has started and ended their work, and also has an option of controlling an employee's availability in real time. In turn, an employee has a statement and evidence of hours of work that have been agreed with a superiors.

Comarch CSM Comarch Cloud Service Management – a complex platform to sell and manage cloud services that supports providers in offering services, applications, infrastructure, and other cloud products. Comarch CSM collects all information on orders, prices, service validity, and provides for contact with customers. It can be integrated with any service via third-party API.

Comarch SSO (Single Sign-On) – a secure single sign-on system – logging into one service, other services can be used without repeating access data. Comarch SSO provides full user security when logging to a multi-service environment.

Comarch Hosting – an integrated comprehensive solution tailored to customers' individual needs which consists in renting a hardware platform located in the Comarch Data Center along with the required licences of external providers (e.g. Microsoft). Additionally, the offer covers a number of services relating to management and administration of the hardware platform and software. The solution is characterised by flexible management of resources that are scaled up along with the customer's growing needs.

iKsięgowość24 – accounting and booking services for enterprises, used by over 2,600 accountancy offices operating Comarch ERP Optima.

Comarch B2B – a B2B platform that among others provides for ordering of products online. A logged-in business partner has access to a history of their orders, payments, or submitted complaints. Selected customers will use a web browser to have a preview of our always updated commercial offer that may be individually tailored.

Comarch e-Store – online store software for small and medium-sized enterprises fully integrated with Comarch ERP management systems, price comparison and Allegro and eBay auction platforms, as well online payment platforms. It facilitates shopping using a web browser and mobile applications running on iOS and Android.

Wszystko.pl – is a trading platform supporting e-sales directly from invoicing and warehousing systems operated by enterprises. Products may be offered by any company operating Comarch ERP management software.

Comarch HRM – an application to be used by staff themselves, operated in a web browser or as a mobile application for employees and their superiors. The key task of the application is to provide ongoing access to data on daily activities relating to a formal aspect of work in an enterprise – working time and a work plan and holidays/leave, business trips/secondments, or other absences. In addition, the tool also provides support for such aspects of the employee's functioning in a company as training records, or an appraisal system.

Comarch e-Reports – a program to generate electronic financial statements, which, among others, are compliant with the Accounting Act, characterised by abundant functionalities (with electronic signature in the application), easy to handle and that can be integrated with ERP systems. The program may be used in a desktop version installed on a computer and in cloud – in a subscription model from any computer with Internet access. The application generates structures of financial statements compliant with the requirements of the Ministry of Finance.

Comarch ESEF – is an application facilitating generation of annual financial reports in an ESEF tool for the generation of financial reports/statements compliant with the European Single Electronic Format (ESEF) that defines a form in which annual financial statements of companies listed on the EU regulated markets will be created.

Comarch Software and Beratung AG systems are a line of ERP and financial and accounting systems for small and medium-sized enterprises in the German language market:

- **Comarch Financials Enterprise** – a new generation financial and accounting system, developed as a supplement to Comarch ERP Enterprise, supporting comprehensive financial management in modern enterprises. The system is also available in the service model (SaaS).
- **Comarch ERP Altum** – the first intelligent ERP platform, comprehensively supporting all key business processes in medium-sized and large trading, service companies and retail networks. It is also addressed to holding companies. The solution is suited to the Polish market and foreign markets. The system is also available in the service model (SaaS).
- **Comarch ERP Suite** – a classic ERP system, offering tested and sector-specific functional solutions for a broad range of users.
- **Comarch Financials Suite** – an expanded, certified financial and accounting system, containing modules for controlling and electronic document archiving, providing for operation in an international environment, also covering various accounting standards (US GAAP, IFRS).
- **Comarch Financials Schilling** – a classic financial and accounting system.
- **Comarch Financials DKS** – a financial and accounting system developed for Austrian customers, provided along with a controlling and HR module,
- **Comarch eBilanz** – an application for electronic transfer of financial statements to public authorities in Germany, operating with various financial and accounting systems.
- **Comarch eRechnung** – an application to handle e-invoices in Germany in compliance with the applicable regulations, operating with German Comarch financial and accounting systems.

Comarch Innovation Space, Kraków

25 YEARS
OF EXPERIENCE

MORE THAN
10 000
CLIENTS EACH YEAR

MORE THAN
300
TRAINING PROGRAMS

90
CERTIFIED INSTRUCTORS

COURSES IN
8
OF THE BIGGEST
TRAINING CENTERS

Training Center

ABOUT THE CENTER:

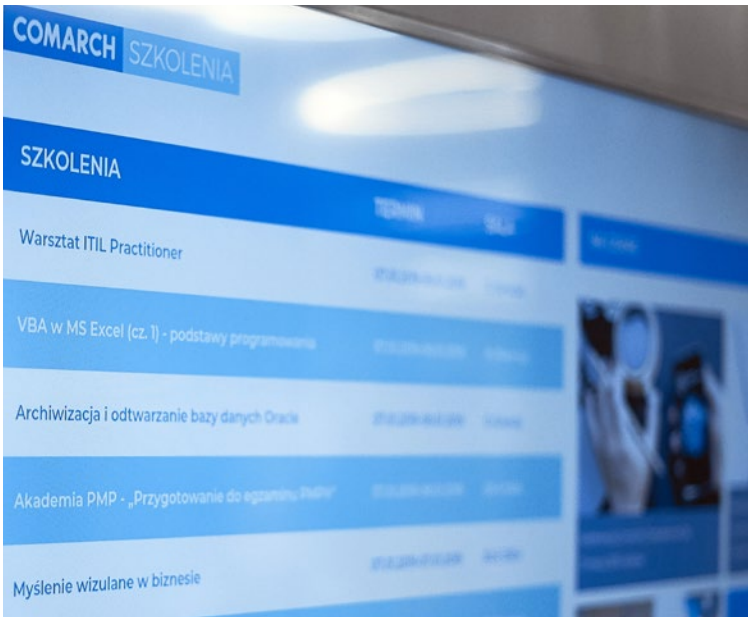
- Open and "tailor-made" business and IT training
- Microsoft Authorized Center
- Mobile training rooms

Training is carried out in two forms:

1. Stationary courses: in the computer lab.
2. Remote courses: distance learning training courses giving the opportunity to participate in the course from anywhere the participant uses a computer with internet access, a microphone and a camera. Dates of training carried out in this formula are marked with the "REMOTE" icon in the course search engine. Distance learning courses are also carried out in closed groups. When building the offer, the analysis of data obtained from own, systematically conducted training evaluation and analysis of publicly available sources of information on the situation on the education market is used.

THE OFFER:

- programming (Java, .NET, PL/SQL, XML, HTML, VBA, PHP),
- application design (UML),
- operating systems (Windows, Linux),
- relational databases (Oracle, Microsoft, MySQL),
- office packages (Microsoft Office),
- computer graphics,
- network service and configuration,
- management support applications,
- systems manufactured by Comarch,
- project management,
- financial and accounting training,
- internet marketing training,
- interpersonal training.



GUARANTEE OF QUALITY:

- ISO 9001: 2000 quality certificate for training services.

This means that the process of preparing, conducting and evaluating training is subject to rigorous procedures, and our clients can expect high standards.

- Microsoft Authorized Center.

The MSUES quality mark is awarded by the Małopolska Region - Voivodship Labor Office in Kraków as part of the Center for the Quality of Education in Lesser Poland.

- Quality mark of Lesser Poland Education and Training Standards.

The center is also an authorized Pearson VUE test center. As a result, it conducts examinations for professional titles authorized by the largest IT companies, including Oracle, Microsoft, Novell, IBM, Lotus and Cisco.

7

Sustainable Business

Statement of the Management Board of Comarch SA to the Company's Stakeholders on Non-financial Reporting

Dear Stakeholders,

In view of the size of its enterprise and the scope of its operations, the Comarch Group exerts a major impact on its environment, especially in economic and social terms. Sustainable development has been one of the key foundations of the Company's strategy from the very beginning and, in the opinion of the Group's Management Board, it has made a significant contribution to the enterprises' market success.

This Non-financial Data Report of the Comarch Group is the third consecutive statement of this kind that we have published, and the second since such an obligation came into effect. Irrespective of formal requirements, Comarch has for years applied good practice in non-financial reporting (among others through publication of relevant information online and in annual reports). This is because of both an internal need to communicate with stakeholders, and compliance with recommendations of corporate governance for listed companies and provisions of the Accounting Act.

Because of the business profile of its enterprise, key issues for Comarch relating to sustainable development include social ones relating to employment and human rights and matters concerning diversity management, especially with regard to management and supervisory authorities. In the opinion of the Management Board of Comarch SA compliance with relevant standards and reporting on them is required for proper management of human resources, and thus a key element to ensure the possibility of long-term growth and maintain the enterprise's competitive advantage.

Key issues relating to sustainable development and non-financial reporting include: management quality, continuous improvement, the significant role of "soft" incentives, promotion of physical and cultural activities among employees, increasing awareness of the management staff about matters relating to diversity, and also continued improvement of management procedures. The Comarch Group has constantly pursued activities aimed at protection of the natural environment protection, an example of which in 2018 was the implementation of Energy Management System ISO 50001 and promotion of pro-ecological attitudes among the staff. The Group has also been supporting various initiatives by local communities and numerous charity activities.

The Management Board of Comarch SA stresses that the Non-financial Data Report for 2019 covers non-financial information concerning Comarch SA and the Comarch Group. The Report has been prepared in compliance with the non-financial reporting requirements included in the Accounting Act of 29 September 1994, guidelines of the European Commission on non-financial reporting and pursuant to national Non-Financial Information Standards (SIN) concerning sustainable development reports. In terms of non-financial reporting, the major challenges and goals of the organization for the next year include improvement of the organization's internal processes allowing it to achieve the target quality and completeness of reporting, and also to reduce labor intensity.

Management Board of Comarch SA

Integrated Management System

Comarch particularly stresses the quality of offered products and provided services. Actions enhancing such value are undertaken to satisfy increasing and very specific expectations of customers operating on the domestic and international market. Through continuous work on improvement and development of the Integrated Management System, Comarch has obtained:

- the Certificate of the Integrated Management System compliant with the requirements of PN-EN ISO 9001:2015-10 Quality Management Systems, PN-EN ISO 14001:2015-09 Environmental Management Systems, PN-N-18001:2004 Occupational Health and Safety Management Systems, PN-ISO/IEC 27001:2014-12 Information Security Management Systems,
- the Certificate of the Energy Management System compliance with the requirements of PN-EN ISO 50001:2012 Energy Management Systems,
- the Certificate of the Internal Control System compliant with the requirements of the ICS Criteria,
- the Certificates confirming that the Quality Management System satisfies the requirements of AQAP 2110:2016 NATO quality assurance requirements for design, development, and production and AQAP 2210:2015 NATO supplementary software quality assurance requirements to AQAP 2110,
- the Certificate confirming that the Quality Management System for Medical Devices satisfies the requirements of EN-ISO 13485:2016 Medical devices. Quality management systems. Requirements for the purposes of legal regulations,
- The Certificates of the Integrated Management System, the Energy Management System, and the Internal Control System have been issued by the Polish Center for Testing and Certification (PCBC). The Quality Certification Center (CCJ) of the Military University of Technology is a certification body for AQAP in Comarch. The Certificates of the Quality Management System for Medical Devices have been issued by TÜV Rheinland Polska Sp. z o.o.

Within the Integrated Management System implemented in the Comarch Group, the following policies have been approved by the Management Board: the Integrated Management System Policy, the Internal Control System Policy, the Policy of Sustainable Development for Suppliers, the Information Security Policy, the Privacy Policy, the Policy of Respecting Third Party Intellectual Property, the Code of Conduct.

Comarch Group Code of Conduct

I. HIGHEST ETHICAL STANDARDS

The Comarch Group is aware of the importance of abiding by the regulations, legal provisions, working procedures, and ethical standards set by the Company. As a leader of the IT market in Central Europe, Comarch is committed to promoting ethics and to striving to be among the world leaders in fostering corporate responsibility, respect for human rights and the environmental protection. The achievement of this goal is a joint responsibility of all Comarch employees.

The present Code of Conduct has been approved by the Management Board of the Comarch Group, who is committed to regularly assess the compliance of the rules provided in the Code and to update its content further to the received feedback.

The Code reflects the ethical values that Comarch upholds and intends to abide by. For the employees of the Comarch Group, it constitutes a standard of conduct towards fellow-employees, as well as superiors, customers, partners, and local communities when doing business and also when involved in business-related activities.

The present Code of Conduct has been circulated and promoted by actions pursued by the PR Section at Comarch SA.

II. MISSION OF THE COMARCH GROUP

Responsibility for the Success of Our Customers

Comarch is a global supplier of IT business solutions, which comprehensively support customer relationships and optimise operational activity and business processes. The Company's in-depth knowledge of the industry is its main advantage, which we transfer to our customers in the form of integrated information technology system. Ever since its establishment Comarch has placed great emphasis on the delivery of applications and professional services of the highest quality in such a way as to ensure that they can be optimally applied in the customers' day to day activities. In this respect, Comarch has attained a strong position as a supplier of complete information technology solutions. The goal of the Comarch Group is to deliver innovative information technology solutions to all key sectors of the economy. There are over 5,500 experienced professionals and consultants working for our customers all over the world. Based on state-of-the art technologies, knowledge about market trends, and sense of responsibility, thus far we have successfully completed thousands of complex implementations in over 60 countries on six continents. Several hundred thousand customers in Poland and abroad use Comarch software. We are proud of the fact that many of our international customers and analysts consider Comarch to be an excellent example of a thriving European IT company from Central Europe that has succeeded in conquering global markets. The Company's product development strategy is supported by capital expenditure for research and development the value of which each year amounts to about a dozen per cent of the revenues from sales. Focusing its efforts on spreading the knowledge, Comarch organizes research and development programs based on collaboration with consultants, analysts, and customers. An idea behind those programs is to disseminate the knowledge and verify our vision of developing new technologies, while taking into consideration market trends. Comarch's strategy is based on using the diversified experience and knowledge of its employees to deliver a full range of information technology services – from consulting through implementations of individual solutions, to outsourcing.

III. VALUES THAT THE COMARCH GROUP UPHOLDS

Both in internal, as well as external relations with its stakeholders, Comarch upholds universal values by fostering honesty, diligence and conscientiousness in performing the entrusted tasks, quality and innovation as individual goals set by the employees themselves, open cooperation for the common, building and maintaining trust among associates and business partners, and also respect, understanding and assistance, regardless of a position held or diversity of opinions.

IV. MAINTENANCE OF THE HIGHEST STANDARDS OF WORK

The Comarch Group respects and complies with international standards regarding human rights and also international labor standards perceiving them as fundamental and universal. It respects and implements the provisions of labor law and occupational health and safety regulations, and also ensures that employees are always treated in accordance with the applicable requirements.

Recognizing the employees' right of free association Comarch engages in a dialog with an elected council of employee representatives.

It complies with the prohibition of discrimination based on: race, social status, ethnicity, religion, impairment, disability, sex, sexual orientation, political affiliation or membership, age, or marital status.

It guarantees the freedom of opinion, conscience, and religion, and the freedom of belief and speech. The Comarch Group promotes teamwork that is free from any prejudice and consciously draws on strength and values derived from the diversity of its employees. In return, the Group makes every effort to ensure that its employees receive fair and regularly paid remuneration, are offered development possibilities, interesting and ambitious challenges and very good conditions of work.

The Comarch Group protects its employees' copyright and, with regard to international standards, respects their intellectual property as a personal asset that should be free from any abuse.

The Group complies with the prohibition of child labour by persons below 16 years of age, forced labor, corporal punishment, mental and physical coercion and insult, and also the prohibition of sexual harassment, and it recognizes the place of work as being free from such practices.

V. LACK OF TOLERANCE FOR CORRUPTION, FAIR COMPETITION

The Comarch Group observes the rules of fair competition, and prevents bribery, illegal payments, and corruption.

It is a duty of the employees of the Comarch Group to avoid any activity leading to a conflict of interests, namely offering and receiving gifts as part of business and commercial activities. It is not forbidden to give or propose any bribes or illegal benefits to public officials, or representatives of political parties in order to conclude or maintain transactions. Comarch employees may not derive any benefits or assist in gaining benefits under circumstances that may arise as a result of using the corporate information or their position in the Group.

VI. PARTNERSHIP IN BUSINESS

Customer Relationships

The fundamental principles of the Comarch Group include: responsibility for customers' success, as well as respect and openness to their needs. Comarch provides its customers with innovative highest quality IT products that are a result of exceptional skills, experience, and competencies of its employees, cooperation with leading research and scientific centres in Poland and abroad. It makes every effort to ensure that delivered IT solutions are compliant with the highest standards and customers' expectations.

Contacts with Public Administration

Contacts with public sector customers (central and local government, municipal and communal companies, State Treasury companies, public health care centres) are governed by the provisions of the Act on Public Procurement Law of 29 January 2004 (Journal of Laws of 2017, item 1579, as amended). Those provisions govern the way of communicating with an awarding entity during tender procedures, the scope of activities that may be pursued by parties to tender procedures, and also regulate available legal remedies.

Security in International Business

In order to ensure control and security of trading in products, technologies, and services of strategic importance for national security, the Comarch Group has implemented the Internal Control System, which guarantees that international and national legal standards and requirements are applied.

VII. INTEGRATED MANAGEMENT SYSTEM

The Comarch Group particularly stresses the quality of the products it offers and the services it provides. Actions enhancing such value are undertaken to satisfy increasing and very specific expectations of customers operating on the domestic and international market.

The Integrated Management System ensures the correct and system-managed execution of all business processes that affect the quality of products and services. Effective operation of the system guarantees that all processes are monitored, improved, and adjusted to ever changing market conditions and technologies, and customer requirements. The high quality of products and services is supported by continued care about the environment and safety of the employees and suppliers.

Compliance with the rules of the systems implemented at Comarch contributes to an increase of trust between the Company and its customers and suppliers. In this way Comarch's corporate image is reinforced in the eyes of all parties interested in the outcome of the Company's operations within such areas as the quality of products and services, the environmental impact, occupational safety and health, and also information and data security, and control of trading in dual-use goods.

VIII. CORPORATE GOVERNANCE – OBSERVING THE PRINCIPLES

Corporate governance is a set of rules of conduct addressed to both corporate authorities and members of those authorities, and also to majority and minority shareholders. The rules of corporate governance apply to broadly understood management of the Company. Comarch SA is subject to a new set of the corporate governance rules under the name of the Best Practice of GPW Listed Companies 2016 adopted by the Board of the Warsaw Stock Exchange (GPW) in 2015.

Following the Best Practice of GPW Listed Companies 2016, as a listed company Comarch operates pursuant to

the rule of "comply or explain", the mechanism of which requires a company to provide the market with an unambiguous explanation of default on a good practice.

All recommendations and rules included in the Code of the Best Practice of GPW Listed Companies 2016 are subject to annual reports on compliance with the corporate governance rules that are drafted by the Company. The Management Board of Comarch SA has published a report on the application of the rules and recommendations by the Company that are derived from a new set of the corporate governance rules that have been posted on the Company's website. Pursuant to the published report, the Company does not apply Recommendation IV.R.2 and detailed rule VI.Z.4.

Provisions of the set of the corporate governance rules that the issuer has not observed and explanation of the reasons thereof.

IX. ECOLOGICAL AWARENESS

The Comarch Group complies with the legal provisions governing the environmental protection. Comarch knowingly limits the impact of its operations on the natural environment, minimising the consumption of natural resources and the production of waste as a result of its ongoing operations.

Furthermore, the Company also promotes an ecological lifestyle among its employees by running campaigns that encourage active participation in environmental protection.

X. CORPORATE SOCIAL RESPONSIBILITY

Ever since its establishment, the Comarch Group has been deeply involved in social activities, propagating the idea of developing a broad social platform to promote sports and most advanced IT technologies.

As concerns its activities of promoting and supporting sports, the principal object of the Comarch Group's social commitment is MKS Cracovia SSA, which is the oldest sports club in Kraków that participates in professional leagues and competitions in several sports disciplines, the most important of which are soccer and ice hockey. The Comarch Group is also broadly engaged in promoting sports among young people.

The Comarch Group provides its employees with permanent and free access to the Recreation Center located in one of the corporate buildings, thus encouraging them and their families to follow active lifestyles.

Another idea widely promoted by the Comarch Group is the popularization of knowledge concerning the most recent IT technologies. Every year a group of approximately 300 students of IT faculties participate in a three-month summer internship program at Comarch which enables young people from all over the world to become familiar with cutting-edge IT solutions for business. The Comarch Group also supports Polish science by taking part in and co-financing scientific conferences.

The third component of the Comarch Group's corporate responsibility is sponsoring of cultural events. In that respect, support provided by the Group includes, but is not limited to festivals, concerts, or other socially significant events.

XI. IMPLEMENTATION AND ENFORCEMENT OF THE CODE

All ambiguities and issues related to the interpretation of the Code of Conduct shall be submitted to the Ethics Ombudsman appointed by the Management Board. The Comarch employees are encouraged to report any remarks or modification regarding the content of the Code of Conduct.

The Ethics Ombudsman is responsible for:

- supporting employees in compliance with the Code of Conduct,
- promoting the Code within the Company,
- updating the Code,
- taking appropriate measures in current issues that the employees may have as regards ethics of business activities pursued by them.

DECLARATION OF POLISH BUSINESS FOR SUSTAINABLE DEVELOPMENT

In May 2014, Comarch signed the *Declaration of Polish Business for Sustainable Development*, and thus gave made assurance, that it will actively work towards the development goals set out in the Vision 2050 of Sustainable Development for Polish Business. The Declaration comprises ten assumptions that, if implemented, will enable us in the future to live with dignity and wisely benefit from the scarce resources of our planet.

Signing of the Declaration coincided with the Inauguration of the third stage of the Vision 2050 of Sustainable Development for Polish Business Project. The participants of the meeting were acquainted with the proposals planned for the third stage of Vision 2050. The signatories of the Declaration have an opportunity to engage in the following working groups: social innovation, sustainable production and consumption, renewable energy sources, greening the new perspective and small and medium enterprises.

The Vision 2050 project refers to the international initiative taken by the World Business Council for Sustainable Development (WBCSD). Vision 2050 is a joint project of the Ministry of Economy, the Ministryof the Environment, the Responsible Business Forum, and consulting company PwC. The aim of the undertaken activities is to integrate business in Poland around the idea of sustainable development, to indicate to business representatives the importance of challenges in this area and to strengthen the administration and business dialogue to develop specific solutions to support the implementation of Poland's development goals. Comarch has been cooperating with the organization engaged in recovering electrical and electronic equipment for several years.

By signing the *Declaration of Polish Business for Sustainable Development* Comarch has committed itself to:

- Base its activities on broad cooperation, innovative thinking, and education of both own employees and society,
- Conduct its business activity based on trust and dialog,
- Cooperate with academic centers and schools in the field of education of future employees,
- Create conditions and development opportunities for its employees,
- Promote and support the implementation of new technological solutions,
- Develop infrastructure and carry out investments based on dialog and in compliance
- with the rules of sustainable development,
- Take actions to reduce its adverse impact on the environment,
- Introduce a solution that reduces energy consumption, both in the implementation of new technological solutions, process optimization and education,
- Conduct a dialog with the government and share its experiences on issues important to entrepreneurs and the economy,
- Raise the level of ethics in business, including in relations with all groups of stakeholders.

Risk concerning the above Declaration involves failure to comply with its assumptions. Comarch is successively striving to meet them through effective implementation of processes within the Integrated Management Systemand implementation of all the above-described policies.

Declaration of Polish Businesses for Sustainable Development

Aware of the challenges faced by the Polish economy and fully recognizing the need to pursue a path of sustainable development, we, the undersigned, hereby commit:

I. To running our operations based on extensive cooperation, innovative thinking and education of our own employees and society at large.
II. To carrying out business based on trust and dialog.
III. To cooperating with academic institutions and schools iin the education of future employees.
IV. To creating conditions and opportunities for the professional advancement of employees.
V. To promoting the implementation of new technologies and their support.
VI. To building infrastructure and running projects based on dialog and in line with principles of sustainable development.
VII. To taking steps to reduce our adverse impact on the environment.
VIII. To introducing solutions designed to reduce energy consumption by deploying new technologies, streamlining processes and education.
IX. To communicating with the government and sharing our experience in areas relevant to business and economy.
X. To enhancing ethical standards of business conduct, including relations with all groups of stakeholders.

Declaration of Polish Businesses for Sustainable Development

HUMAN RIGHTS

The Comarch Group respects and complies with national standards of human rights and international labor standards, treating them as fundamental and universal. It respects and implements the provisions of labor law and occupational health and safety regulations, and also ensures that employees are always treated in accordance with the applicable requirements.

Recognizing the employees' right of free association, Comarch undertakes dialogue with the Employees' Representatives. Comarch has not identified cases in which there may be a breach of the rules or there may be a serious risk of default on the right of association and collective bargaining both within the organization and among suppliers.

Comarch complies with the prohibition of discrimination because of: race, social status, ethnic origin, religion, impairment, disability, sex, sexual orientation, political union or membership, age, or marital status.

It guarantees the freedom of opinion, conscience, and religion, and the freedom of belief and speech. The Comarch Group promotes teamwork that is free from any prejudice and consciously draws on strength and values derived from the diversity of its employees. In return, the Group makes every effort to ensure that its employees receive fair and regularly paid remuneration, are offered development possibilities, interesting and ambitious challenges and very good conditions of work.

The Comarch Group protects its employees' copyright and, with regard to international standards, respects their intellectual property as a personal asset that should be free from any abuse.

The Group complies with the prohibition of child labor by persons below 16 years of age, forced labour, corporal punishment, mental and physical coercion and insult, and also the prohibition of sexual harassment, and it recognises the place of work as being free from such practices.

Both Comarch SA, as well as the Comarch Group identified no cases of violation of human rights, child labor, or forced labor, including no such cases at subcontractors. No complaints about respect for human rights were received.

Employees of the Comarch Group companies are trained in the dimension of respect for human rights and in the ethical area during *first step* training organized by the employer during their first days of work at Comarch.

Internal Control System Policy

Broadly understood technological development and rapidly growing competition put new requirements on software, implemented IT systems, and goods in circulation. The necessity to meet these requirements means that the products provided by Comarch may be goods of dual-use and be utilised in a manner inconsistent with the principles of national and international law. To prevent such practices, the Internal Control System (ICS) has been implemented within the Comarch Group, the main document of which is the Internal Control System Policy. The main assumptions of this policy are the following:

- Exclusion of the possibility of making a profit contrary to the requirements of the Internal Control System,
- Abandonment of supporting trade in goods when it is contrary to national and international law,
- Enforcement of the rules of the Internal Control System at all workstations related to trade in goods,
- Supervision of the Trade Control Proxy over the course of the Internal Control System processes.

As part of the Integrated Management System, the following critical risks have been identified:

- Risk related to the incorrect classification of products and services under ICS,
- Risk related to undertaking cooperation with a contractor from the list of refusals,
- Risk related to the execution of transactions with entities from countries subject to legal sanctions,
- Risk related to non-compliance with the legal requirements and internal procedures regarding ICS.

Mitigation of risks related to international trade in goods is carried out as part the mechanisms described in the section of the Integrated Management System Policy. In the case of the Internal Control System, an important role is played by information technology systems dedicated to them, such as the system of contract workflow, where individual steps enforce specific actions required by ICS. Processes specific for ICS, such as handling of dual-use goods and services or verification of contractors on refusal lists, have been described in internal procedures.

Supervision over processes specific for ICS is carried out as part of internal audits. Non-compliance, potential risks, and opportunities are then identified. Statistical data are also maintained in this regard. In 2018, one incident of non-compliance directly related to ICS was identified as part of the internal audits.

Security Policy

Information and information processing systems constitute critical and extremely important goodwill, which is why Comarch places great emphasis on protecting data and assets, both its own and those of its customers. A comprehensive information protection system based on PN-ISO/IEC 27001:2014-12 and ISO/IEC 27002:2013 standards was implemented. The system has been certified by the Polish Center for Testing and Certification (PCTC) since 2008 as part of the Integrated Management System. The system comprises all internal processes supporting the Company's activity and business processes and covers all of the company's assets.

The Security Policy regulations include organizational issues, raising of employee awareness, physical asset protection, IT technical security, business continuity and response to incidents of information security breaches. Internal policies and procedures have been defined to regulate the confidentiality, integrity and availability of Comarch and customers' data, which in particular specify:

- Rules for Classifying and Handling Information,
- Comarch IT Network Management Policy,
- Rules for Administration of Systems and Applications,
- Rules for Staying at and Accessing Comarch Premises,
- Rules of Using Assets and Taking Hardware Out of Premises,
- Rules of Securing Personal Computers,
- Rules of Securing Data Media,
- Remote Access Rules,
- Electronic Mail Security Rules,
- Password Policy,
- Business Continuity Policy,
- Anti-Virus Policy.

Many organizational and technical measures have been implemented to ensure comprehensive and multilevel protection of data and assets to counteract and minimize the results of incidents of information security breaches.

The system ensures a continuous process of monitoring and reacting to information security risks. It allows continuous improvement of the protection of data and assets of Comarch, as well as of customers. Conclusions from the operation of the safety management system are reported to the Management Board and necessary improvements and corrective actions are taken.

Among the most important risks, which are counteracted by the implemented security measures, mentioned can be made of:

- information security breach,
- unauthorised operations,
- unavailability of key services and Comarch space,
- compliance with regulations.

Within the Company, dedicated business units operate to deal with information protection, determination, and implementation of standards and monitoring the security of Comarch's assets. Business continuity plans have been developed to maintain business continuity in the Company's key areas.

Sustainable Development Policy for Suppliers

As a global organization specializing in the design, implementation, and integration of advanced IT products, Comarch has a significant impact on supply chain functioning. Furthermore, as a company, we realize that the success of undertaken projects depends not only on us, but also, to a large extent, on our business partners. The key issue is an appropriate selection of contractors, who, to the greatest possible extent, satisfy specified criteria. Thus, we can be certain that cooperation with them will in no way disturb the stability and efficiency of processes implemented within the supply chain.

The Comarch Group has a Sustainable Development Policy for Suppliers, which defines the most important rules that the Company follows while implementing cooperation with its business partners. Additionally, this document is a commitment to a sustainable development procurement policy and sets out requirements for key suppliers.

These commitments are implemented mainly through:

- Supporting and encouraging our customers and suppliers to act in accordance with the principles of ethics, social responsibility, and environmental protection,
- Building a good partnership with suppliers based on mutual cooperation, trust, and integrity,
- Conducting activities related to orders in accordance with provisions of law and legal regulations, both domestic and international,
- Selection of suppliers under a conviction that only responsible practices in the supply chain can ensure the highest quality of the final product or service, at the same time caring for the environment, good work standards, business ethics, and local communities.

We are convinced that high standards of conduct in business, with which Comarch undertakes to comply, should also be binding for our contractors. That is why we require our key suppliers to apply the following rules:

- Managing the environmental impact in a responsible manner in accordance with ISO 14001 or similar standards to reduce an adverse impact on the environment,
- Applying occupational health and safety standards in accordance with OHSAS 18001 or a similar standard to minimise the hazards associated with occupational risk and prevent injuries,
- Using with understanding good business practices, social issues, and those related to the environmental protection, which are linked to the activities of the supplier,
- Conducting operations in accordance with applicable law,
- Recognizing employees' right of association and collective bargaining,
- Prohibiting discrimination in all of its manifestations because of: race, social status, ethnicity, religion, impairment, disability, sex, sexual orientation, political affiliation or membership, age, or marital status,
- Prohibiting employment of children under 16 years of age and application of corporal punishment, mental and physical coercion, abuse and sexual harassment,
- Eliminating forced labor.

As part of the Sustainable Development Policy for Suppliers, the followingcritical risks have been identified:

- Risk of disturbances in stability and efficiency of processes implemented within the supply chain,
- Risk of establishing cooperation with contractors, who do not meet the requirements of the Policy and violate the principles of ethics, social responsibility, and the environmental protection,
- Risk related to the insolvency of contractors,
- Risk related to non-compliance with legal requirements and internal procedures to the extent concerning contractors.

Cooperation based on principles followed by Comarch, consistent enforcement of the requirements for contractors and the use of verification mechanisms and ensuring compliance with the applicable regulations allow to effectively mitigate the risk of instability and non-compliance within the supply chain.

Policy of Respecting Third-party Intellectual Property

As a software development company, the Comarch Group understands the need to respect intellectual property rights and, for its part, strives to fully respect the intellectual property of third parties, including other software developers, as well as Comarch's suppliers and customers. Comarch complies with legal regulations concerning the rules of respecting intellectual property of third parties at the levels of international, European Community, and national law and supports the system of intellectual property protection. Comarch makes every effort to ensure the highest level of protection of third-party intellectual property rights.

The basic objectives of the policy applicable in the Comarch Group regarding these issues include:

- Taking care to ensure respect for intellectual property of third parties,
- Ensuring respect of patents, trademarks, and other industrial property rights of third parties,
- Using intellectual property, patents, trademarks, and other industrial property rights of third parties in accordance with provisions of law and the licenses obtained by Comarch,
- Using third-party software only in the scope of licenses granted to Comarch,
- Protecting intellectual property, patents, trademarks, and other industrial property rights of Comarch,
- Protecting Comarch's interests, especially financial and legal,
- Caring for the high quality of offered products and services,
- Managing risk in the area covered by the Policy,
- Managing intellectual property and licenses.
- Detailed objectives of the Policy resulting from the primary objectives are:
- Protecting intellectual property of Comarch's suppliers and customers,
- Familiarizing Comarch employees with the Policy and enforcing its compliance,
- Achieving transparency of the rules governing the use of third-party intellectual property by Comarch employees,
- Achieving the highest level of understanding and respect for intellectual property rights,
- Prohibiting the use of software by employees and associates of Comarch that infringes the intellectual property of third parties.

Comarch aims at achieving the objectives of the Policy by training employees and acting in accordance with the procedures that streamline the process of evaluation, selection, and acquisition of software and storage of licenses for:

- Utility and office software for Comarch's internal needs,
- Programming components and source codes to be used in Comarch products,
- Programming components and source codes for use in programming services implemented in such a way that Comarch's work effects become the property of the customer (dedicated Comarch products).

Policy objectives are also implemented through activities under the certified Internal Control System, in accordance with the procedures for foreign trading in goods, technologies, and services of strategic importance for national security, as well as for maintaining international peace and security.

The obligations of each employee and associate of Comarch include knowledge and observance of the Policy of Respecting Intellectual Property Rights and procedures resulting from it, to such extent to which theyrelate to them, i.e. in the scope of:

- Responsibility for using Comarch software,
- Responsibility for using software on Comarch hardware by an employee or associate,
- Manner of obtaining consent for the use of third party intellectual property in Comarch products and Comarch dedicated products,
- Manner of obtaining consent for the purchase of new software.

As part of the Policy of Respecting third-party Intellectual Property, thefollowing critical risks have been identified:

- Risk of using unlicensed software for internal needs,
- Risk of illegal use of software owned by third parties in Comarch products,
- Risk of potential financial and legal claims, as well as image losses,
- Risk related to non-compliance with legal requirements and internal procedures to the extent concerning respect for intellectual property of third parties.

Mitigation of risks related to respect for intellectual property of third parties is carried out as part of the mechanisms described in the section of the Integrated Management System Policy. Both the supplier and the customer of the software have the right to have their intellectual property rights respected. The guarantee of respect for intellectual property is the use of appropriate procedures by Comarch employees and associates when using such property. Execution of activities in accordance with the presented guidelines minimizes the risk of non-compliance with the applicable legal regulations in this area and possible financial claims. In the case of detection or obtaining information on non-compliance with this Policy, as well as in the instances of third-party intellectual property rights infringement, Comarch obliges its employees, associates, suppliers, and customers to report such cases to the Quality, Occupational Health and Safety Department and the Legal Department via a dedicated email address.

Quality Policy of the Quality Management System for Medical Devices

Besides the core activities related to software and development of information technology systems and the provision of services in this area, Comarch also carries out activities in the field of production and marketing of medical devices and services.

In terms of the health and safety impact, all products that are medical devices manufactured by Comarch SA and Comarch Healthcare SA are tested. Those products are subjected to appropriate analysis and certification.

With a view of improving the quality of life and a sense of security and in caring for health of our customers, Comarch offers a wide range of medical devices and services. Offered products are created in response to market needs in the field of prevention and treatment, and are prepared on the basis of the latest technologies as a result of the cooperation of Comarch's qualified employees with the scientific medical community. Comarch guarantees the right quality and safety of the offered products,professional and ethical service, as well as assistance and advice tailored to the individual needs of customers.

In order to implement the provisions of the Quality Policy of the Quality Management System for Medical Devices, the Management Board and the employees of Comarch undertake to:

- Adjust products and services to the expectations and requirements of customers, while maintaining the requirements of legal regulations in the scope of production and distribution of medical devices and provision of medical services, as well as in the scope of IT products and services,
- Market products and services that meet the quality and safety requirements,
- Reliably inform about the quality and safety of the offered products and services,
- Constantly and systematically take care for the quality and competitiveness of the offered products and services,
- Develop cooperation with suppliers to improve the quality of the offered products and services,
- Enhance qualifications,
- Constantly improve the efficiency of the Quality Management System for Medical Devices.

The means of achieving the above objectives are implemented and constantly improved quality management systems developed and based on the requirements of:

- Directive 93/42/EEC on medical devices (MDD),
- EN-ISO 13485 Medical devices. Quality management systems. Requirements for the purposes of legal regulations,
- ISO 9001 Standards. Quality management systems. Requirements.

As a part of the Quality Policy of the Quality Management System for Medical Devices, the following critical risks have been identified:

- Risk of marketing products and services that do not meet the quality and safety requirements,
- Health, life, and safety risk for users of medical devices and services,
- Risk of deterioration in the quality of medical devices and services,
- Risk related to non-compliance with legal requirements and internal procedures to the extent concerning medical devices and services.

Risk management in the field of medical devices is an extremely important, systemically regulated issue. As part of the implemented and certified Quality Management System for Medical Devices compliance with ISO 13485, the Company has a risk management process in place, described in internal procedures. The process includes the rules of identifying risks related to a medical device, its accessories and software, estimating and assessing the acceptability of risks, controlling these risks, and monitoring the effectiveness of control.

In the case of medical devices, there is also a possibility of reporting medical incidents, or irregularities regarding a medical device that may or may have led to death or serious deterioration of health of a patient or user of such device. A register of such cases is kept in Comarch. Since the beginning of the activity, no medical incidents have been identified in the field of medical devices.

Reporting on Environmental and other Factors

The Comarch Group complies with local legislation on environmental protection. Comarch consciously limits the impact of its operations on the natural environment, minimizing the consumption of natural resources and the production of waste as a result of its ongoing operations. It also promotes an environment-friendly lifestyle among its employees by running campaigns that encourage active participation in the environmental protection, such as voluntary signing of "green declaration" by Comarch staff. In May 2014, Comarch signed the Declaration of Polish Business for Sustainable Development, thus providing assurance that it would take active steps towards the attainment of development goals set out in the Vision 2050 of Sustainable Development for Polish Business. The Declaration comprises 10 assumptions that, if implemented, will enable us in the future to live with dignity and wisely benefit from the scarce resources of our planet. The environmental policy and procedures under the Integrated Management Systems put an obligation on Comarch SA to take active steps to reduce a negative environmental impact. Using the implemented Environmental Management System compliant with the requirements of ISO 14001 standard, Comarch identified environmental aspects that it monitors, supervises and moulds. The 2019 Non-financial Data Report was published on 29 April 2018. The document comprises non-financial information concerning Comarch SA and the Comarch Group. Full report content can be found on the website at: https://www.comarch.pl/files-pl/file_420/RS-2018-Raport-danych-niefinansowych.pdf

Occupational health and safety

ACCIDENT SUPERVISION AND INVESTIGATION SYSTEM

In the Comarch Group, accidents at work are examined in accordance with the applicable regulations by an accident team composed of the OHS Service and Employees' Representatives. Reports determining the circumstances and causes of accidents are approved by the Employer. The register of accidents at work and accident documentation are subject to archiving. The method of reporting and recording accidents is described in internal procedures developed on the basis of the applicable legal requirements and Comarch practice.

There have been no fatal or serious accidents recorded thus far in all Comarch Group companies. There have been no accidents among Comarch subcontractors, either.

In all its branch offices, Comarch has a group of Rescuers that all together has over 100 people. Rescuers are employees trained in first aid administration and evacuation procedures in emergency situations. Every two years, training courses for Rescuers are organized, aimed at refreshing and systematizing knowledge, informing about possible changes in first aid standards and organizational changes in the field of evacuation. The training courses are also designed to supplement the number of Rescuers. Rescuers have at their disposal means and instructions for first aid administration. Instructions and check lists describing the rules of conduct during evacuation have also been prepared. The Rescuers are volunteers.

There are no work positions in Comarch SA or the Comarch Group companies where the levels of NDN (maximum acceptable intensity) and NDS (maximum acceptable concentration) have been exceeded. There are no jobs with an unacceptable level of occupational risk, either.

ACTIVITIES OF THE WORKS COUNCIL

No trade unions were established at Comarch SA or in the Polish companies of the Comarch Group. Instead, a Works Council was established at Comarch SA. It operates pursuant to the Act on Informing and Consulting Employees of 7 April 2006 . Employees' representatives are selected from among the employees hired under employment contracts. The selection is made by the Company's employees every two years. Employees' representatives take part, among other things, in the analysis of accidents at work pursuant to the applicable legislation. In 2016, the employer consulted with the employees' representatives regarding the amendments to the work regulations. The amendments proposed by the employer were unanimously accepted by the employees' representatives. There are no collective

CERTYFIKAT

Niniejszym informujemy, że:

COMARCH SPÓŁKA AKCYJNA
Al. Jana Pawła II 39A, 31-864 Kraków

kupuje energię elektryczną w ramach produktu

TAURON EKO BIZNES

który jest oferowany przez
TAURON Sprzedaż sp. z o.o.

Tym samym zaświadczamy, iż energia elektryczna sprzedawana w ramach produktu TAURON EKO BIZNES uczestniczy w systemie Gwarancji Sprzedaży Energii Ekologicznej.

Planowany wolumen zakupu energii elektrycznej:	15.000,000	MWh
Wartość ekwiwalentu redukcji emisji CO_2:	1.532,220	t
Okres objęty prognozą zakupu:	01.01.2015 - 31.12.2015	

TAURON
Ireneusz Perkowski
Prezes Zarządu
TAURON Sprzedaż sp. z o.o.

PTCE
Mariusz Schmidt
Prezes Zarządu
Polskiego Towarzystwa Certyfikacji Energii

labor agreements in the Polish companies of the Comarch Group. In 2019 the employer conducted consultations with representatives on the selection of a management institution of the Employee Capital Plans (ECP). Representatives attended meetings with suppliers and presented their recommendations that were considered during selection of the tender procedure short list. The representatives failed to make an unambiguous recommendation for a firm that would be the winner of the tender (as the result of voting among the representatives ended with a tie).

In foreign companies that are members of the Group there are no trade unions in the DACH region. There are, however, works councils. Employees select a works council for a certain site, then all employees at a certain site are subject to the jurisdiction of a certain works council. The works council is not mandatory, a decision on the works council election belongs to the employees. Not all employees are eligible to participate in the elections. Restrictions concerning election to the works council are related to seniority. The election is arranged every few years, which is regulated by the Act.

Works councils in individual companies of the Comarch Group in the DACH region include:

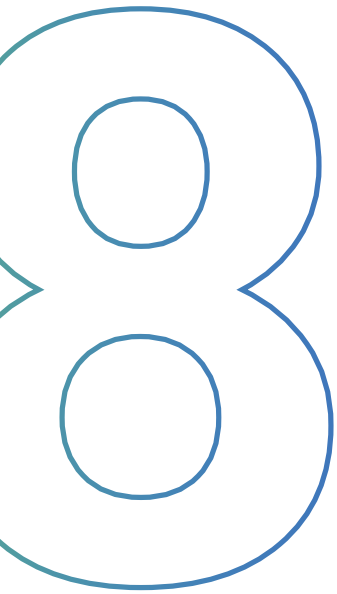
- Comarch Solutions AG – Innsbruck
- Comarch AG – Monachium
- Comarch Software und Beratung AG

There are no trade unions in Comarch SRL (Italy). On the other hand, employees are subject to a national collective labor agreement that was created to regulate the relations between employees and employers. It is a collective labor agreement, because it affects all employees covered by the agreement and in a national sector, since it applies to all companies that are located in the territory of Italy. It regulates the employment relationship, e.g. a work schedule, qualifications, and duties, remuneration, etc. Comarch SRL is subject to 'CCNL del commercio' (national collective bargaining agreement in trade).

There are no trade unions in other foreign companies of the Comarch Group. Some of them have sectoral agreements.

No collective disputes were initiated in any of the companies of the Comarch Group in the last year.

In each investment agreement, Comarch incorporates a clause that requires a contractor to respect the basic employees' rights. Such provision, among others, covers an obligation of hiring employees in compliance with the Labor Code and secondary legislation concerning employment of staff, disbursement of wages and salaries due to them, and provision of working conditions as required under law. Contractors are also contractually required to provide employees with security, safe working conditions, and well-being and to comply with the provisions concerning OHS.



Material Events in 2019

Celebration of Comarch's 20th anniversary on the Warsaw Stock Exchange. From the left: Marek Dietl, President of the Warsaw Stock Exchange, Elżbieta Filipiak, Chair of Supervisory Board of Comarch, professor Janusz Filipiak, CEO of Comarch

COMARCH IS CELEBRATING ITS 20TH ANNIVERSARY ON THE WARSAW STOCK EXCHANGE

It's been 20 years since Comarch's debut on the Warsaw Stock Exchange. On this occasion, on September 25, a meeting was held in the Warsaw Stock Exchange building, which was an opportunity to reminisce about the history of Comarch's shares quoted on the big trading floor.

During the meeting, Prof Janusz Filipiak, Founder and President of Comarch, presented in his speech the important role of the Warsaw Stock Exchange in the development of Polish companies and showed how the company used the funds raised under the issue of shares for its global development.

The panel discussion on the capital market in Poland was attended by Marek Dietl, President of the Warsaw Stock Exchange, Paweł Borys, President of the Polish Development Fund, and Paweł Przewięźlikowski, President of Selvita.

Comarch's shares debuted on the Warsaw Stock Exchange in 1999. At that time, the price per share was PLN 151, i.e. over 100% more than the issue price, which was set at PLN 47. Such performance meant that investors valued Comarch at PLN 230m and the company was then one of the 50 largest listed companies by value. In 2000, the second issue of shares took place, which provided the company with PLN 70m. In 2002, Comarch decided to issue convertible bonds, the proceeds from which amounted to PLN 40m. In total, Comarch raised PLN 124.1m through the stock exchange.

The funds obtained from the issue of shares enabled the company to implement the long-term strategy adopted in 1999. It assumed the development and sale of its own products and technologies, entering international markets, making acquisitions, pursuing customer diversification, as well as increasing employment and investing of its own infrastructure, including office buildings in the Kraków Special Economic Zone and data processing centers in Poland and abroad.

"In 1998, we decided to enter the stock exchange. We didn't need capital. However, the company had grown, we employed several hundred people, we had a turnover of many millions of dollars. At the annual managerial meeting, young colleagues said that we had to become a listed company to enjoy the necessary prestige on the market and to develop further. Thanks to the issue of shares, we were able to stabilize the company and its management and continue to grow. Importantly, entering the stock exchange is not only about raising capital at a moment crucial for the company, but also it means the increase in credibility and image-building necessary for the company to spread wings on foreign markets. The history of Comarch shows that the stock exchange can be extremely important for Polish private companies. Unfortunately, not all of them see the benefits of being listed, primarily being afraid of excessive regulations, but the stock exchange does really help companies", says Janusz Filipiak, Founder and President of the Management Board of Comarch.

CONFERENCE "PARTNERSHIP 2019"

Conference "Partnerstwo 2019"

Every year, Comarch organizes the "Partnership" conference, which is a meeting for the network of business partners of the IT company. Every day, these companies cooperate with Comarch in implementing ERP systems, i.e. enterprise management solutions. This year the conference was held on October 10-11 in Łódź.

The "Partnership" program is a series of workshops and lectures during which participants have the opportunity to learn about new products in the Comarch offer, trends on the IT market, as well as the use of new technologies in information systems. The conference also announces the results of the "Partner of the Year" competition for companies that have carried out the most interesting implementations of Comarch ERP solutions. In 2019, the awards were granted in nine categories: the main Comarch ERP products, the best marketing campaign, the special IDG Computerworld award and the audience award. The winners of this year's edition are partner companies: CDN Partner in Wrocław, ERP Serwis, Graphcom, Infortes, OrderSoft, Prospeo, Standard Polish Enterprise SPE IMEX and Supremo.

THE 17TH EDITION OF THE COMARCH HOLIDAY INTERNSHIP IS OVER

On September 30, 2019, the 17th edition of the Comarch holiday internship ended. The internship took place in 12 cities and 350 participants took part.

This year, students had a choice of programming, telecommunications, embedded system engineering, AI/ML or UX/UI internships. Each of the interns worked on real projects, and for 75% of them it was also the beginning of longer cooperation with Comarch, because they decided to stay in the company.

Holiday IT internships at Comarch are the largest of their kind in Europe. We give the participants of our program the opportunity to enter the labor market and gain first, valuable experience.

TECHNOLOGICAL INNOVATION SPACE AT THE COMARCH CAMPUS IS OPEN

The Innovation Space in which the IT company's products and services are presented in a multimedia way has been set up at Comarch's Head Office in Krakow. At individual stands, one may learn about the possibilities of using Comarch IT and technology systems, including telediagnostics and telemedicine monitoring, e-mobility solutions, a store of the future and others, including IoT, 5G, artificial intelligence, and virtual reality solutions.

The Comarch Innovation Space has been divided into several zones. Each zone presents IT solutions for individual sectors of the economy, including financial and insurance institutions, telePhone: network operators, medical facilities, as well as companies representing the retail trade and manufacturing enterprises. The stands also feature multimedia presentations describing case studies of implementations carried out by Comarch.

The Comarch Innovation Space is one of a few places of this type in Poland, where advanced IT technologies have been presented in one space in a multimedia way. The space has been prepared for entrepreneurs who often want to familiarize themselves with Comarch's full offer. Now, we have a very modern tool for this. The zone will also be open to high school students and students of all fields of study.

Comarch Innovation Space

COMARCH'S NEW OFFICES IN ROME AND SYDNEY

In 2019, Comarch opened new competence centers in Rome and Sydney. Opening an office in Australia means that Comarch Capital Group conducts business activities on all inhabited continents.

Comarch has been active in the Antipodes since 2017, carrying out, for instance, a special project for an Australian parimutuel betting and gaming operator. As part of the agreement, it will deliver a platform for customer relationship management and IT marketing, based on the Comarch Loyalty Management system. A similar platform is currently being implemented for a global fuel company that owns a chain of gas stations throughout Australia.

Comarch has been present in Italy since 2015, when it opened its first office in Milan. Despite the recent opening, Italy is one of the key markets for the international Comarch group with over 60 successfully implemented projects for more than 40 companies operating in different sectors, including retail, FMCG, travel, hospitality, travel, airlines, telecommunications, insurance, finance, healthcare, among others.

COMARCH SPONSORS SOCCER CLUB OSC FROM LILLE

Comarch has become a sponsor of OSC from Lille, France, a Ligue 1 club, currently in the second position. The IT company will support the soccer players until the end of the 2019-2020 season. Sponsoring the team from Lille will help develop broader cooperation and contribute to better recognition of the Comarch brand in France. Comarch's logo will be placed on the shirts of Lille players, as well as on the LED displays on the Pierre Mauroy arena in Lille and on the official marks at the seat of LOSC.

COMARCH IS THE MAIN PARTNER OF THE 100TH ANNIVERSARY OF THE AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY IN KRAKÓW

Many of Comarch's employees are graduates of the AGH University of Science and Technology in Kraków. In addition, the company has been cooperating closely with the university in many fields since the company's inception. The decision to start Comarch's partnership at during the 100th anniversary of AGH was a further step in strengthening relations with the university.

The official celebrations began on October 4, 2018 and lasted until October 19, 2019. As part of the jubilee, numerous conferences, exhibitions and concerts took place.

One of the most important points of the celebration was the First World Congress of AGH Graduates. Over 1,000 people from all over the world took part in the congress. AGH visited by guests including from the United States, Canada, Australia, South Africa, Vietnam and Cuba. During the conference lectures were given by professors of AGH. The first to speak was the Chairman of the University Council, Professor Janusz Filipiak with the presentation "University cooperation with industry – Corporate social responsibility".

COMARCH USER GROUP CONFERENCE

On September 18-19, the next edition of the Comarch User Group took place – a two-day conference dedicated to the latest technological developments and the latest market trends regarding the automation of business processes. This unique event was organized to provide dozens of specialists from the IT and business world with a unique social forum where they could share ideas and concepts regarding the future of systems and services for business structure management and more.

The conference was attended by over 250 guests from 31 countries who visited the headquarters in Kraków. Representing some of the most developed companies from many industries, the participants had the opportunity to take part in over 50 inspirational presentations and make contact with other innovators in the field of customer experience. In addition, everyone also had the opportunity to see our latest and upcoming products.

COMARCH AWARDED WITH "POLISH ECONOMIC EAGLE" FOR BUSINESS SUCCESSES IN BELGIUM

The idea behind "Polish Economic Eagle" is to honor companies, which, through their achievements promote Poland as an innovative country with large economic potential. The award was conferred on 15 January 2019 in Brussels. The prize was awarded to Wojciech Pawlus, Managing Director for the Benelux Region, by Artur Orzechowski, Poland's Ambassador to Belgium.

9

Corporate Social Responsibility

Corporate Social Responsibility

Socially responsible business is largely based on activities for the local community. Since the beginning of its activity, the Comarch Capital Group has been widely involved in social activities, promoting the idea of creating a broad social platform on the basis of which sport and the latest IT technologies are promoted. Actions promoting healthy lifestyles and environmental protection, helping animals, as well as involvement in culture and supporting local community initiatives are also important.

The foundations of CSR in Comarch are the basis for activities in the area of corporate social responsibility, the company's Code of Ethics has also been adopted and is in operation. Detailed reports on CSR in the Comarch Group are documented and presented every year in the Comarch Group's CSR report, which is posted on the website: http://www.comarch.pl/o-firmie/zrownowazony-biznes/csr/.

Each year, the Comarch Group observes an increase in the involvement of its employees in the undertaken actions in the area of CSR. For communication, opportunities to report new issues in this area, an email csr@comarch.pl was created.

COMARCH FOR CULTURE

Comarch for improving the quality of organ music in St Mary's Church

Comarch has been cooperating with St. Mary's Parish for years. In previous years, the company made a donation to renovate the organ in the church and will co-fund the new instrument and the whole project of revitalizing the musical space in the church. The middle organ has already been completed, while the newly built main organ will be completed for the 700th anniversary of the consecration of the present church in 2020.

St Mary's Organ Festival

Comarch has been a sponsor of the St. Mary's Organ Festival - a series of summer music events in the church walls of the parish, since its very beginning. The festival is not only a musical evening in Kraków's most famous church, but also a timeless dialog of epochs and confrontation of the common sound of the organ with a variety of instruments. For the fifth time the company was involved in the organization of the event, as the main sponsor of the Festival.

Comarch plays *Last Night of the Proms*

Also in the past year, Comarch sponsored an event which has become a permanent feature of Kraków's cultural calendar - the Last Night of the Proms concert.

Graduation Project

For the first time, the company is also involved in Graduation Project, a review of the best thesis for people from the Visegrad Group countries. In 2018, 347 diplomas were submitted for the review, of which the jury qualified 30 projects for the exhibition. The diplomas were presented in June 2019, during the European Design Festival at the Palace of Culture and Science in Warsaw and in autumn at Vienna Design Week. The vernissage in the cultural center of Cieszyn Castle was accompanied by a special ceremony awarding paid internships at Comarch.

SOCIAL ACTIVITY

Comarch Cares Grant competition

#ComarchCares Grant Competition could be entered by Comarch employees who, together with institutions (foundations, associations, educational institutions), want to implement pro-social activities. In the autumn of 2018, the next edition of the competition was decided, in which two winning grants for 2019 were selected: "Programming has a future" and the project "Programming - an adventure for life". The first one assumed conducting programming classes for older children and young people, as well as Lego WeDo 2.0 and Lego Boost classes for preschoolers in Tarnów. The second initiative consisted in organizing additional classes for children from secondary schools in Poznań, from the basics of programming with elements of robotics and the use of new technologies, e.g. 3D printing, digitally controlled machines. The project also used the Sphero edu platform and Star Wars BB-8 robots. The projects were completed in 2019.

For local communities

As in previous years, also in 2019, employees from Polish Comarch companies in their branches all over Poland joined in the organization of Christmas material collections for people in need. Several organizations and institutions received support, including the Małopolska Hospice for Children, Zdążyć z Pomocą Foundation, St Lazarus Hospice or orphanages.

We also returned to the organization of the charity action on the occasion of World Animal Day. Thanks to the enormous commitment of the company's employees, it was possible to support shelters and organizations working for homeless animals in Bielsko-Biała, Gdańsk, Gliwice, Katowice, Kielce, Lublin, Łódź, Poznań, Tarnów, Warsaw and Wrocław.

Comarch has also been a sponsor of the Czyżyny Feast "Czyżyny district for children" - a family open-air event for the residents of the Kraków district where the company's headquarters are located. The iMed24 medical center belonging to the Comarch Capital Group had a stand at the event, conducting health-oriented activities.

PRO-ENVIRONMENTAL MEASURES

Responsible administration of Comarch buildings - photovoltaics, rainwater and waste segregation

There are seven office buildings on the Comarch campus in Kraków, where over 3,500 people work every day. The company also owns several buildings outside Kraków; two in Warsaw and one in Łódź. Additionally, the company leases several offices in Poland and abroad. The management of these properties takes into account environmentally friendly practices, such as the modernisation of buildings and equipment, the use of renewable energy sources or the application of an appropriate purchasing policy. In facilities owned by Comarch, bulbs are gradually replaced with new ones with LED technology and more modern, energy-efficient devices are introduced. In all buildings, bins are placed to segregate waste into four categories: glass, paper, plastics and mixed waste.

The newest Comarch building in Kraków (Comarch SSE 7), which was commissioned in 2017, is equipped with photovoltaic panels mounted on the roof of the office building. These devices allow you to partially cover your own electricity demand. They are able to produce 64 kW of electricity, which allows them to power around 1,000 computers. Additionally, electric vehicle charging stations were installed in the underground garage.

Photovoltaic panels mounted on the roof of the Comarch SSE7 office building

A distinguishing feature of the building are the light shelves, designed on the south and west elevations, which fulfill a double function: they shade the window strip from the sun and reflect the light, illuminating those parts of the rooms which are located deep inside. In this way, electricity consumption is reduced. All rooms are equipped with a separate intelligent ventilation and air conditioning system, which is also a source of heating. At night, the air conditioning operates in eco mode, and in the morning it warms the room to the temperature set on the controller in advance. During the realization of the Comarch SSE7 investment, care was also taken of the building's immediate surroundings. Trees and shrubs were planted. There are also green areas in the vicinity of other office buildings on campus.

Additionally, all Comarch buildings are equipped with modern ventilation systems with heat recovery. And, on two office buildings in the Kraków campus and on the building in Łódź, systems are installed to collect rainwater. This water is used for the care of green areas on company premises.

We are building an ecological fleet of cars

The company is also successively replacing its car fleet with vehicles that meet European emission requirements. In 2019, 75 per cent of the cars met the stringent EURO6 emission standards, including 13 ecological hybrid vehicles, 23 per cent were in the EURO5 standard, and only two per cent were EURO4 or lower. In 2019,15 vehicles characterized by older emission standards were witdrawn from the operation. Diesel vehicles are gradually being phased out of the fleet and replaced by more environmentally friendly cars with petrol engines and hybrid drives.

Employees are also eco-friendly

Comarch promotes ecological values among its employees by implementing actions encouraging conscious use of natural resources and reducing energy consumption. In the utility rooms and common areas there are messages to remind people to turn off the lights, computers and other devices after finishing work, to use reusable envelopes for internal correspondence, to limit printing in favor sending correspondence electronically and to use running water prudently.

– Employees are very environmentally aware and willing to join the environmental protection and shaping actions that we organize in the company – says Anna Bajorek, the Head of Employer Branding at Comarch.

For the sake of the environment, the company's canteen, which is located on the Comarch campus in Kraków, is organizing the action "Come with your own mug for coffee".

– Instead of selling hot drinks in disposable cups, restaurant staff can serve these drinks in cups brought by guests. The initiative is primarily aimed at preventing excessive waste production. Additionally, in social rooms in Comarch buildings there are water dispensers or devices that filter water. In this way, we encourage our employees to give up bottled water in favor of tap water – specifies Monika Krąkowska, the Head of Administration at Comarch.

And at the Comarch Training Center...

The Comarch Training Center also focuses on activities that are nature-friendly. Therefore, the offer of the "trainer" includes online versions of training materials (convenient and always available to the participant), didactic materials made of ecological and biodegradable materials and remote training in the distance learning formula. In addition, stationary training is organized in a building that meets energy-saving requirements, and there is a coffee machine in the center where coffee can be purchased.

– We encourage participants and trainers to take part in the "Come with your own mug for coffee" action. We also plan to give our trainers ecological and reusable bamboo cups – announces Wojciech Czerepak, the Director of the Comarch Training Centre.

We are making Kraków green

Proof of the Comarch Group's concern for the state of the natural environment is demonstrated by, among other things, joint actions of the company and the Management Board of Zieleń Miejska in Kraków, implemented since 2015. Last year, the company continued to make the capital of Małopolska green. Comarch employees and their families planted 1,500 plants on the Kraków Planty Park, and distributed the following seedlings to the inhabitants of Kraków: lavender, spathiphyllum and ferns.

– Employees and their families are making their "green" contribution to improving public space – adds Anna Bajorek.

POPULARIZATION OF SCIENCE

Since the beginning of its activity, the Comarch Group has actively cooperated with schools, universities and other educational institutions. In individual branches, employees' initiatives are created, which involve devoting time to students on dedicated courses or occasional meetings.

Our employees share their knowledge during various conferences and events, among others: Women in Tech Summit, The Dark Side of the UX, World Usability Day, dev.js and J/vacon.

In 2019, Comarch sponsored the Inter-School IT Festival "Project for the Highest Grade". The Inter-School IT Festival has been organized for 14 years by the Complex of Communication Schools in cooperation with the Mikromakro Institute Foundation and the Kraków Technology Park. Students of Małopolska schools take part in the struggle and the aim of the festival is to promote young talents with IT interests.

With many graduates of the AGH University of Science and Technology in Kraków and having cooperated with the university in many fields since the company was founded, Comarch decided to support the celebration of the 100th anniversary of the Academy, which took place in 2018-2019.

COOPERATION WITH THE CENTRAL TECHNOLOGY HOUSE

Comarch started a partnership with the Polish Development Fund Foundation and the Central House of Technology. The task of this place is to popularize the STEAM methodology, i.e. the current in education developing interdisciplinary competences in the fields of: science, technology, engineering, art and mathematics. Together with the Central House of Technology employees, we try to make this space a source of knowledge for visitors. Among the presented devices and technological solutions is the Diagnostic Point (developed by Comarch Healthcare), which shows the possibility of using IT in medical care. The diagnostic point allows for quick so-called pre-screening, without the participation of the point operator - each person willing to do the test can, within a few minutes, perform an Electrocardiography (without attaching cables, but only grabbing the sensor). This two-channel ECG test takes one minute. We can also measure saturation, temperature and body weight, BMI and blood pressure.

Additionally, as part of the cooperation, the children of employees from the Warsaw branches of our company took part in weekend interdisciplinary educational activities in the Central House of Technology. During the workshops, they gained knowledge in the fields.

COMARCH FOR EDUCATION

Comarch popularizes knowledge about ERP systems among universities and vocational schools with economic profiles. This activity is carried out through:

- lending Comarch ERP systems in educational versions (over 600 educational institutions and schools equipped with educational versions of Comarch ERP)
- ERP meetings and seminars for lecturers and students, teachers and vocational school students
- training on Comarch ERP systems for teaching staff
- other educational programmes and events for economics students

We also distribute special exercise books dedicated to vocational training, preparing for state vocational exams for the profile of economist technician.

COMARCH INNOVATION ZONE

The Comarch Innovation Zone is a space where Comarch's technological achievements in the field of information systems, telecommunications, Internet of Things and artificial intelligence are presented. The separated areas of the Zone are dedicated to particular sectors of the economy, for which Comarch designs and implements innovative solutions. Visitors have the opportunity to learn about solutions such as virtual reality, e-mobility or telemedicine.

Not only business partners visit the Innovation Zone. Organized sightseeing, the opportunity to interact with modern technologies and expand knowledge create conditions friendly to school and academic groups. A trip to the Innovation Zone is an excellent opportunity for young people to have inspiring discussions about their future, choice of studies or career paths.

During the guided tour, students interact with modern solutions, ask many questions, deepen their knowledge and interests. Among the visitors are both high school and primary school students.

A visit to a space full of innovative solutions can be a unique experience regardless of age. The Comarch Innovation Zone was also visited by Third Age University students. The latest solutions turned out not to be strange to them - they were an impulse for a lively discussion on Comarch's activities and further technological development.

The Comarch Innovation Zone promotes and teaches. Modern, multimedia space encourages interaction with new technologies and makes it easier to organize knowledge. It is a place of meetings and exchange of thoughts, and at the same time an exhibition area presenting a vision of the future, extremely attractive and valuable for visitors.

SUMMER INTERNSHIP

For years, the company has been consistently continuing the program enabling students to start their careers in the IT industry. In 2019, the 17th edition of the summer internship program took place in 12 Polish cities. Candidates could choose between programming, telecommunication, system engineering, embedded, AI/ML and UX/UI internships. During the internship, more than 350 students had the opportunity not only to confront their own ideas with the knowledge they had gained so far, but also to carry out real projects in cooperation with a real client and under the watchful eye of specialists. After three months of paid internship, nearly 75% of them decided to continue cooperation with Comarch.

SPORT AND HEALTHY LIFESTYLE

For over 25 years, Polish companies of the Comarch Group have been involved in promoting sport among young people and inhabitants of the Małopolska region. Since 2003, the company has been a titular sponsor of the oldest existing soccer club in Poland - Cracovia, and in 2019 it became a sponsor of the OSC extra-league soccer club from Lille, France.

The company also promotes a healthy and active lifestyle among its employees. In Poland, Comarch encourages employees to come to work by bike in the spring and summer months, providing bicycle infrastructure (e.g. racks, bicycle storage, repair stations and changing rooms with showers in Kraków) and occasional actions related to bicycles.

During the annual "Bike Breakfast" event, employees who came to work that day by bike received a healthy snack. Many integration events are also accompanied by sports activities.

Last year, Comarch joined the Małopolska campaign "By bicycle to work - home, bicycle, work... and so on". The aim of the action was to promote the bicycle as a daily means of transport used during the journey to and from work. During five months of participation in the campaign, almost 200 Comarch employees systematically commuted to work by bicycle.

Bicycle campaigns organized in the company are part of the environmental policy, which is inscribed in the company strategy and management model.

The Comarch Group also encourages its employees to participate in external sporting events and the income from many of them is transferred for social purposes.

In 2019, employees of Comarch Group companies in Poland took part in several dozen running events all over Poland, soccer matches or the Comarch World Cup. Some events were also of a charitable nature.

Also in 2019, in the summer season, employees of the Comarch Group in Poland took part in the ComarchONrun and ComarchONbike running and cycling competition. During its duration, the cyclists covered over 85,000 km, while the runners covered over 17,000 km. In this edition, for the first time the participants competed for a common prize, which was financial support for a selected charity. Each month of the struggle was a new challenge and a larger amount to be donated to the proteges of the Zakątek Orphanage in Katowice.

In order to encourage its employees to spend weekends actively and out in the open, Comarch also inaugurated a mountain club. It was started with a trip to Babia Góra and was provided for the company's Kraków, Katowice and Gliwice branches.

Employees of the Comarch Group companies in Kraków and their families also have at their disposal the Comarch Recreation Center. In the winter season, employees have the opportunity to take advantage of free admission to the ice rink.

EMPLOYEES' SAFETY

First aid

Every two years, Comarch organizes evacuation exercises in company-owned buildings. At the same time, there is training for designated Rescuers, organized among employees in most locations in Poland. The last activities in this area were implemented in 2019. Evacuation exercises on the Comarch campus in Kraków were attended by approx. 3,000 employees. Exercises are carried out with the participation of rescue and firefighting units of the State Guard Fire Service in Kraków. Scenarios are prepared to reflect real dangers and make people aware of threats resulting from fire. We want our employees to know how to behave in order to be safe while leaving the building, where the assembly points are designated and how to proceed to these points. We train employees to pay attention to bystanders who may be in buildings during the evacuation of Comarch, and to people who have mobility problems whether in everyday life or as a result of the situation. Each time, we raise the level of difficulty and we try to cover more and more with types of exercises and issues.

Reflector

In the autumn-winter season, when visibility is getting worse and it gets dark quickly, reflective elements provide a great improvement to pedestrian safety. As many of Comarch's employees get to work by bicycle, public transport or on foot, the company has initiated an internal campaign framework "Don't be on the dark side - wear a reflector". The initiative provides reflective elements to employees, and is supported by an educational campaign in the field road safety.

CRACOVIA – CSR 2019

1. Lajkonik

At the beginning of last year, after a longer absence, Lajkonik returned to the stadium at 1 Józef Kałuża Street. Cracovia's new mascot regularly appears at soccer and hockey matches and at all major club events. Lajkonik is mostly fun for the youngest fans who can take a picture with him or get club trinkets. The mascot is also used in outdoor promotional campaigns, school visits, etc. Many times Lajkonik has strolled around Kraków's Błonia, inviting the city's residents to the "Stripes" soccer and hockey matches.

2. The Media and Student Ambassador of Cracovia.

The projects were created for young people who actively participate in the Club events. Fans' amabassadors, have the opportunity to realize their ideas of promoting Cracovia and improve their skills in workshops, for example as reporters, editors or photographers, gaining valuable experience in the oldest sports club in Poland. One of the participants of the Ambassador Cracovia's Media Programme during his activity demonstrated his skills to the extent that he was hired by the Club and joined the marketing department on a permanent basis, carrying out, among other things, activities for people with disabilities, as he is himself a wheelchair user. Programs therefore have the potential to find interesting, energetic people, who are willing to act to support the Club on many levels.

3. "Sprawni z Cracovią" Fan Club

Since October 2019, the Official Cracovia Fan Club "**Sprawni z Cracovią**" has been operating. It brings together a community of supporters with disabilities. The Fan Club, in cooperation with associations and foundations, works on activating people with disabilities by inviting them to soccer and hockey matches. The fan club will organize special events for its members, including meetings with Cracovia players.

4. Kraków Family Card

In November 2019, the oldest sports club in Poland joined the Kraków Family Card program, created by the Municipality of Krakow. The Kraków Family Card is a system of discounts, rebates, preferences and entitlements for families with many children and pupils in family care facilities. Cracovia's involvement in the program is another element of the Club's cooperation with the City of Kraków. The club offers, among other things, cheaper passes and tickets for the family sector, discounts in the Cracovia Official Shop and for visiting the stadium, and a dedicated offer for kindergarten children taking part in soccer activities with the Cracovia Kids.

5. Cracovia Uruguay

In the capital of Uruguay, Montevideo, an amateur soccer club Cracovia Uruguay was founded. Its founders had been at one of Cracovia's matches a few years earlier and became its supporters. The club decided to appreciate the initiative of the Uruguayans and, together with its partner the Puma company, it sent a package to Uruguay, which included matchwear and passes for Cracovia matches for all players of the club Cracovia Uruguay, as well as other club trinkets. The action was widely reported in social media and was very positively received by the fans. In the club's museum at the stadium at 1 Józef Kałuża Street, a Uruguayan club t-shirt also appeared.

6. Teddy Bear Toss

The sixth edition of the popular action worldwide took place in 2019 at the Cracovia ice rink. The teddy bears, thrown on the surface after the first goal for Comarch Cracovia, were delivered as usual to children from Kraków orphanages and the University Children's Hospital.

7. The #SergiuKing Action

The action is organized in cooperation with the fans, to collect toys, clothes, cosmetics, school supplies, etc. for a needy family from Romania, supported by one of the Cracovia players – Sergiu Hanca.

8. ”The Glove Action”

The initiative was created by high school students from Kraków, in which the oldest sports club in Poland is based. Before two Cracovia matches, volunteers taking part in the "Give Warmth" campaign collected clothes for homeless people, to be distributed to the poorest during the Charity Eve on the Main Square in Kraków.

9. The #Grey Screen Action

Before Christmas, the Club joined the social responsibility campaign to fight people's addiction to mobile phones. At Christmas, the Club abandoned publications on social media to encourage fans to spend this time with their families.

10. Szlachetna Paczka

Soccer and hockey players of Cracovia have once again supported the Noble Parcel campaign, thus helping families in need.

11. WOŚP

As every year, the Club also supported the Great Orchestra of Christmas Charity, donating for the auction, among other things, match jerseys with autographs of the players.

12. Cooperation with the Ithaca Foundation.

Inspired by the activities of Western clubs, the Club decided to use its reach in social media and, in cooperation with the Ithaca Foundation, help to search for missing people. Photos of missing people appear regularly on the Club Facebook and Twitter pages.

13. Cracovia Fan Day and Fat Thursday

Cracovia soccer and hockey players served doughnuts and apples to the inhabitants of Kraków - a reminder of the need of balance in a healthy lifestyle. The players conducted a number of competitions, in which club trinkets and invitations to the matches were to be won.

13. "Stripes with class" (pol. „Klasy w Pasy")

Action supporting the idea of safe and cultural cheering in stadiums. The club invites to matches organized groups of young people from schools and other educational institutions, including specialist sports schools. Entry for participants and their supervisors is free of charge.

14."Cracovia in schools"

Cracovia's athletes and coaches regularly go to Kraków's schools in order to spread knowledge about a healthy lifestyle, careers in sport, dietary restrictions, cultural doping at the stadium or education as part of a dual-track career for athletes. For many young people, such meetings are a source of inspiration and motivation to continue working hard, not only in sport.

15. Extra Talent and Academy of the Extra Class

Cyclical actions dedicated to young athletes, organized in cooperation with the Extra Class league. The actions support the development of young players and give children of primary schools a chance to show their talent to professional coaches.

16.Cracovia Kids

Cracovia Kids is a unique Polish sports development project for the youngest. Following the example of the best clubs in the world, we invite children and their parents to have great sports fun in our "striped" kindergartens. By raising the spirit of fair play, the most important principle of sport, we want to build health habits among youngsters through the physical activity. This, combined with an individual approach, is a chance for a great ball adventure. And who knows? Perhaps this is an opportunity to find real soccer talent among skilled young people.

10

Prizes and Rankings

AWARDS FOR COMARCH

Comarch received the **Pipeline Innovation Awar**d as a leader in the “Innovation in Assurance” category. This category is intended to “recognize innovations designed to assure services and operations, and to prevent customer-facing issues”. Pipeline Innovation Awards are granted by a jury of key executives from leading service providers and influential members of the telecom analyst community. The awards are among the most desired endorsements for continued excellence in the field of communications technologies.

Each year, the editors of "Gazeta Bankowa", a Polish banking magazine, indicate the most interesting technology innovations on the domestic financial market. "Hit of the Year" is a contest selecting the most innovative IT solutions for companies and institutions. It is divided into three categories: "Banking", "Insurance and other financial institutions" and – recently added – "Industry 4.0". The latter refers to the so-called fourth industrial revolution, which consists in the integration of physical objects with the information network. This year, in the "Banking" category, the **Comarch Anti-Money Laundering system was named a hit**. Its main task is to monitor transactions and identify money laundering attempts, while the most important feature it has is the ability to draw conclusions from its analyses. Because the system is AI-based, it understands the relationships and similarities between data, and in so doing, it can better detect and predict anomalies.

Comarch was announced as the recipient of the **Best Loyalty Innovation** award during this year’s Loyalty & Awards 2020 conference, a two-and-a-half-day exclusive conference that provides travel industry professionals with a forum to discuss the latest technological innovations and new trends driving customer loyalty.

Gala of the "Trustworthy Brand" Awards 2019

From the left: professor Janusz Filipiak, CEO of Comarch and Michał Zajączkowski, General Director of HPE Polska

The Loyalty & Awards Conference is led by a panel of top customer engagement professionals looking to acknowledge genuine innovations in loyalty management, especially those that can revolutionize travel loyalty.

Comarch received the **INVEST 2018 award in the 'Polish Investor in France' category**. This prize was awarded as part of a competition organized by the Polish Embassy in Paris for the company's contribution to building bilateral relations and improving Poland's image by showing the innovative and dynamic side of the Polish economy. The ceremonial gala was held on November 21, 2019 at the Embassy of the Republic of Poland in Paris.

Comarch was chosen as the best company in the ranking of the IT businesses providing services for the financial sector. As each year, **IT@BANK** ranking also awards distinctions in five additional categories: efficiency, development potential, the Innovation leader according to IT companies, company’s position in the financial sector and company’s position in the cooperative banking sector. Apart from the Main Award Comarch was honoured to be the winner in “Development potential” category and took the second prize in “Company’s position in the financial sector” one.

During the annual conference for clients and partners of Hewlett Packard Enterprise "HPE Discover", Comarch received the **title of CEEMA Service Provider of the Year**. On behalf of Comarch, the occasional statuette was received in Las Vegas by Marek Hojda, Indirect Sales Manager HPE Polska.

Comarch received the **Małopolska Economic Award** in the large entrepreneur category. It is a distinction awarded by the Małopolska Economic Council for companies and institutions that constitute the economic business card of Małopolska.

During the jubilee meeting of the Social Insurance Institution (Zakład Ubezpieczeń Społecznych), which celebrated its 85th anniversary, awards were presented to the institution's partners. Comarch implementing strategic projects

Gala of IT@BANK 2017 Awards

for the state received the "**Leader of Cooperation**" award. The award was granted for the involvement and support of ZUS in the implementation of tasks serving the good of the state and citizens.

Comarch was in the top 10 of the national champions ranking prepared by the **Polityka Insight** analytical and research company. The authors of the list took into account the performance of enterprises, role in the industry, their presence on the international market as well as investments in development and innovation.

Comarch became the winner of **the "Trustworthy Brand" ranking in the "Company offering cloud services" category**. Nearly 25 per cent of entrepreneurs, by completing surveys in which they spontaneously answered, which brand they trust the most in a given category, indicated Comarch as the most popular service provider in the cloud model. The study was conducted by the Kantar Millward Brown institute on behalf of the magazine "MyCompany Polska". Online surveys contained open questions in which entrepreneurs selected brands in 26 categories of the most popular services and products for business, including leasing company, Internet provider, hosting company, telecommunications operator. Only one brand could be identified in each category. The form of the survey gave equal chances to every brand, regardless of its size and scope. The respondents' answers were based on their knowledge and experience.

Comarch **received the White CSR Leaf in the eighth edition of the CSR Leaf ranking of the Polityka weekly**. These are awards for the most responsible and socially engaged companies. Corporate social responsibility review is prepared on the basis of the results of a survey sent to enterprises. As every year, the analyzed areas were: corporate governance, human rights, behavior towards employees, environmental protection, customer care, business integrity and social commitment. The ranking partners are the consulting company Deloitte and the Responsible Business Forum.

Every year, the editors of the Computerworld magazine prepare a publication in which they describe the condition of the Polish IT market, analyze industry trends and prepare company rankings in several categories. According to the authors of the "**Computerworld Top200 2019**" report, Comarch came first in the categories of integration service providers and cloud service providers. It also held high positions among providers of service solutions for the trade sector and companies from the telecommunications industry. The financial result generated in 2018 in the amount of PLN 1.32 billion gave the Comarch Capital Group the sixth position in the category statement 'The largest capital groups operating in Poland in 2018'. Comarch SA took ninth place in the ranking of "IT companies with the highest net profit from IT" with a result of PLN 49.6 million. In turn, in the category "The largest IT companies operating in Poland" Comarch currently occupies the 13th position, two points higher than a year ago.

Comarch was awarded the **Pearl of the Polish Economy** certificate in the Great Pearls category. The jury awarded the company with an award for the consistent implementation of the company's policy and strategy and a leading position among the most dynamic and effective enterprises. The organizer of the event is the publisher of the English-language monthly "Polish Market" and a partner at the Warsaw School of Economics.

For the 20th time, **"Puls Biznesu" awarded the best listed companies**. Comarch was among the winners of the competition and took the fourth place. The jury assessed which company has the most competent management board, achieved the most spectacular success in the previous year, can boast the best in the market quality of products and services, and best conducts relations with investors and has the most interesting development perspectives.

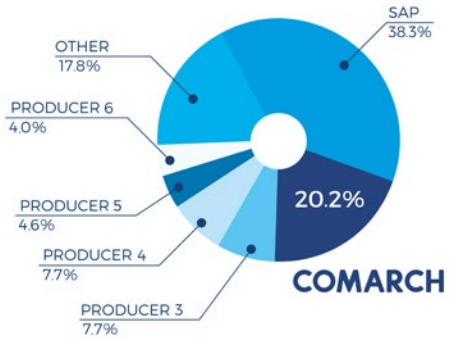
Comarch received the title of "**Jedynka Gazeta Wyborcza**". This distinction is awarded to enterprises that have made a special contribution to the development of the Małopolska economy over the past 30 years. The awards were presented during a conference "30 years of Małopolska's economic success", organized by the editors of Kraków's Gazeta Wyborcza.

COMARCH IN REPORTS OF ANALYTICAL COMPANIES

Comarch Wealth Management was recognized by **Celent in their report on European wealth management technology vendors**. The report examined European vendors of front-to-back office wealth management platforms available in Europe, the Middle East, and Africa. In all, 14 different solutions were profiled, with an overview of features, the customer base, lines of business supported, as well as technology, implementation, pricing, and support. Celent positively notes the depth of service provided by Comarch to clients, as well as the firm's ability to scale these services to serve global multinationals and other large clients. Celent also highlights positive client feedback around system implementation and maintenance.

Comarch has been recognized by POI Institute for our sales support solutions including Mobile Sales Force, Online Distribution and Reporting Platform. Featured in **the 2019 Vendor Panorama for Retail Execution and Monitoring in Consumer Goods report**, this year Comarch has also received the POI Best-in-Class Award for Interactive Customer Presentation. Comarch is one of a few companies that offer integrated TPM, Retail Execution and eCommerce. POI Institute has also acknowledged us for delivering highly interactive Analytics with innovative KPIs.

According to the report "**Poland Enterprise Application Market Shares, 2018: 2019 Update**" Comarch, as the only company classified in the top three providers of Enterprise Application Software solutions, has increased its share in this segment. Sales of Comarch systems increased in 2018 and already includes 20.2 per cent of enterprise management systems market. This gives the company a second place in the list of producers, including both Polish and foreign companies. Among solution providers to the small and medium-sized enterprise segment (employing up to 499 employees), Comarch maintained its leadership position for another year in a row. According to IDC, the company has almost 30 per cent market share. Another supplier has 19.8 per cent in this segment.



The position of Comarch ERP in the Polish market according to the report "The Enterprise Application Software Market in Poland: 2017-2021 Forecasts and 2016 Vendor Shares"

Comarch was included by Forrester, one of the leading research and advisory companies in the world, in a February 2019 report on B2B Customer Engagement Marketing (CEM) solutions providers. Having analyzed over twenty different vendors in terms of size, performance, and post-sale marketing focus, Forrester recognized Comarch, included in the Large Vendors category, in the primary functionality segment of advocate-nurturing which included functionalities such as Customer Loyalty, Gamification, and Customer Recognition/Rewards. Apart from giving an extensive overview of the current CEM landscape, the report also offers professional advice on how to choose the right technology provider and which practices should B2B marketers implement in order to become more successful.

Gala of the Małopolska Economic Award 2019

11

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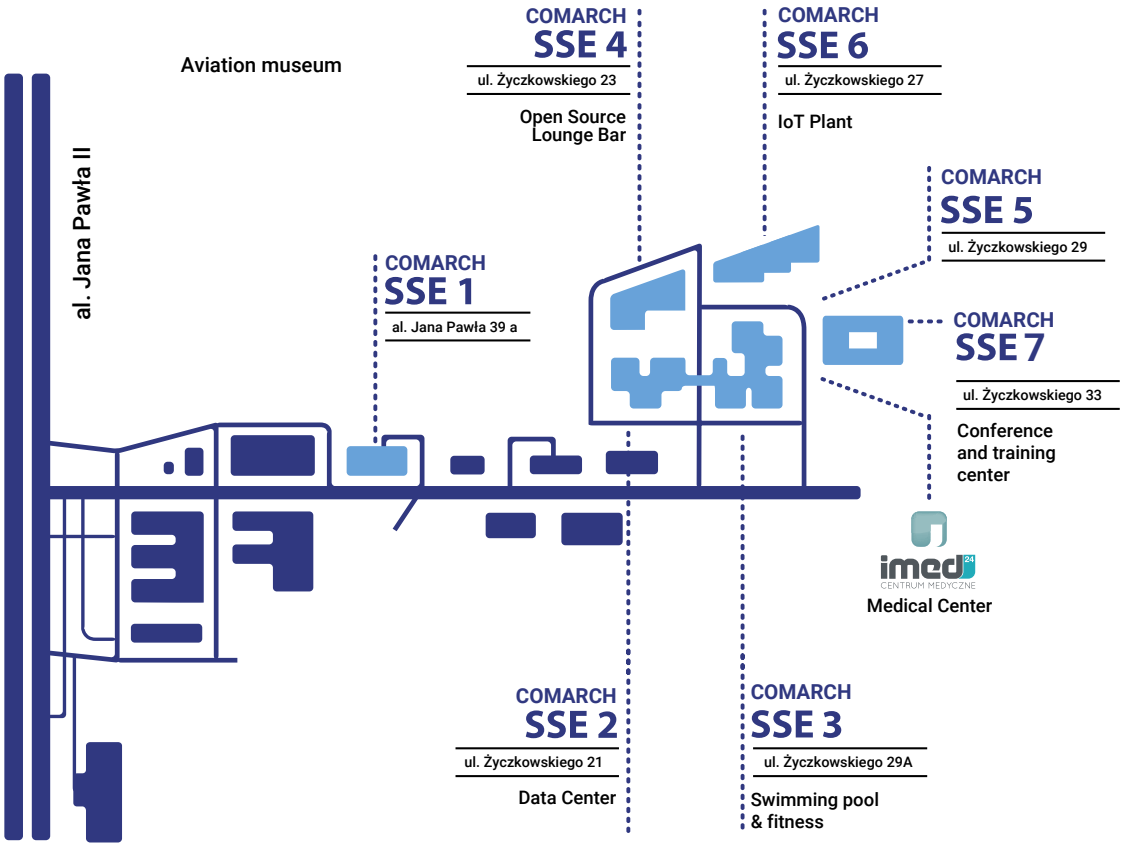

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