



Consolidated financial results of Comarch Capital Group as of 31 December, 2020.





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A Letter from Comarch CEO to Shareholders

Dear Shareholders,

I am pleased to announce to you today that the Comarch Group achieved record financial results in the challenging year 2020. Sales revenue significantly exceeded PLN 1.5 billion, operating profit amounted to PLN 191.6 million, while the net profit attributable to the parent company's shareholders was PLN 120.6 million. The operating margin in 2020 was 12.5%, and the net margin was 7.8%. The achievement of these results was possible thanks to the very good diversification of the Group's operations, a wide product offer, and the ability to adapt efficiently to a rapidly changing environment, which was particularly important in the conditions of a global pandemic.

In 2020, the Comarch Group successfully continued its growth strategy based on the development of proprietary IT products for many industries and selling them on international markets. Last year there was an increase in revenue from the sales of Comarch's software and related services, but the situation in individual business areas has changed significantly. The Group's business developed steadily in Poland, and on foreign markets, especially in Asia and Western Europe, it developed much faster than in Poland. Solutions for financial and telecommunications sectors, ERP systems, and solutions for the public sector enjoyed particular interest from customers. Thanks to the wide and comprehensive offer of modern IT solutions and high-quality services, the Comarch Group strengthened its position in 2020 as a leading Polish software producer and one of the most prominent IT suppliers in the world. Due to the global sales network that has been operating for many years, the Comarch Group was able - despite the pandemic and related limitations - to successfully develop the sales of its solutions in new markets. A visible effect of these actions was the signing last year of the largest contract in the history of the Comarch Group, worth over PLN 300 million, with a telecommunications operator from New Zealand.

In 2020, the Comarch Group continued the intensive development and improvement of new and existing IT products. Expenditures for research work exceeded PLN 260 million, which represents over 17% of the Company's sales revenue these key investments being financed primarily from the Company's own funds. The Comarch Group intensively developed a new generation of telecommunications systems dedicated to 5G technology, e-commerce solutions, ERP systems and IT solutions for the financial sector and the Internet of Things. In 2020, the Comarch Group invariably focused on the development of IT solutions in the service model as one of the market leaders in this field. In order to accelerate the development in the area of e-Health, last year the Comarch Group acquired 2CSI, a French IT company that has been providing solutions for this sector for many years. In addition, 2020 saw the composition of the Group completed by a newly established subsidiary - Comarch New Zealand LTD.

Last year the Comarch Group was a stable employer. In 2020, the number of employees increased by 114, and at the end of the year the Group employed 6,462 people worldwide. As every year, the program of summer student internships was very popular, thanks to which Comarch is perceived as the first-choice employer on the labor market in the IT industry in Poland.

The Management Board of the Comarch Group makes efforts to effectively implement the mission of globally disseminating innovative technical thought created in Poland. In addition to its business activities, the Comarch Group implements a corporate social responsibility policy 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.

The past year has proved that the Comarch Group was and is very well prepared to operate even in conditions of economic slowdown caused by the COVID-19 pandemic. I am convinced that the Comarch Group will, in the coming year as well, be able to strengthen its market position as a global provider of IT solutions, thanks to a very good current financial situation, the significant product, industry and geographical diversification of its offer, and the high commitment of employees.

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

1. Wind



## **Comarch in Numbers**



# **Worldwide Customers, Projects, Companies, Data Centers**



90 Offices

69 69

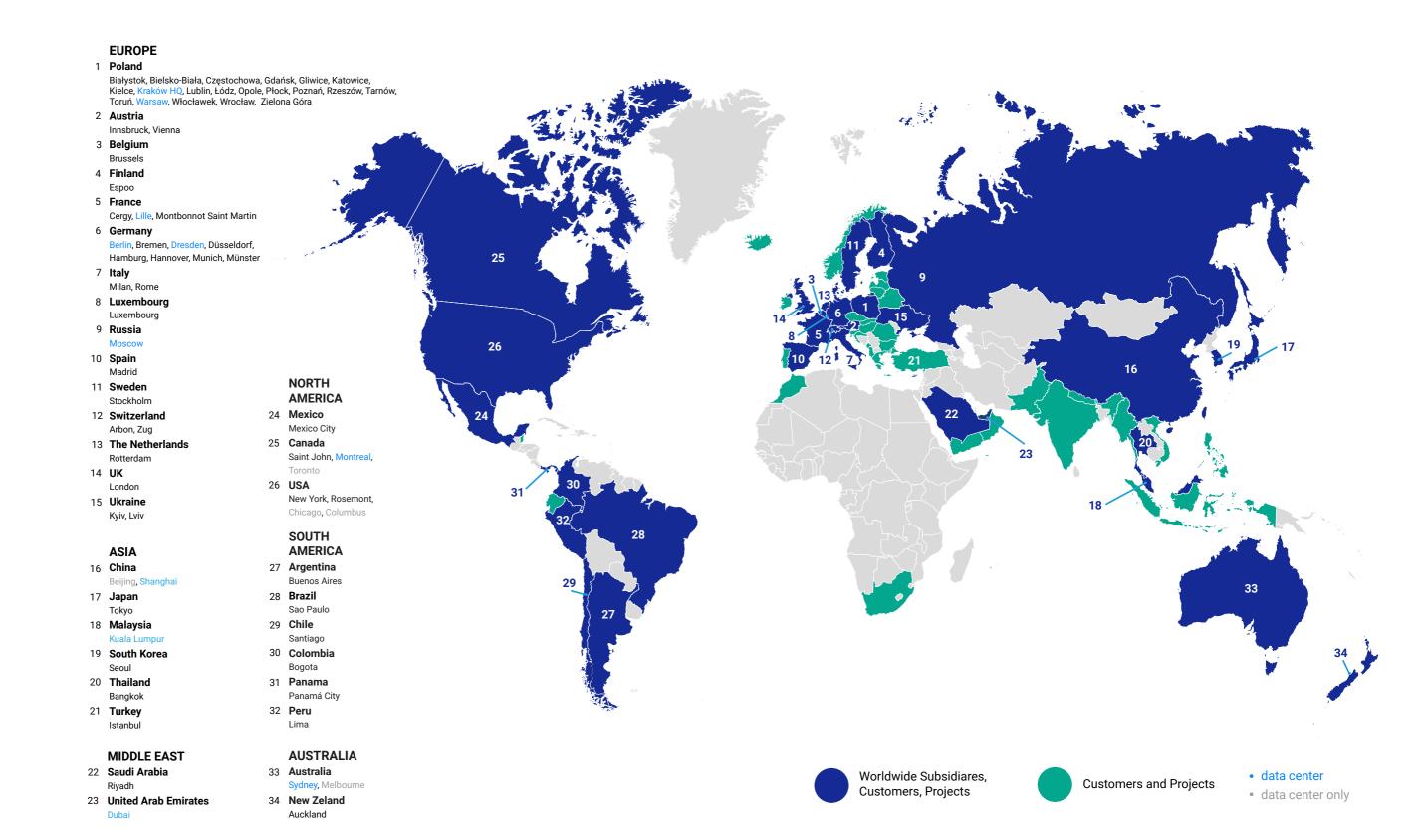
cities

<sup>1</sup>34

countries

On **5** 

continents



10 11

## **Operations of the Comarch Capital Group**

The Comarch Group is a provider of innovative IT systems for key sectors of the economy both in Poland and abroad. Comarch's main strategy is to provide customers with comprehensive IT solutions based on its own products, including in the service model. With high-class specialists and the professional infrastructure, Comarch is able to provide both IT products and implementation and maintenance services as well as 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 offered modern IT services and can optimize their business processes.

The broad range of Comarch offer covers ERP-class systems, financial and accounting systems, CRM systems, loyalty software, systems supporting sales and electronic document exchange, electronic banking systems, OCT 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, entities from the public administration, banking, accounting offices, FMCG companies, airlines, automotive, medical sector, production companies, public utility companies, capital markets, telecommunications and insurance companies, universities, trade and service companies, transport companies, fuel suppliers and entities conducting brokerage, e-commerce and factoring sectors.

The Comarch Group focuses on developing IT solutions in the service model, a field in which Comarch is among the market leaders. Last year, the Comarch Group launched a comprehensive cloud computing offer called Comarch Cloud, with the highest security standards, built on the infrastructure of Comarch Data Center. With Comarch Cloud, customers can use software, store data and run their businesses without having their own IT infrastructure, while being provided with high performance, reliability, security and scalability.

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.

#### Global scope of activities

As of the report publication date, Comarch SA has 20 branches in Poland and one in Albania. The Comarch Group consists of 61 companies located on five continents, in 34 countries, in 90 locations worldwide. In the past year, the

Comarch Group successfully continued its growth strategy based on diversifying its activity across various industry segments and regions of the world, developing its own products and selling them on the global market. For many years, one of the main strategic objectives of the Comarch Group has been the development of sales of an increasing number of products on foreign markets, particularly in Western Europe, Asia and the Americas. In the past year, four new subsidiaries were added to the Group: Cabinet Conseil En Strategie Informatique SAS (2 C.S.I.) in France, Comarch New Zealand LTD in New Zealand, Wszystko.pl Sp. z o.o. (formerly "Unitec" Sp. z o.o.) and LLC "Comarch Software" in Ukraine. The plans for 2021 provide for other capital investments, both on the domestic market and foreign ones.

#### Membership of international organizations

Comarch is a member of organizations in the IT field, such as ETIS and TM Forum, which gives it constant access to the latest standards emerging in these fields.

The TeleManagement Forum (TMF) is a non-profit organization established in 1988 to accelerate development of telecommunications networks management systems. ETIS, on the other hand, is an international organization that aims to help members improve their business performance by sharing information on the effective use of computer technology.

In 2019, Comarch joined MEF, an industry association of more than 200 companies in the telecommunications industry. Since 2020, Comarch has been a member of the O-RAN Alliance, a consortium dealing with the promotion of software-based, extensible RAN networks and the standardization of critical elements of the O-RAN Alliance architecture.

Comarch also belongs to international chambers of commerce, such as the Polish-German Chamber of Industry and Commerce, the French-Polish Chamber of Commerce, and other industry organizations around the world.

In Spain, Comarch is a member of AECOC, the Spanish representative of the global GS1 organization, and Asociación XBRL España, an association that promotes the implementation, adoption and development of the XBRL language to standardize the presentation of financial statements.

In Japan, Comarch belongs to 21c Club within EGG JAPAN. 21c Club supports companies in creating and developing new B2B companies and serves also as a platform to exchange expertise and experiences.



In Italy, Comarch is a member of the Retail Institute Italy, whose mission is to promote the culture and development of the entire sector, by offering basic content and strategic actions. Moreover, Comarch belongs to an association of companies operating in the metropolis of Milan and in the provinces of Lodi, Monza and Brianza in Pavia – Assolombarda. The role of the association is to support member companies in contacts with local companies and institutions. Comarch is also a member of the Osservatorio Innovazione Digitale in Sanità. The institution's mission is to create and disseminate knowledge about the impact that digital technologies have on businesses, public administration and citizens.

In the Benelux countries, Comarch belongs to the Belgian-Polish-Luxembourg Chamber of Commerce, whose mission is to promote Belgian and Luxembourg investments and exports to Poland and to support Polish companies in their cooperation with Belgian and Luxembourg companies. A member of the board at BEPOLUX is Wojciech Pawluś, Comarch's Managing Director for the Benelux.

In France, Comarch is a member of the HUB-RETAIL "Cross-Canal and Omni-Logistics" association. The aim of the organization is to unite and collaborate the business community in the Auvergne-Rhône-Alpes region and the associated

logistics sector. Comarch also belongs to the Adira organization, which brings together all the regional players in the field of information technology. In addition, Comarch is a member of AD2N, a regional association that brings together more than 40 companies that provide digital services (ESN) and providers of IT systems. It also operates within the structures of Syntec Numérique. It is a professional organization bringing together digital service companies (ESNs), software publishers and technology (ICT) consultancies. The company also belongs to Clubster NSL - Nutrition, Santé, Longevité, a cluster of companies in the agri-food, health, healthcare, biotechnology and e-health sectors, which stimulates the exchange of and cooperation between academia and industry and supports candidate innovation projects in finding regional, national and European funding sources.

Comarch is also a member of the PIKOM cluster, which brings together small and large research laboratories and training institutions involved in a specific industry. In Australia, Comarch is a member of the Australian Loyalty Association. This is an organization set up to promote education and provide networking opportunities for those working in the loyalty industry. In addition, it is also a member of Loyalty360, an association that operates in the customer loyalty marketing solutions market with the aim of enabling and encouraging dialog between industry leaders.

#### **Customers**

Due to the type of IT systems offered by the Comarch Group, the main group of recipients are medium-sized and large enterprises, which are the largest customers for advanced IT solutions worldwide. Most of the Comarch Group's products are aimed at a specific group of customers, while IT services, due to their universal nature, are offered to any group of customers. The offer of the Comarch Group is intended both for entities on the Polish market and for foreign customers. For many years, one of the main strategic goals of the Comarch Group has been the development of sales of an increasing number of products on foreign markets, especially in Western Europe, both Americas and Asia. Sales by the Comarch Group are much diversified and the Group is not dependent on any single buyer. As in Comarch SA, in the Comarch Group in 2020, sales to no single contractor exceeded 10 per cent of total sales.

The most important principles of the Comarch Group are responsibility for customers' success and respect and

openness to their needs. The Comarch Group provides its customers with innovative IT products of the highest quality, which is achieved as a result of the high skills, experience and competencies of its employees, cooperation with leading research and development centers both in Poland and abroad, as well as making every effort to ensure that the IT solutions delivered meet the highest standards and customer expectations.

With regard to contacts with public sector customers (central and local government administration, municipal companies, State Treasury companies, and public health care institutions), the provisions of the Act of 11 September 2019 apply. Public Procurement Law (Journal of Laws of 2019, item 2020, of 2020, item 1086). These provisions regulate the manner of communicating with the contracting authority during the tender procedure, the scope of actions that may be taken by the parties to the procedure and legal remedies.

# Prospects for the Development of the Comarch Group's Activities and its Expected Financial Situation in 2021

In 2020 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 the financial and banking sector, the public sector, the medical sector and for ERP products, while sales to the telecommunications sector and trade and services declined. The Group's order book currently ensures that its production capacity will be fully utilized in the next few periods.

In 2021, the business activities of the Comarch Group will be significantly affected by the epidemic 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 operations and also the financial standing of its customers and their demand for IT products and services, too. As at the Report's preparation date, the Group's operations were carried out without any disturbance. 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.

In terms of revenues sales, there was a temporary decline in revenue from the sale of services and products offered in industries negatively affected by lockdowns, but there was also an increase in revenue in industries benefiting from this situation (e.g. online trading, logistics and telemedicine). The financial results achieved in the coming periods will also be affected by the duration of the epidemic, further administrative restrictions on the functioning of countries, restrictions imposed on businesses, the possibility of utilizing aid packages launched by individual countries, the pace of implementation of the vaccination program, as well as exchange rate volatility and the financial condition of the Group's customers.

Comarch's activities and financial results in 2021 will also be influenced by political and economic developments in Poland and worldwide, as well as the situation on the labor market. Thanks to the strategy, consistently pursued for many years, of positioning itself on the market as a technology and product company, Comarch's 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, in particular to investment levels in IT made by medium-sized and large companies in Poland and abroad and to the intensifying competition in the IT labor market. Additionally, effective management of operational risks is another condition required to implement strategies. An opportunity for the Group is its great innovativeness and the increase in demand for IT delivery in the service model - the Comarch Group, thanks to its wide range of own products, infrastructure, human and capital resources, can flexibly adjust to business models expected by clients.

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 deferred sales and the often long lead times of contracts;
- risk of staff turnover, risk of lack of an adequate number of qualified staff, risk of rising labor costs;
- currency and interest rate risk;
- risks related to international terrorism which affects business trips to various regions of the world;
- risks related to the spread of the SARS-CoV-2 coronavirus and COVID-19 outbreaks, which affect the way the Group conducts its business and the financial health of the Group's customers and the demand they generate for IT products and services.

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

# **Characteristics of Factors Significant for the Development of the Comarch Group**

#### Internal factors

- a high degree of diversification of its activities, both in terms of industry and in terms of geography and products;
- continuous growth of sales and importance of foreign business;
- position and reputation of the Comarch Group affecting the type of attracted customers;
- Comarch Group's activities in the special economic zone in Kraków;
- 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 (license fees),
  - a broader and more diversified clientele meaning a larger scale of operations.

- attractive training policy and attractive working conditions offered to employees 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**

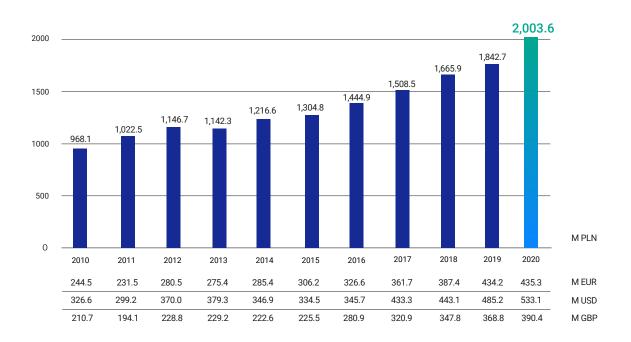
- an increase in the demands placed on information systems by clients. Demand has been growing for large, complex IT systems dedicated to specific users. This better positions larger IT companies like the Comarch Group that offer a number of various technologies and products and are able to provide technologically advanced solutions;
- growing importance of mobile technologies, now commonly applied in IT solutions for all user groups;
- changing business models in many industries and changes in the business strategies of many companies due to technological progress and economic development, which shapes the demand for new IT systems, the widespread sale of software in the cloud computing model means increased capital and resource requirements for IT companies;
- 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;
- exchange rate volatility, particularly EUR/PLN and USD/ PLN, GBP/PLN, CAD/PLN, CHF/EUR, BRL/PLN, NZD/ PLN, RUB/PLN, UAH/PLN and AED/PLN affecting the profitability of foreign sales;
- the global economic situation, with particular emphasis on the situation in Europe, affecting the volume of demand for IT products and services in this market and the financial credibility of customers in this geographic area;
- international political situation, including, growing risk of terrorist attacks at locations where projects are carried out making their execution more difficult.
- the epidemiological situation in the world, related to the spread of the SARS-CoV-2 coronavirus and the COVID-19 outbreak, which affects the Group's business activities, the way it organizes its work and contacts with customers, the health of its employees, and also affects the situation of the Group's customers and the demand they generate for IT products and services.

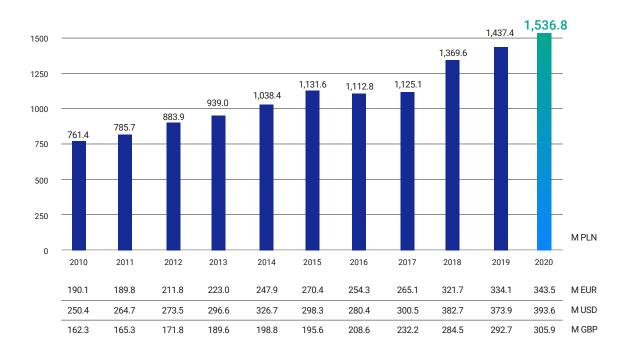


Comarch SSE7 Building, Kraków

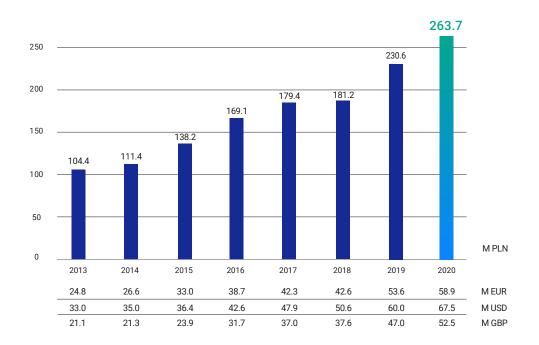
## **Balance Sheet Total**



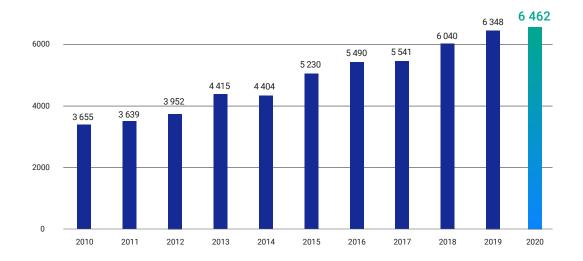
# **Sales Revenue**



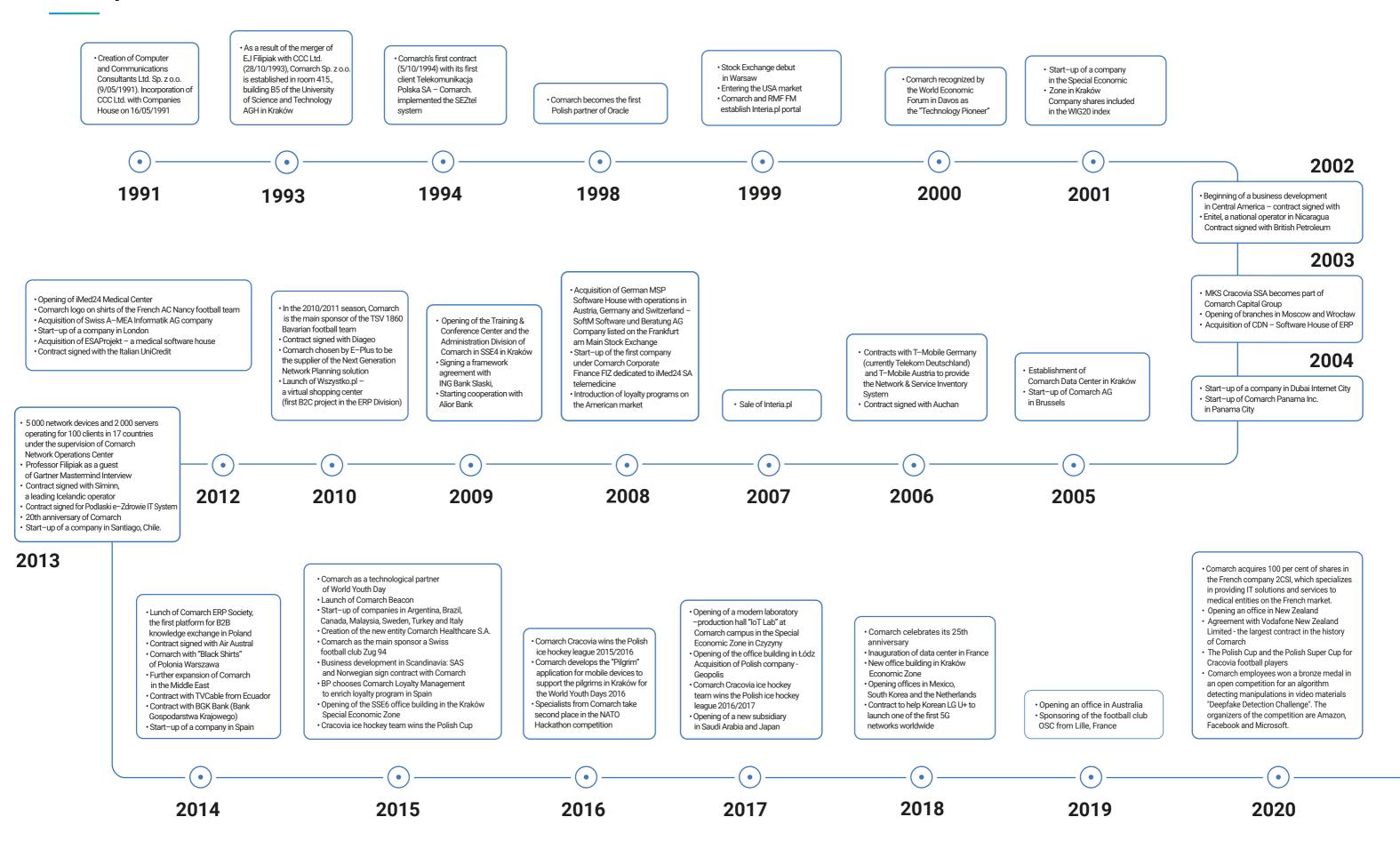
# **Research and Development Expenditure**



# **Employment**



# **History of Comarch**



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Financial Analysis

## **Basic Economic and Financial Figures**

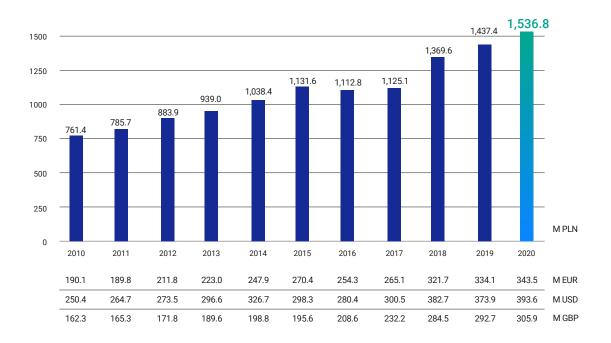
#### Selected consolidated financial data

|   | 2020      | 2019      | 2018      | 2017**    | 2016      |
|---|-----------|-----------|-----------|-----------|-----------|
| Revenues from sales                                     | 1 536 753 | 1 437 423 | 1 369 619 | 1 125 110 | 1 112 813 |
| Revenues from sales of own solutions                    | 1 448 379 | 1 336 083 | 1 242 114 | 1 047 393 | 1 041 133 |
| Operating profit  | 191 561   | 143 383   | 87 543    | 58 364    | 116 893   |
| EBITDA*   | 277 852   | 228 312   | 152 748   | 122 673   | 179 901   |
| Profit before tax                                       | 164 254   | 142 369   | 62 480    | 87 149    | 104 777   |
| Net profit attributable to equity holders of the parent | 120 631   | 104 846   | 30 616    | 64 626    | 73 034    |
| Earnings per share (in PLN)                             | 14.83     | 12.89     | 3.76      | 7.95      | 8.98      |
| Assets  | 2 003 558 | 1 842 711 | 1 665 945 | 1 508 452 | 1 444 875 |
| Equity  | 1 098 547 | 970 756   | 876 108   | 851 190   | 862 064   |

In 2020, the Comarch Group's sales revenues were PLN 99,330 thousand, i.e. 6.9%, higher compared to the previous year. The operating profit amounted to PLN 191,561 thousand and was PLN 48,178 thousand, i.e. 3.6%, higher than in 2019. The net profit attributable to equity holders of the parent company in 2020 amounted to PLN 120,631 thousand and was PLN 15,785 thousand, i.e. 15.1%, higher than in 2019. Operating profitability was 12.5% (previous year 10.0%), net profitability 7.8% (7.3% in 2019).

The value of Comarch Group's assets at the end of 2020 increased by PLN 160,847 thousand, i.e. by 8.7%, compared to 2019. The value of equity increased in 2020 PLN 127,791 thousand i.e. 13.2%, mainly as a result of the net profit generated in 2020.

#### Revenues from sales



<sup>\*)</sup> Operating profit + Depreciation
\*\*\*) From 1 January 2018. The Group started to apply the principles under IFRS 15 to sales revenue. For comparative purposes, the 2017 figures were also restated in accordance with IFRS 15. The figures for 2015 – 2016 have not been restated in accordance with IFRS 15.

#### Structure of sales

#### Revenues from sales – geographical structure (in PLN thous.) PLN)

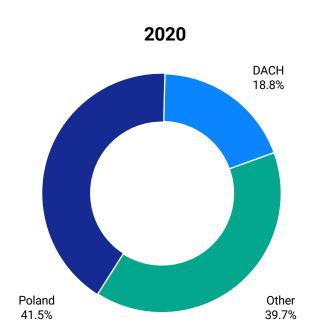
|                     | 12 months<br>2020 | %      | 12 months<br>2019 | %      | 12 months<br>2018 | %      |
|---------------------|-------------------|--------|-------------------|--------|-------------------|--------|
| Country (Poland)    | 637 943           | 41.5%  | 594 021           | 41.3%  | 632 372           | 46.2%  |
| Abroad              | 898 810           | 58.5%  | 843 402           | 58.7%  | 737 247           | 53.8%  |
| Revenues from sales | 1 536 753         | 100.0% | 1 437 423         | 100.0% | 1 369 619         | 100.0% |

In the 12 months of 2020, the Comarch Group recorded PLN 637,943 thousand of domestic sales revenues, PLN 43,922 thousand (i.e. by 7.4%) higher than in the corresponding period of 2019. This was due to increased sales to the public sector, SME-Poland and the medical sector. Foreign sales in the 12 months of 2020 amounted to PLN 898,810 thousand and were PLN 55,408 thousand (i.e. by 6.6%) higher than in the corresponding period of the

previous year. This is mainly due to the increase in revenue from sales to customers in the finance and banking sector and SME – DACH. Foreign sales accounted for 58.5% of the Comarch Group's total revenue in the 12 months of 2020.

The geographical structure of sales remained stable during the financial year.

#### The geographical structure of sales



|                  | 12 months<br>2020 | %      | 12 months<br>2019 | %      | 12 months<br>2018 | %      |
|------------------|-------------------|--------|-------------------|--------|-------------------|--------|
| Country (Poland) | 637 943           | 41.5%  | 594 021           | 41.3%  | 632 372           | 46.2%  |
| DACH             | 288 691           | 18.8%  | 279 899           | 19.5%  | 241 637           | 17.6%  |
| Other countries  | 610 119           | 39.7%  | 563 503           | 39.2%  | 495 610           | 36.2%  |
| Total            | 1 536 753         | 100.0% | 1 437 423         | 100.0% | 1 369 619         | 100.0% |

Group sales in the DACH region in 2020 increased by PLN 8,792 thousand i.e. 3.1%, on the previous year, and accounted for 18.8% of the Group's total sales. Other

foreign sales increased by PLN 46,616 thousand, i.e. 8.3%, compared to 2019. Other foreign sales accounted for 39.7% of the Group's total sales in 2020.

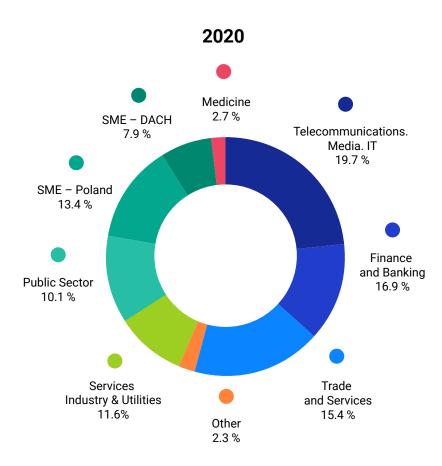
#### Structure of sales by recipients (in PLN thous.)

| Total                         | 1 536 753 | 100.0% | 1 437 423 | 100.0% | 1 369 619 | 100.0% |
|-------------------------------|-----------|--------|-----------|--------|-----------|--------|
| Other                         | 35 182    | 2.3%   | 32 341    | 2.2%   | 27 128    | 2.0%   |
| Medicine                      | 40 820    | 2.7%   | 25 919    | 1.8%   | 27 351    | 2.0%   |
| SME - DACH                    | 122 146   | 7.9%   | 100 411   | 7.0%   | 99 568    | 7.3%   |
| SME - Poland                  | 206 169   | 13.4%  | 190 421   | 13.2%  | 160 874   | 11.7%  |
| Public Sector                 | 154 541   | 10.1%  | 130 352   | 9.1%   | 193 000   | 14.1%  |
| Industry & Utilities          | 179 019   | 11.6%  | 179 336   | 12.5%  | 138 344   | 10.1%  |
| Trade and Services            | 237 137   | 15.4%  | 251 743   | 17.5%  | 202 406   | 14.8%  |
| Finance and Banking           | 259 151   | 16.9%  | 191 054   | 13.3%  | 204 532   | 14.9%  |
| Telecommunications, Media, IT | 302 588   | 19.7%  | 335 846   | 23.4%  | 316 416   | 23.1%  |
|                               | 2020      | %      | 2019      | %      | 2018      | %      |

In the 12 months of 2020, sales to TMT customers amounted to PLN 302,588 thousand, which means a decrease by PLN 33,258 thousand (i.e. by 9.9%) compared to the corresponding period of 2019. Customers in the finance and banking sector purchased products and services worth PLN 259,151 thousand, higher than in the corresponding period of the previous year by PLN 68,097 thousand, i.e. by 35.6%. On the other hand, a decrease was recorded in sales to customers from the trade and services sector (PLN 14,606 thousand, i.e. 5.8%), which was caused by reduced demand for IT solutions among customers from industries more affected by the COVID-19 outbreak. Revenues from sales to customers in the industrial and utilities sector also recorded a decrease,

by PLN 317 thousand, i.e. 0.2%. Revenues from sales to public sector customers increased significantly (by PLN 24,189 thousand, i.e. 18.6%). There was also a significant increase in revenues in the case of sales to the medical sector (PLN 14,901 thousand, i.e. 57.5%). Customers from the SME-Poland sector purchased products and services worth PLN 15,748 thousand, i.e. 8.3% higher than in the corresponding period of the previous year. There was also a significant increase in sales to customers in the SME-DACH sector (by PLN 21,735 thousand, i.e. by 21.6%). Revenues from sales to other customers increased by PLN 2,841 thousand, i.e. by 8.8%.

#### Structure of sales by type (thousand PLN)



The business situation in the 12 months of 2020 confirmed that maintaining diversification of revenue sources and diversity of the offer is beneficial for the stable development of Comarch Group's activities. Thanks to its focus on sales

of own solutions, the Comarch Group recorded a significant increase in revenue and improved operating profitability.

The structure of sales by customer remained stable during the financial year.

#### Structure of sales by type (thousand PLN)

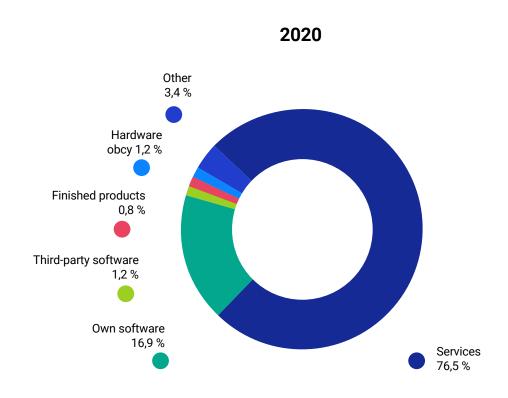
|                      | 2020      | %      | 2019      | %      | 2018      | %      |
|----------------------|-----------|--------|-----------|--------|-----------|--------|
| Services             | 1 175 323 | 76.5%  | 1 074 965 | 74.8%  | 992 627   | 72.4%  |
| Own software         | 259 952   | 16.9%  | 249 442   | 17.3%  | 207 271   | 15.1%  |
| Third-party software | 18 219    | 1.2%   | 30 997    | 2.2%   | 24 041    | 1.8%   |
| Finished products    | 13 104    | 0.8%   | 11 676    | 0.8%   | 42 216    | 3.1%   |
| Hardware             | 18 597    | 1.2%   | 19 134    | 1.3%   | 55 728    | 4.1%   |
| Other                | 51 558    | 3.4%   | 51 209    | 3.6%   | 47 736    | 3.5%   |
| Total                | 1 536 753 | 100.0% | 1 437 423 | 100.0% | 1 369 619 | 100.0% |

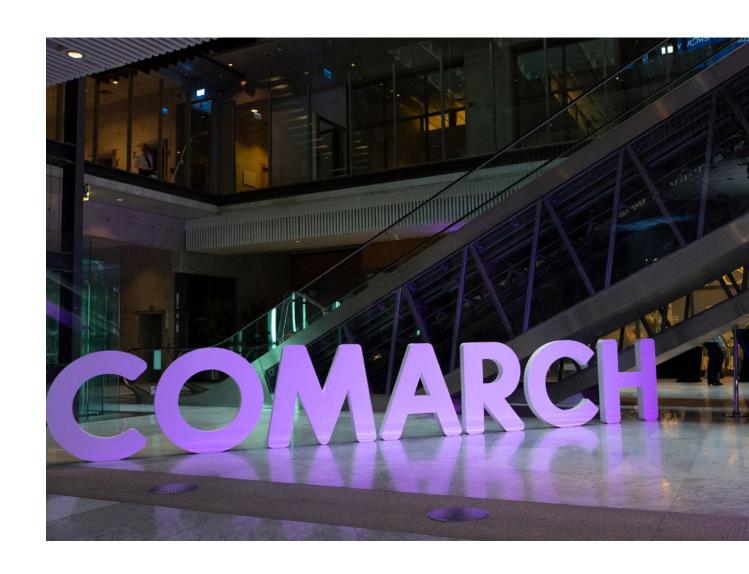
In the 12-month period of 2020, the type structure of the Comarch Group's sales revenue did not change significantly compared to that recorded in the corresponding period of 2019. Revenues from sales of IT services increased by PLN 100,358 thousand, i.e. by 9.3%. Revenues from sales of own software recorded an increase of PLN 10,510 thousand, i.e. by 4.2%. Sales of own finished goods increased compared to the previous year (by PLN 1 428 thousand, i.e. by 12.2%), similar to other sales, where the increase

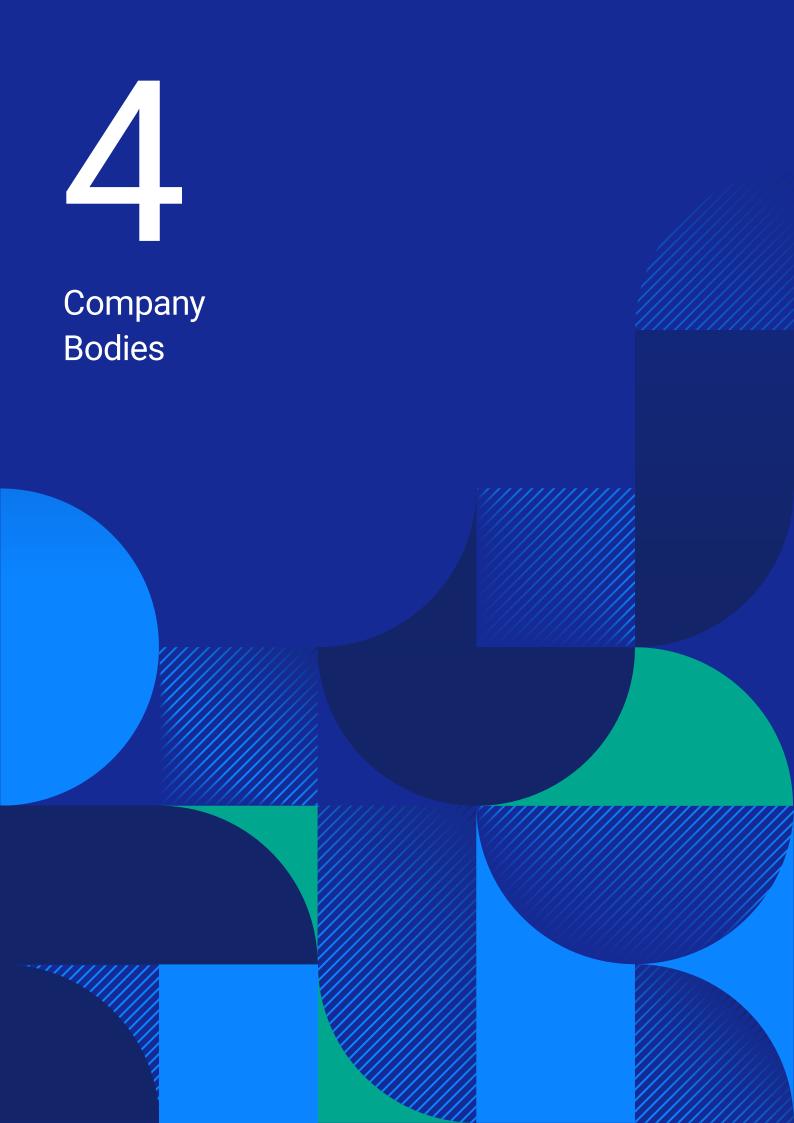
in revenues amounted to PLN 349 thousand (i.e. 0.7%). Revenues from sales of third-party software decreased by PLN 12,778 thousand, i.e. by 41.2%. In the 12-month period of 2020, sales of third-party hardware decreased by PLN 537 thousand, i.e. 2.8%.

Throughout 2020, the structure of sales by type remained stable.

#### Structure of sales by type (thousand PLN)







## **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-President of 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

#### **Danuta Drobniak**

Member of the Supervisory Board

#### Łukasz Kalinowski

Member of the Supervisory Board

#### Joanna Krasodomska

Member of the Supervisory Board

#### **Anna Pruska**

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

## **DIVISIONS**



**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



Jacek Lonc

Director of TELCO SALES&BUSINESS STRATEGY



**Paweł Workiewicz** 

Director of



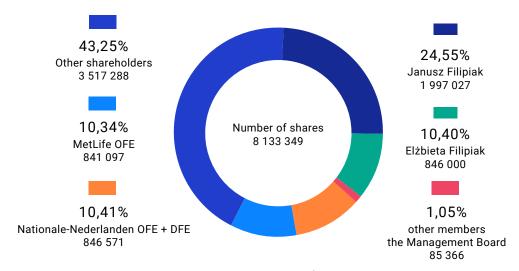
Andrzej Zasadziński

Director of TELCO BSS

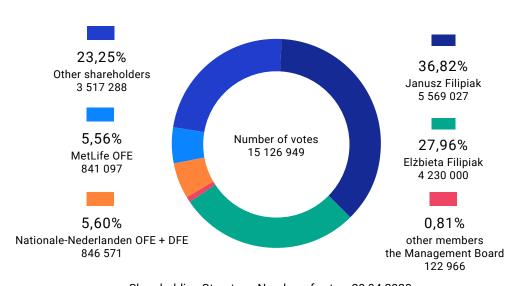
# **Shareholding structure**

The share capital of Comarch S.A. is made up of 8 133 349 shares with a total nominal value of PLN 8,133,349. According to information possessed by Comarch S.A., as of 31 December 2020, shareholders holding at least

5% of votes at the Company's AGM are Janusz Filipiak, Elżbieta Filipiak, Nationale-Nederlanden OFE + DFE and MetLife OFE.



Shareholding Structure. Number of shares 29.04.2020



Shareholding Structure. Number of votes. 29.04.2020

# 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
- SoInteractive SA
- WSZYSTKO.PL sp. z o.o.

#### FUROPE

- 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 Software LLC Ukraine
- Comarch 000 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
- Cabinet Conseil en Strategie Informatique SAS (2 C.S.I.) – Francja

#### **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.) South Korea
- Comarch (Thailand) Limited Thailand

#### MIDDLE EAST

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

#### **AUSTRALIA AND OCEANIA**

- Comarch Pty. Ltd Australia
- Comarch New Zealand Limited New Zeland

# Ownership changes, capital changes and changes in the organizational structure of the Comarch Group in 2020

On 10 February 2020, an increase was made in the share capital of Comarch Pty. Ltd. from 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).

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

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

On 16 April 2020, the share capital increase in Comarch SRL was registered.

The Management Board of Comarch SA informed, in its current report no. RB-6-2020 of 23 April 2020, of the signing of an agreement by Comarch SA to acquire 100 per cent of the shares in the company CABINET CONSEIL EN STRATEGIE INFORMATIQUE S.A.S. with its seat in Cergy, France (hereinafter "2CSI"), which provides IT solutions and services for medical entities on the French market. As part of the transaction, Comarch SA acquired 500,000 shares in 2CSI with a nominal value of EUR 1 each from the company's existing shareholders. Shares in 2CSI were purchased at a unit price of EUR 4.20, i.e. PLN 19.09 per share, and the total value of the transaction amounted to EUR 2,100,000, i.e. PLN 9,543,240 (at the euro exchange rate on the date of publication of the current report).

On 18 June 2020, Metrum Capital SA was merged with an entity outside the Comarch Group and ceased to be an affiliate of the parent company.

On 26 November 2020, a subsidiary of Comarch New Zealand LTD was registered in Auckland with a share

capital of NZD 50,000 (i.e. PLN 135,660) consisting of 50,000 shares worth NZD 1 (i.e. PLN 2.71) each. Comarch SA holds 100 per cent of the shares and votes in Comarch New Zealand LTD.

On 2 December 2020, the name of the company was changed from Opso sp. z o.o. to Comarch Finance Connect sp. z o.o.

On 2 December 2020, Comarch SA acquired 100 per cent of the shares of "Unitec" sp. z o.o. The share capital of "Unitec" sp. z o.o. amounts to PLN 60,000 and is divided into 100 shares with a nominal value of PLN 600 each. The total value of the transaction was PLN 1,000.

On 31 December 2020, the share capital of Comarch SAS was increased by EUR 3,000,000 (i.e. PLN 13,844,400) to EUR 4,000,000 (i.e. PLN 18,459,200).

On 21 January 2021, the management board of Geopolis sp. z o.o. filed an application with the District Court in Toruń, 5th Commercial Division, for bankruptcy including liquidation of the debtor's assets, i.e. the company. On 16 March 2021 The District Court in Toruń, 5th Commercial Division, having examined the case from the motion of Geopolis sp. z o.o. in Toruń for bankruptcy, decided to secure the debtor's assets by appointing a temporary court supervisor.

On 10 March 2021, among other things, the change of the name of Unitec sp. z o.o. to Wszystko.pl sp. z o.o. and the change of the company's registered office to Kraków were registered.

On 22 March 2021, a subsidiary LLC "Comarch Software" with a share capital of PLN 14,000 was registered in Lviv. Comarch SA holds 100% of the shares and votes in the LLC "Comarch Software".

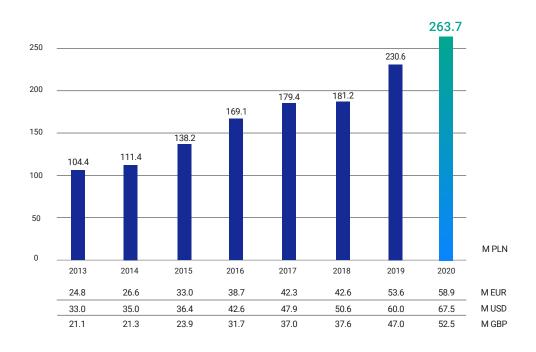
# 5

Research and Development Work

## **Research and Development Work**

The globalization of the world economy and the liberalization of trade result in the 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 an 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 selling competitive 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 technologies, 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 263,7 thousand, thus reached 17.0% of revenue in 2019. Comarch allocated their internal funds, as well as actively acquiring European funds.

# Research and Development Expenditure of Comarch Capital Group



# Research and Development Activities in the Telecommunications Division

#### **Business Support Systems (BSS)**

We continue to support the business activities of telecommunications operators within the area of direct contact with end-customers. The largest investments in the development of proprietary solutions are undertaken in the following directions:

- Intensive development of market-proven digital sales and self-service platforms aimed to digitize the majority of the BSS Suite customer-centric processes (enhancing the platform with selling and managing fixed services and including self-operation capabilities for SMEs/large enterprises).
- A new and innovative business model subscription billing-on the telecommunication market, offering telco customers the flexibility of OTT players such as Netflix and Sportify (no-invoice, no-agreement - customer connects credit/debit card to the account and has full control of the spend).
- Support for the latest technologies and market standards in terms of services provided, and preparing for dissemination of the following technologies: 5G (including new interfaces provided by the 5G network), network slicing, and SDN/NFV.
- Internet of Things (IoT)

We provide solutions for mass management of functions and connectivity in the field of the Internet of Things. Further intensive development of the IoT Connect product takes place, as follows:

 The latest version is built fully using cloud technologies, which increases the number of possible implementation variants and improves scalability as customers' businesses grow.

#### Integrated Assurance & Analytics (IAA)

As part of the projects ending in 2021, our team won first prize at virtual Action Week for the greatest contribution to the creation of standards and good practices with the Catalyst project "Al-Driven Autonomous Service Assurance - C20.0.22". This cooperation will continue under the TMF initiative "Redesigning the Operations Process (Al2)".

- Expansion of possibilities supporting sales staff in SFA (sales force automation), mainly to provide support to the key business customer market through expansion of pre-sales processes, including contract lifecycle management and streamlined quoting mechanisms.
- Introduction of AI/ML algorithms to BSS functionalities, allowing an innovative approach to customers mainly in the areas of adjusting offers to individual customers and predicting their needs by next best action or next best offer functionalities. Also improves operators' systems in terms of fraud detection, and reduces time required for verification during bill-run processes.
- Further expansion of the standard API in compliance with market standards (such as TMF Open API), which translates into reduced time required for implementation and greater integration potential of Comarch solutions with third-party elements.
- Significant changes in architecture aimed at further improvement of the efficiency and scalability of individual solutions, reducing dependency in storage solution (Oracle-free) and primarily providing for launching the BSS solution when using in full the possibilities of highlyefficient cloud environments.
- The first IoT Connect cloud production plant has already been deployed for a large customer in Switzerland.
- Implementations for clients in Belgium, Austria and Mexico are underway.
- The entire IoT Connect solution has been equipped with a modern UI compliant with the new Comarch guidelines, unifying the UX for all Comarch applications.
- All system functionalities are available via a highly efficient and modern API.

Further work in the field of building, using and maintaining systems in the assurance domain using machine learning (ML) methods in other areas includes:

 Automated situation detection, which is a way of using the machine learning system in the combined areas of business and technology. Based on data coming directly from end users (reports via BSS systems) and data from monitoring events and indicators (based on the implemented use cases, automated situation detection and automated baseline generation and anomaly detection), sources of dissatisfaction of end customers will be detected. The emerging patterns will be used not only for faster, holistic resolution of complaints, but also for addressing situations and anomalies before they result in complaints. In 2021, the most effective ways of linking customer complaints received with significant and varying delays to network phenomena and their consequences will be sought.

• Automated recommendation, in line with the policy of applying machine learning methods, is a universal module for other use cases. It collects, organizes and improves a set of recommendations for actions and effective tools for carrying out corrective actions. In this area, activities will focus on how to maintain the knowledge base accumulated in processes using AI/ML methods. Intensive work will be carried out on the use of the adopted modular architecture of solutions in AI/ML area. This should lead to easier and faster creation of solutions in other areas of the assurance domain, such as the application of event analysis modules from automated situation detection to network signaling analysis in the customer experience management area. Work will be carried out to evaluate the effectiveness and usefulness of methods other than those currently used, one of which is analysis using neural networks.

The year 2021 will be marked by the implementation of microservices technology in our solutions, leading to a comprehensive transfer to the cloud environment. This will increase the scalability of the solution for different types and sizes of potential customers. By introducing continuous implementation/continuous development technology, it will be possible to implement zero downtime maintenance and obtain much greater flexibility in the improvement of our products' performance for our clients.

#### **Operations Support Systems (OSS)**

New challenges in R&D OSS will deal with a sweeping redefinition of the telecommunication business. In the COVID-19 era and beyond, OSS must meet market demands - from providing automation tools for the maintenance of legacy networks to AI/ML for cloud-native 5G orchestration.

On one hand, telecommunication operators need to replace legacy systems with new, cloud-native alternatives. To do this, stable tools for topology/inventory are needed. Comarch OSS meets those demands by offering a set of tools for auto-discovery of topology and reconciliation of resources in networks. For many domains, such as transport, RAN, fix access and core, consistently new

vendor interfaces are developed. Parallel orchestration tools based on Resource Catalog and CM Templates are developed. AI/ML can be used for many time-consuming operations such as massive network configuration checking, reconfiguration of sprawling legacy transport network based on hundreds of different devices, massive rollouts of new RAN (gNB), or extensive replacement of equipment in existing RAN.

On the other hand, 5G networks slicing becomes a reality with massive management of VNF software images, end-to-end testing of components, security measures for removing vulnerabilities, and AI/ML support for automatic instantiations of slices or subnets.

#### Current development work is aimed at:

- Support for telecommunication networks using any cloud solution: on-premises, private cloud or public cloud.
- Using AI/ML as much as possible for repetitive tasks and intensive data analysis in management (configuration) and in maintenance (assurance).
- Modelling different orchestration solutions for network slices and network slice subnets.
- Preparing the solution for 5G lifecycle phases through adaptation of existing Comarch modules such as

Planning Tool, Service Order Management and Resource Order Management, CM Templates, Autodiscovery and Reconciliation, Intelligent Assurance and Service Monitoring.

- Commencing work on the 5GC testing module (elimination of security vulnerabilities) as market leaders prepped 5G SA rollouts.
- Preparation of security rules for multi-tenant networks/ private 5G networks/strategically important networks.

#### **Field Service Management System**

FSM continues development of the new Automatic Dispatcher functionality, Continuous Schedule Optimization, which applies a heuristic algorithm for task scheduling. Work started under R&D has been accelerated within projects executed for new customers.

In area of scheduling optimization engines in the product, there is also an implementation of the Schedule Simulation Module, which provides insight into future need for resources and assesses the impact of changes in the resource roster on current and planned field work.

Further work underway relates to enhancing UX/UI of FSM based on UX Audit. Adjustment of FSM mobile applications, including a redesign of the Android app, has already made significant advances, and changes in the backend of the app have been scheduled for 2H of 2021.

Apart from that, integration of FSM with Comarch BI Point has started. The aim is to improve the functionality

of a reporting module, deliver a higher number of built-in reports, and allow cross-selling between both systems.

Within projects that are under way, a dispatcher view will be also enhanced. It will combine a calendar, map, task backlog, and the possibility of filtering into the single coherent and interactive screen that is the basic tool in the dispatcher's work

For two contracted clients, a new module with a strong relation to OSS inventory is being developed. OSS Mobile App is a game changer in the approach to data in OSS inventory. The module gives the capability to review OSS data while performing a task on site, via a mobile device (Android or iOS). Coupled with more FSM mobile features (task and orders, communication, and knowledge base with augmented reality), OSS Mobile App enhances the performance and efficiency of field tasks related to the inventory.

# Research and Development Activities in the Services Sector

#### **Comarch CRM&Marketing**

As part of the research and development work for the Comarch Loyalty & Marketing product group, an innovative approach was implemented in the use of AI/ML algorithms to generate personalized offers for customers, taking into account the transaction history of a given customer as well as global purchasing patterns, and optimizing the time of sending marketing messages.

The loyalty mobile application has been extended to support mobile payments, enabling the execution of payments for purchases directly from the application without the need to use other payment methods, such as payment cards, as well as integration with GooglePay and Apple Wallet virtual wallets.

The Reward Shop module, which is an online store with rewards, has been expanded with new functionalities in the field of searching and filtering rewards as well as displaying reward recommendations for a logged in customer. These recommendations are generated by the AI/ML module.

In order to meet the constantly growing demand for applications in the SaaS model, a new version of the system for handling loyalty programs is being developed. With Comarch Loyalty Cloud, customers can use a wide range of functionalities within just a few weeks of signing the contract, without the need to implement the system.

Comarch Loyalty & Marketing solutions are also developed in the field of micro-service architecture based on open source technologies, as well as a new graphic interface based on the Comarch Design System library.

## Comarch E-Invoicing

One of the main goals of Comarch E-Invoicing is to enable the exchange of electronic documents in accordance with the requirements of individual countries that use the post-audit and clearance models. Last year, activities related to this goal were focused mainly on integration with government platforms and the implementation of local formats in Germany (OZG, ZRE platforms and XRechung, ZUGFeRD formats), Austria (PEPPOL), Italy (SDI and NSO), India (partner integration), Spain (the FACE platform),

Portugal (the eSPap platform), Finland (the Finvoice format) and Brazil (the SEFAZ platform).

Last year also saw intensive development of the E-Invoicing Portal, with new modules and functionalities including management of onboarding campaigns, self-care tools for the client, and collaboration tools such as dynamic discounting and exchange of applications and messages in the context of electronic documents.

### **Comarch EDI**

The heart of Comarch E-Invoicing is the EDI (Electronic Data Interchange) platform, where as part of the development a new version of the EDI Tracking 3.0 application was implemented for all customers in compliance with Comarch CDS and Comarch SEED. The new version also offers additional functionalities expected by the market, such as comparing different document formats and configurable data transmission reports. New products in Comarch EDI also include the handling of messages specific to the e-commerce and pharmaceutical industries, mass mailing service regarding the exchange of electronic documents for clients, and a new approach to business monitoring, among others to detect document traffic

anomalies. At the end of the year, work was also started on the launch of the WebEDI 3.0 application in the cloud stack, based on the experience from implementing a B2G electronic document exchange solution.

Comarch EDI is constantly being developed, not only in terms of functionality, but also regarding data security and broadly understood optimization. Last year, the first steps were taken towards the new version of the platform (EDI 3.0 Cloud Native), understood as the separation of the mapping and translation process of documents outside MS BizTalk, which translated into savings on foreign licenses and the possibility of greater control over registered maps.

## Mobile applications

2020 brought three new mobile applications with a common goal of eliminating paper documents. Mobile PoD (proof of delivery) is a tool supporting vehicle drivers in the process of delivering goods and exchanging related documents (shipping advice and delivery notes). Mobile

Document Capture allows you to quickly capture paper invoices for accounts payable processes. The eDoc Mobile application allows users to track the exchange of documents available within the E-Invoicing portal.

#### Comarch ICT

In the area of R&D BU ICT Comarch Infraspace Cloud, work was carried out on the development of part of laaS and the implementation of new PaaS services. In the laaS area, work was done on implementing the new OpenStack platform in the Ussuri version, which was related to withdrawal of support by Red Hat and the desire to unify the technological stack of the CIC cloud and the internal cloud (CZK) as part of building new regions. The change of OpenStack to the Ussuri version allowed a more stable environment in the infrastructure part, and gave rise to new services on the platform, including natively supported availability zones, object storage and encryption.

In the PaaS area, based on the requirements collected from customers (both external and internal), three

services have been selected to be implemented on the platform: monitoring as a service, DB as a service and container orchestration services supporting Kubernetes clusters. Modules supporting the above-mentioned services within the OpenStack community were identified, trial installations were made on test environments, and a version for installation on the production environment was prepared based on the new version of OpenStack Ussuri. The production implementation of the services is planned for Q1 2021. As part of the work carried out by SZK Frontend, in 2020 all reports related to Comarch Infraspace Cloud Demo were closed. All reported requirements were met and the final version was published for the production environment.

Moreover, a basic version of the Comarch theme template for OpenStack Horizon has been prepared. The previous template has been completely replaced with the new one for the OpenStack Ussuri version. The new approach uses 100% inheritance of the base template, which allows rapid modification in the future while remaining fully compatible with software updates

Based on the mock-ups prepared by the UX/UI team, all views for the ICT Calculator 2.0 application have been implemented. At the end of 2020, a presentation took place with a specific list of changes and additional requirements, some of which were implemented in 2020.

In the PowerCloud area, a development infrastructure (DEV, TST, PREPROD) was created at CDC in Warsaw and a production infrastructure (PROD) in the Dresden region. As part of these activities, the construction of infrastructure and related elements such as operating systems, monitoring systems and the preparation of project documentation were standardized. These development and production environments have been integrated with SmartBSS (hereinafter CPC).

The API for CPC has been implemented, enabling:

- User registration in CPC and role selection (admin, operator, PM)
- SSH key management (add/remove) enabling password-less login to created VMs
- Creating projects within the Dresden region
- Creating VMs (IBMi and AIX)
- Dynamic allocation of processor and/or memory
- Volume management (adding, deleting, sharing)
- VM cloning with or without IP addressing
- Preparation and partial implementation of a new UI within the CPC
- Performance of CPC penetration tests (Security Department) with a positive result
- Optimization of processes on the part of SmartBSS (shorter operation time)
- Updating the development and production environments

# Research and Development Activities in the e-Health Sector

Comarch Healthcare provides comprehensive solutions for the health service sector. It is involved in a number of R&D projects that are aimed at developing innovative technologies supporting, for instance, management of medical institutions, electronic medical documentation, and monitoring of patients (with the use of telemedical solutions). The sector comprises the Medical Center

iMed24 which is a natural environment for developing IT tools for medicine.

As a leading provider of solutions in the field of remote healthcare in Poland Comarch Health pursues numerous initiatives to expand availability of telemedicine.

## e-Care Platform

One of the Company's solutions is Comarch e-Care, which is a telemedical platform that supports remote, ongoing monitoring of patient health. It is applied for instance in cardiology, pulmonology and senior care. The research and development work conducted on the platform enabled its expansion from an alerting system to a service system. The functions that have been developed include short-term and long-term monitoring, examination management, process reporting and automation.

Additionally, work has been undertaken to rebuild the graphic interface and the way services are managed. The launched modifications make it possible to handle a much larger number of patients (which will allow achieving an effect of scale and cost optimization). Support by algorithmics is an additional factor that optimizes operations of the platform. Currently, functionalities that are under development result from customers' needs in Poland, Europe, and the Middle East.

## **Comarch Diagnostic Point**

The Comarch Diagnostic Point is a product that is being constantly and intensively developed. Diagnostic Points are stations equipped with measurement devices (including, blood pressure monitor, ECG event recorder, thermometer, scales and pulse oximeter), where patients may have their life parameters measured, also outside health care centers. Examinations are self-made by patients or with staff support, and then are evaluated by doctors using a telemedical platform. Diagnostic Points are also

available as a portable case that facilitates transportation of devices and health checks, for example, in care homes or at patients' homes.

Research and development work has covered expansion of the application used to support a Diagnostic Point, adding new measurement devices, and improvement of stationary and mobile versions.

### **Comarch HealthNote**

In 2019 the Company launched Comarch HealthNote, which is the first mobile application for patients. It is an Internet health diary that is used for collecting full and updated information on health history directly in a mobile application. It facilitates entering measurements and examination results, illness monitoring, scanning and viewing medical documents, and making such data available to doctors. Comarch HealthNote also has a web version with a component for doctors, which is used for receiving patients' data. The solution is completely free of charge, both for patients and specialists.

The research and development work covered creation of a mobile and web-based application with a functionality of entering various types of data (symptoms, documentation, measurements), and making it available. Further functionalities are being continuously developed to make it possible to add new modules and provide integration with solutions offered by the Company and external organizations.

## **Comarch Medical Analysis Platform (CMAP)**

The Comarch Medical Analysis Platform (CMAP) where remotely recorded patients' ECG results are saved is an important element of the Company's ecosystem solutions. The algorithms implemented in the platform interpret and analyze ECG results in an advanced manner, automatically detecting major disorders and thus offering an opportunity for early reactions to detected heart rhythm disorders. The solution significantly shortens the time of ECG analysis from long-term monitoring and ensures complete verification of the results without manual signal processing. The Comarch Medical Analysis Platform relies on algorithms that provide early detection of inter alia: tachycardia, bradycardia, cardiac arrest, or atrial fibrillation.

In recent years there has been a major development of algorithms based on Machine Learning (ML). A stage has been reached where ML algorithms match classic methods of digital signal processing (DSP). That has opened up opportunities for more effective detection of disorders and improved analyses of performed examinations.

With reference to **algorithms**, R&D work covers among others:

- Development of algorithms using machine learning methods to detect atrial fibrillation in ECG signals,
- Development of algorithms to assess the quality of ECG signals,
- Development of algorithms to classify morphological types of beats in ECG signals,
- Use of ECG signals collected during project execution for algorithm learning (semi-supervised and supervised learning),
- Development of methods to detect disorders in the ECG signal with special attention to rhythm disorders: atrial fibrillation, supraventricular arrhythmias. The results of the work will be used in a system to analyze long-term ECG signals: Comarch CardioVest,
- Development of an expert system supporting the prediction of patients' potential problems on the basis of data collected in the Electronic Medical Documentation base,
- Development of a system of automatic detection of disorders in the signal from a digital stethoscope,
- Work is also conducted into streamlining medical documents to allow presenting the most critical information, summarising data, and facilitating browsing through patients' medical documentation.

With reference to **software**, R&D work covers among others:

- Development of the CMAP platform to operate under a service model, successful completion of CMAP certification as a platform for ECG signal analysis,
- Development of a uniform platform for remote monitoring based on services understood as sets of complementary examinations,
- Validation of the Comarch CardioVest system used for long-term EEG analysis and certification of the system as a medical device.

## "Cities of Health" Project

As a result of their R&D work, Comarch specialists have developed an innovative solution dedicated to local public authorities. It provides efficient and integrated provision of healthcare services and preventive actions for city residents. It is an analytical and reporting platform that is a component of the "Cities of Health" Project. It is used to analyze the collected data, develop reports, and recommend pro-health actions. Pilot projects under the "Cities of Health" program

have been launched, among others, in Łódź, Zabrze, Suwałki, Płock, and Brzeg. The remote medical services under the pilot projects have been used so far by over 3,000 patients from all over Poland. As part of the project, such platforms, as "Podlaski System Informacyjny e-Zdrowie" ("Podlasie e-Health Information System"), or "Lubuskie e-Zdrowie" ("Lubuskie e-Health") have been developed.

## **Equipment**

In the field of medical devices, R&D work is focused on:

- Development of the functionality of the Company's own life wristband to monitor the vital signs of elderly and dependent people,
- Development of a new version of the Personal Medical Assistant (PMA), a device for remote care and cardiac diagnostics,
- Creation of on a new Mobile Personal Medical Assistant (mPMA) to provide long-term cardiac and event monitoring,
- Creation of the new Comarch PulmoVest device for remote diagnostics of sleep apnea,

- Development of the Event ECG application for monitoring of seniors in home environment,
- Release of a new version of Comarch HomeHealth, a system for remote monitoring of patients in home environment,
- Development of the new Comarch eConsultant product, a system for remote consultations for customers/ applicants.

# 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 swindle, 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, behavioral analysis

# Research and Development Activities in the IoT Division

Comarch IoT has been focusing on intensive R&D in the area of the Internet of things (IoT). Over one half of the 200-strong team work on R&D projects. Against other sectors, Comarch stands out with development of both software and hardware solutions for its own needs and for other entities. The developed devices and technological solutions support product functionalities of the other departments.

A team of specialists has been developing its own communication modules and IoT devices and medical devices. The strategy includes the construction of HW and SW blocks that will support the delivery of solutions for the Internet of Things. This is a specific synergy of specializations and competencies that generates innovative solutions.

#### IoT Plant & IoT Lab

It is a research and development center of Internet of Things, in which R&D operations are performed on a broader

scale starting with the development of prototypes of EMS electronic devices (with respect to industrial designs, electronics designs, software development, mechanical prototypes, vacuum casting of the use of 3D SLA laser printing technology, CNC milling) via production (selective application of protective coats, environmental tests) and to assembly and post-production control inspections of the offered products.

#### Comarch IoT Platform

This is a cloud solution supporting the implementation of various IoT solutions. The project covers the design and development of elements that are incorporated in such solutions as Comarch Smart Metering. The R&D work under way covers such products as: Comarch IoT Hub – IoT Gateway, Comarch communications modules (IoT MESH, BLE, 3G/4G, LPWAN: NB-IoT, LTE-M LoRa), Comarch Smart Lighting modules (being a smart lighting controller).

# Reseach and Development Activities in the Public Administration Sector

In recent years, Poland has seen an increase in spending on the development of digital services for the public administration sector. The 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 entities to perform tasks and handle matters electronically. At Comarch, we conduct many R&D activities on our products for central and local administration.

The development work focused on e-services using Comarch e-Government, Comarch EZD and Comarch ERGO products. The integration of the products was ensured by basing the data flow processes between these products on electronic documents. The definability of data flow processes from e-forms filled in by citizens on the Comarch e-Government platform to the Comarch ERGO system, where data contained in electronic documents is processed for the purpose of issuing documents resulting from the processes, was ensured. An extremely important area of Comarch ERGO development work was to provide e-service support in the area of road construction. Approximately 40 processes have been implemented at the interface between

the road manager and citizens, entrepreneurs and external institutions involved in handling cases. The processes for handling citizens' administrative, project, maintenance and inspection work have been implemented. The processes are supported by interfaces available from a web browser and in a remote version on mobile platforms. One important area of development work was the rebuilding of geodetic data import processes for the construction of regional GIS platforms, ensuring batch download of data made available by counties to the central system, while ensuring control of processed GML file data.

Additionally, attention should be paid to extensive development activities aimed at making Comarch EZD and Comarch e-Government products available via the Comarch Cloud. There has been a significant upgrade of solutions and optimization of their architecture, enabling the platform to fully leverage its capabilities to manage, automate and scale containerised applications. The containerisation of both products in the course of R&D projects has significantly contributed to shortening the time of launching solutions at new customers.

An important area of development work was to undertake conceptual and analytical work related to providing electronic services for citizens and entrepreneurs within the new **Comarch EOS** platform. The work focused on developing the concept of electronic case handling in the office. The division of tasks between the systems comprising the platform such as Comarch e-Government, Comarch EZD, Comarch ERGO and Comarch ERP Egeria. The basic data flow processes between these systems were defined. The requirements for the spatial localisation of documents and cases are defined, ensuring that spatial data is taken into account in the case handling and administrative decision making processes.

Comarch systematically invests and continues development work in the area of Smart City products. In the APUS sector, work in this area focuses on platforms that integrate data from sensory systems and from video analytics developed by Comarch. The development work on video analytics

is divided into two main branches: the security area and the transport area. In the area of security, work is related to solutions for special services, police units and railway security. The Comarch Smart Parking platform, which systematically increases the offered functional scope, is an example of the second branch of solutions. This year's additions include support for various types of IP cameras, including PTZ cameras, as well as billing, payment and booking modules and the addition of algorithms for automatic reading of vehicle registration numbers, which can significantly automate parking payments and control activities. The platform forms the main axis for the overall management of the Smart City parking policy. Given the dynamic development of this area not only in Poland, but also worldwide, Comarch is offering this solution through its numerous international sales offices. The first implementations of the platform in two cities in the United Arab Emirates and the soon-to-be-launched project work in Japan are examples of such activity and success.

## **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.

In order to optimize the work of ERP sector clients, Comarch ERP XL is systematically developed with RPA mechanisms (Robotic Process Automation). RPA mechanisms enable the automatic execution of repetitive processes, reduce the risk of human error, increase the productivity and efficiency of tasks assigned to robots and reduce company costs. Within Comarch ERP XL, a number of functions were launched to automate the most important business processes of the enterprise, for example:

- automatic generation of contractor cards on the basis of data from the CSO;
- automatic corrections;
- automatic allocation of incoming stock to reservations;
- automatic data exchange with banks via webservice;
- automation of the analytical description of documents
   analytical templates;
- planning and rescheduling of orders and automatic execution of orders/operations
- automatic assignment of the serial number to the product on the production order.

A separate team has been established in the ERP sector to focus on the implementation of functionalities based on artificial intelligence for all Comarch ERP systems. It is planned to use components created by the AI team in Comarch ERP XL wherever it makes business sense. The AI/machine learning development work planned for the current year is indicated below:

- Automation of calculation of the proposed trade credit limit for a specific counterparty – within this framework, the system will introduce the possibility of determining the rules for limit calculation (for which group of counterparties, what calculation schedule, how long is it supposed to be in force, for what period, for rounding of the limit, etc.). The credit limit amounts proposed by Al will be able to be entered automatically on the counterparty's file, or be subject to operator verification. Decisions to change/reject credit limit amounts will be sent to the Al engine for algorithm refinement.
- Automatic classification of a counterparty in terms of financial credibility credibility will be determined by means of four categories (A counterparty without payment problems, B minor problems with receivables collection, C considerable problems with receivables collection, D unreliable counterparty). This parameter will be able to be completed manually by authorized operators.

- Automatic debt collection actions Introduction of the "debt collection scenario" panel, where it will be possible to define a multi-step procedure (steps) for automatic debt collection actions. A given step within the scenario will generate a summons/reminder with the specification of the form in which the action will be carried out (text message, e-mail or uploading a task to the operator's mailbox about the need to, for example, make a phone call), for which documents (amounts and deadlines) and what content of the text message/ email/printout is to be delivered to the customer (courtesy, pre-court, etc.).
- Hints for cyclical invoices Use of a recommendation mechanism for sales invoices that can be generated cyclically. As a result of the AI algorithms, the user may receive a message with, for example, the following content: "Dear User, you issue the same invoice every week. You can set up automatic invoicing for this purpose".
- Determination of ABC/XYZ classification by AI mechanisms for this purpose, the AI model will extract relevant data from the commodity card, such as in the case of give categories (Code, Name, Attribute such as Color/Material, Feature, Price, Weight, Dimensions), information about the category calculated by the AI will be forwarded to Comarch ERP XL automatically, according to the defined schedule, and then it will be possible to automatically, or after user verification, assign it to the commodity card. The categories will be automatically visible in Comarch WMS, where algorithms will assign the goods upon receipt to the appropriate zone.
- Automatic calculation of demand forecast in the Merchandise Balance Sheet – the calculation of the demand forecast will be carried out on the basis of historical demand data. The algorithms will be selflearning, i.e. they will check how accurate the forecast was and modify the calculation for the next period. From the Comarch ERP XL side, the user will see in the BST simply the column "Forecasted revenue of goods", which will present the value calculated by the Al engine, similarly to other columns.
- Automatic determination of ABC/XYZ classification and demand forecast for newly created goods when a new file is created in Comarch ERP XL, there will be a possibility to call up a screen, which, on the basis of selected parameters (similar to those defined in point 1, but possible to define individually), will launch AI mechanisms defining the level of similarity with the existing goods, expressed in percentage terms. Seeing this information, the operator will be able to select (by default the commodity with the highest value will be selected) from which commodity the data for ABC/XYZ classification and demand forecast are to be

- taken. It will be possible to automatically download information from the most similar file without user acceptance. In addition, functionality will be created to manually assign a similar commodity to a newly established one.
- Within the ERP sector, we ensure that our solutions are widely available and easy to implement for the potential customer. Because of that we have released a version of Comarch ERP XL running on Opensource PostgreSQL database. This will enable companies that do not need to invest in expensive MS SQL-type databases to work efficiently and securely on our solutions.
- Over the last few months, the ERP sector has carried out a number of actions aimed at facilitating work on Comarch ERP XL system with the use of Comarch Data Center. As a result, two possibilities of managing the company with Comarch ERP XL located in Comarch's server room were introduced:
- Enterprise Cloud a model of work, where ready (or almost ready) virtual hardware environment is available, dedicated to a specific client, together with Comarch ERP XL software and other IT solutions necessary to support it.
- Cloud Standard in this model, clients of Comarch ERP XL work on one, shared hardware environment.

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Together with the latest version of Comarch ERP XL, it has become an "IoT inside" solution, which means that the information from sensors placed on the shop floor, or from production machines, can be sent automatically to the system, realizing in practice the idea of Industry 4.0.

In the coming months, we will systematically analyze manufacturing companies' expectations in relation to this functionality. Among the most important planned developments in this area is the introduction of process modelling on IoT shares, which will result in sensor information being able to automatically trigger specific actions in the system. Another important element is the REST API support, which will open possibilities of two-way communication, i.e. sending information – orders, operations and so on, from Comarch ERP XL to production machines.

Within the ERP sector, we are also leading the ongoing development of the Omnichannel trend in our systems. We are systematically developing integrations between various sales channels (retail, ecommerce, B2B) ensuring direct data exchange and management from the ERP system level. Comarch WMS solution is a software for warehouse management. As part of the development work, the functionality of online booking with Comarch ERP XL was prepared in it. The solution allows to check availability of a particular batch in Comarch WMS while adding items in Comarch ERP XL batch and reserve appropriate amount for the needed document. During synchronisation, bookings are linked to the relevant document in Comarch WMS. Work is also currently underway on a tool using elements of artificial intelligence and machine learning to optimally select an employee for a specific task.

Comarch Mobile is a set of IT tools which enable the execution of business processes from the level of a mobile device such as a mobile phone or a tablet. Merchants in the field can use it to place orders, print invoices (in connection with a mobile printer), issue goods, conduct surveys or perform merchandising. On the other hand, the service technician can register the service and issue an invoice for it at the customer's premises. Comarch Mobile modules include functionality for recording the routes of employees in the field. With the help of the web application, the sales manager can analyze where the salesman is at present, what route he has been following and where he has been performing particular tasks. The Comarch Mobile Management application also makes it possible to determine the optimal route in combination with a Google map. Currently, within the Comarch Mobile Sales application, work is underway on the implementation of the ML/AI mechanism for recognition of goods on shop shelves. Ultimately, by means of the mobile application, after taking a picture of a shop shelf, a company representative will receive information on statistics related to facing, availability of goods and marketing materials in the shop, the share of goods in a given product segment and compared to the competition.

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 solution we are developing is a system that detects cyclicality in invoices. With the system, the user may more comfortably automate issuance of invoices by being proposed to use a mechanism of recurring invoices. It provides for more comfortable and faster automation of work using information on parties to a financial transaction, a 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, which is a system that offers automatic reading of invoices. Using the system allows decreasing the amount of labor while 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 a bank account number from the document. The mechanisms for recognizing items on documents have also been strongly developed. 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.

Last year, as part of development work, a new application was also created, dedicated to the smallest companies and B2B employees – Comarch My BR. The application is only available for smartphone mobile devices and is used to issue sales invoices. In the application it is also possible to read cost documents through the OCR service. All documents entered into the application are automatically forwarded to the accounting office, which is linked to the client, and from the office feedback is sent to the client about liabilities to ZUS and US, as well as an invoice to the accounting office itself.

Another application that was developed in 2020 was Comarch Shipping. A tool that communicates with courier companies and allows you to order shipments, download waybills, communicate with the customer through the courier companies' applications. The application can work completely independently, it can also be connected to Comarch ERP systems.

One of the latest features to emerge in the sector was also the integration of Comarch ERP XT with Comarch Finance Cloud for the factoring service. Currently, clients of Comarch ERP XT can directly from the system report the need to finance sales invoices, and the transfer and processing of the request takes place online.

R&D activities also include the development of applications for financial reporting departments: Comarch e-Reporting and Comarch ESEF. They are a response to the emerging demand for compliant, modern, intelligent IT solutions. Comarch e-Reports is an application that allows you to effectively create, manage and analyze reports and reporting documents in your company in accordance with the Accounting Act. Comarch ESEF, on the other hand, is a tool designed for issuers of securities across the EU, allowing for intuitive construction of financial reports compliant with ESEF regulation in the XBRL standard.

The ERP sector this year also started work on the development of a new solution for advanced production planning Comarch APS. The first version of the Comarch APS application will make it possible to control the production plan/schedule in a fast and ergonomic way ("drag and drop" function) from the level of the Gantt chart. Ultimately, the Comarch APS system will also enable the creation of simulations of production plans according to various criteria, analysis of plan execution on the basis of real production data and quick re-scheduling in order to eliminate conflicts and bottlenecks. The Comarch APS solution will be based on the following technological and functional assumptions:

- full integration with Comarch ERP solutions (Comarch ERP XL, Comarch ERP Enterprise),
- web application based on angular/angular-seed technology,
- availability in two versions: stationary (on-premises), service in the Comarch Cloud,
- production planning optimization based on artificial intelligence mechanisms,

- ultimately, the system will be based on its own application logic,
- the system will allow you to define your own rules and constraints for optimizing production planning,
- use of AI/ML mechanisms for production optimization.

Development has also taken place in e-Commerce solutions. In Comarch e-Store we have introduced a product configurator, which was created with manufacturing companies in mind. With this solution, the retailer can offer customised products in its online shop. In the field of e-Store templates, we have provided a design wizard in which the user can create a unique shop layout. The tool is intuitive to use and requires no technical knowledge on the part of the user. For sellers listing their goods on Allegro, we have prepared a mechanism of mass listing, which greatly facilitates and accelerates the entire sales process. The latest solution in our offer is the integration with wholesalers thanks to which a seller can automatically download goods from an external wholesaler.

Currently, work is also underway on a mechanism using elements of artificial intelligence, which will allow customers of the e-Store, among other things, to search for goods using product images (visual search).

Collection support through automatic setting of a transaction limit is the last 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.



## **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



OVER 50 TELECOMS FROM AROUND THE WORLD USE COMARCH BSS/OSS SYSTEMS IN THEIR KEY CUSTOMER SERVICE AND NETWORK MAINTENANCE ACTIVITIES



COMARCH SYSTEMS DYNAMICALLY PROVIDE INFORMATION ON THE QUALITY OF SERVICES THANKS TO THE ANALYSIS OF NEARLY 1PB OF DATA EVERY DAY



COMARCH SOLUTIONS USE AI/ML
TO IMPROVE CUSTOMER EXPERIENCE



COMARCH DRIVES THE MARKET IN THE CONTEXT OF 5G TECHNOLOGY THROUGH EXPANSION ON THE JAPANESE MARKET, INNOVATIONS IN THE AREA OF STANDALONE 5G AND NETWORK SLICING



THE COMPANY USES THE PUBLIC AZURE CLOUD TO LAUNCH BSS/OSS SOLUTIONS FOR A KEY OPERATOR IN NEW ZEALAND



COMARCH SYSTEMS ALLOW THE GENERATION OF ALMOST 200,000,000 INVOICES FOR TELECOMMUNICATIONS AND ADDITIONAL SERVICES EACH MONTH, INCLUDING CABLE, SATELLITE AND MODERN IOT NETWORKS



COMARCH SOLUTIONS ALLOW RECORDS TO BE KEPT OF HUNDREDS OF THOUSANDS OF PHYSICAL AND VIRTUALIZED ELEMENTS OF TELECOMMUNICATIONS NETWORKS

## **Telecommunications Division**

Since 1993, Comarch's telecommunications sector has specialized in providing IT solutions for telecommunications operators around the world. Our customers in this industry include Tele-fónica, 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 create innovative services quickly. 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 measura-ble 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 businesses in the most appropriate way. The system supports all kinds of multi-level business relations (B2B, B2B2C and B2B2B).

**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 near-instant quotes which, thanks to the product catalog-driven mechanism, become agreements seamlessly upon approval.



Comarch Innovation Space, Kraków

## **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.

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.

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.

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 content-based.

## **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 Resource Order Management simplifies network planners' daily activities. All repeatable tasks can be delegated to the ROM smart engine, allowing planners to focus on strategic network planning and optimization. In addition, Comarch ROM gives operators the ability to design and automatically provision complex, hybrid,

multi-technology and multi-vendor network services, and to automate day-two operations.

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

## Customer Experience Management (CEM)

plays an overarching role in service monitoring and service quality management, transforming service management by providing 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 under-neath.

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 Auto-discovery & Reconciliation

provides 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 provision-ing 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.

## **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 Activation is responsible for activation of the delivery of service components on legacy (based on NMS) and modern (employing NFS/SDN technologies) service platforms. Pre-integrated with Service Fulfillment & Orchestration that enables coordinated activation steps on various platforms, it facilitates provisioning of converged services and complex value-chain products.

Comarch Service Inventory facilitates the end to end management of your network and all related products from the service 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 services (RFS) one.

## **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

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 model-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 supporting the workforce in the field, which results in significantly increased efficiency of operations. Thanks to this tool, customer and network opera-tions 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 company'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.

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 transformation 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.

**E2E 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, im-plementation 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 en-sures full automation of platform integration and delivery, rapid deployment, and cloud-readiness from the start.



Comarch Innovation Space, Kraków



## **OVER 20 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 THOUSAND**

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 encapsulating over 20 years of experience. Our portfolio of satisfied clients includes financial institutions in more than 30 countries, among others: BNP Paribas, 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 platform that allows factors and their customers to manage the whole life cycle of receivables. Comarch Factoring is a customer service tool which has an advanced billing engine and multi-channel access to factoring services.

Comarch Cloud Factoring is a platform for debtors and creditors using microservices, available in the cloud. The modularity of the system allows you to easily adjust the solution to customer needs. Thanks to supporting end-to-end processes, the cost and workload of a factoring company are kept to a minimum.

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

Comarch Relationship Manager Assistant supports banks and other financial institutions in building and maintaining solid relationships with their business customers. Designed to effectively manage sales processes, the system helps in lead scoring, performance monitoring and effective communication.

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 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. The platform incorporates a full portfolio of credit products – starting from quick loans for retail customers, through mortgage origination processes, up to complex business loans for SMEs or corporations.

Comarch Custody is a modern back-office system for post-trade operations carried out by custodian banks. As a comprehensive custody software, Comarch Custody covers all functions required by custodians operating on domestic and foreign markets: Settlement & clearing, Safekeeping, Asset servicing, Client & regulatory reporting, Automated data exchange, Billing & taxation.

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 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 to focus on more demanding and complex challenges.

Comarch RPA for KYC is robotic process automation (RPA) software designed for banks and financial institutions. It optimizes KYC in AML – heavily manual, routine and prone to human error – by enhancing data collection and input. The system uses automatic processes to derive data from different sources, both external and internal, and turn them into user-friendly reports ready for further analysis in line with regulatory requirements. RPA in banking reduces the number of manual tasks.

Comarch Cyber Threat Protection is an online threat prevention and anti-identity theft platform for workstations and mobile devices. The platform tracks both end-user activity and their devices to calculate partial and general scoring for authentication, authorization, or any other operations. The scoring is reflective of device recognition and cyber threat-repository data. For this purpose, a lot

of different artifacts are collected, based on tamper detection, or browser and device fingerprints.

Comarch Identity and Access Management (IAM) is a solution that allows full control over the 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.



Comarch Innovation Space, Kraków



Comarch SSE4 Building, Kraków



# **27**TRADE MARKS THAT HAVE BEEN APPLIED FOR AND REGISTERED WORLDWIDE

## 01101 0010

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 is the fast-growing technology wing of Comarch Capital Group, providing comprehensive, end to end Internet of Things (IoT) solutions combining hardware and software, distinguished by following the highest industry standards in safety and security. As a result, we have created a rich IoT Ecosystem with the aid of our own rapid prototyping and production facility (IoT Plant), technologies such as our cloud-based IoT Platform (Enablement), innovative hardware and software building-blocks, solutions for various verticals, and advanced connectivity modules supported by professional services.

IoT expansion is paving the way for new business models which are used by Comarch IoT. The combination of these elements allows us to effectively create off the shelf and dedicated, tailored IoT solutions for companies and institutions around the world. Moreover, our teams offer services in the areas of consumer electronics R&D services, including the design of electronics, hardware prototyping and production, as well as embedded software and user experience analysis.

Additionally, we are an active member of the IoT group in the Ministry of Digital Affairs in Poland, where we share our knowledge, experience and successful implementations of IoT solutions for our clients from different parts of the world. We cooperate with our European neighbours on Industry 4.0 implementations, as well as Middle Eastern partners in utilities and telemonitoring, and with associates in the Far East - in one case providing the whole IoT stack to help a leading Japanese IoT solutions company become an IoT provider.

## **Internet of Things**

### **IoT Solutions**

Comarch Smart Metering – is a solution dedicated to the utilities sector (water, heating, gas and electricity). The solution consists of a dedicated Comarch device for reading data from meters in a standardized way (wired and wireless) allowing wireless data transmission using LPWAN technology through a telecommunications provider's network (NB-IoT or 4G) to the Comarch cloud-based Smart Metering application utilizing the Comarch IoT Platform (Enablement).

Comarch Manhole Monitoring – IoT solution for fully automatic monitoring of the opening and closing states of all hatches, including sewage wells, electrical boxes, tips and doors. The system consists of small battery-powered devices that are mounted to the manholes or any other infrastructure that can be opened or closed with a limit switch. Each opening and closing is noted by sensors located in the gateway. Devices send an event signal to the IoT platform via standardized communication protocols (NB-IoT or 4G), then all data are collected and analyzed. The IoT platform can send alerts to the customer and generate reports.

Comarch for Industry 4.0 – is a comprehensive system provided in the SaaS (software as a service) model or as a customized, dedicated solution. It is composed of integrated production equipment (PLC and sensors) with receivers (Comarch IoT Hubs), connected to a cloud database (Comarch IoT Platform) which is the key to creating Industry 4.0 solutions. The solution consist of features and components like: IoT Platform, Hardware

Integration, Real-time OEE calculation, NOK Management, Digital Instructions, Notifications, ERP Integration, Comarch BI Integration. There are three Industry 4.0 packages, their functionalities depends on which one will be chosen to fulfil the client's requirements.

Comarch Smart Metering for Industry – it is a concept that helps manage the production process by media consumption monitoring and delivery planning to optimize it and ensure continuity of production. The solution is fully compatible with Industry 4.0, bringing tangible business benefits to the enterprise.

Digitization — through digitization, IoT technology streamlines and automates processes in enterprises. IoT solutions facilitate communication between devices, sensor-based data collection, and information processing in a dedicated platform. By replacing inefficient systems with those mentioned ones (based on the IoT), an intelligent environment is created for homes, urban infrastructure, factory floors and health services, among others.

Internet of Healthcare Things (IoHT) – is paving the way for healthcare applications to create a connected medical environment, enable patient monitoring, and improve systems. The IoT brings multifaceted value to the whole healthcare system - patients, medical staff, and management. Thanks to various types of advanced technical connections, patients can benefit from quick

notification of problems, continuous monitoring of their condition and parameters, and recording of this information.

Comarch CareMate — is a digital caregiver set that is always at hand. As a remote senior guardian service consists of a mobile CareMate application which, in combination with the integrated Comarch WristBand device, offers a modern solution dedicated to the elderly and to chronically ill people, to individuals who want to increase their independence but whose health is at risk, to parents of children and caregivers of sick people who can conveniently monitor the location and safety of their loved ones 24/7.

Comarch WristBand for Industry – Comarch WristBand as a device integrated with the e-Care Platform creates a modern ICT system for continuous monitoring

of the life functions of employees working at one-person stations for the sake of their safety. This remote employee monitoring system can be implemented for example, in large industrial plants (e.i. factories, warehouses, steel mills, harbour quays, machining centers, open pit mines and large-scale companies) to enhance the safety of people performing single-person work in isolated places, often exposed to harmful conditions.

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 following the latest standards including Ultra WideBand technology (UWB). The data is processed and collected via Asset Tracking application based on Comarch IoT Platform in the cloud.

## Components (Building Blocks) of IoT Solutions and IoT Devices

Comarch IoT Platform – the highly scalable 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 them, which translates into increased efficiency of process management and reduction of costs of both operations and used resources.

Comarch IoT Hub – Comarch IoT Hub acts as a bridge between connected devices and Comarch IoT Platform. It enables secure and reliable short distance communication, distributed control and remote device management through a single device. The support of leading connectivity protocols provides interoperability and creates new possibilities for businesses to offer smart services.

Comarch Beacon – is a compact BLE device broadcasting a radio signal, readable by any smartphone. The mobile application, combined with Comarch IoT Platform, delivers personalized, location-based content directly to the customer. The main goal of Comarch beacon technology is to improve customer experience at anytime and anywhere, thanks to two variants of the Comarch beacon device.

Comarch M-BUS NB-IoT Gateway – is a gateway using Narrowband IoT (NB-IoT) technology from the LPWAN family. NB-IoT is an LTE-based and IoT-optimized wireless technology allowing the creation of IoT devices with very long battery life. The device reads data from meters and sends information to the cloud, where it is translated into a common data format that allows digitization/retrofitting on existing infrastructure.

Comarch TNA (Time and Attendance) – is an innovative system for tracking and monitoring working time based on the cooperation of an original mobile application with Comarch TNA Gateway devices.

Comarch WristBand – is a wireless personal device equipped with an SOS button for monitoring and immediate call for help in life and health-threatening situations.

Comarch IoT Button – is a small device that can be used to trigger automated actions. Actions are defined using Comarch IoT Platform, and may include sending an SMS message or creating an ERP system record. Comarch IoT Button uses one of three LPWAN technology standards (EGPRS, NB-IoT or LTE-M) to connect directly to the IoT Platform without the need for additional network configuration.

## 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. Innovative production line, which 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 own 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.

## **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 (e.g. Voice assistants: Google Alexa Assistant, parking, payment, music, 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.

Infotainment in-Car – 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 smartphones — 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, you can control them using e.g. a button on the steering wheel or voice commands, without performing additional activities requiring divisive attention (e.g. MirrorLink, CarPlay, Android Auto).

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).

 $\mbox{UX}$  /  $\mbox{UI}$  — these services rely on a comprehensive study of user behavior and profiles to design intuitive and user-friendly applications.

## **Standard Organizations & Certification**

Certification test tools for standardisation 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 carried out.



KSI ZUS ABOUT
500 MILLION
INSURANCE DOCUMENTS
PROCESSED DURING A YEAR



9 MILLION COURT CASES HANDLED



143
E-SERVICES READY FOR USE ON
THE COMARCH E-OFFICE PLATFORM



250+
LOCAL GOVERNMENT UNITS WHO USE COMARCH EZD
AND ABOUT 200 WORKING ON COMARCH ERGO



**20 000**USERS OF COMARCH EZD - SYSTEM FOR ELECTRONIC MANAGEMENT DOCUMENTATION

## **Public Administration Division**

Comarch specializes in designing, implementing and integrating modern IT systems for public administration, companies and public sector institutions. The company has experience in creating complex turnkey solutions and 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 EOS – is a platform for electronic handling of matters in the office. The system ensures the digitization of case-handling activities, enabling citizens and entrepreneurs to handle them remotely, and office staff to handle cases remotely. The platform ensures the transition from electronic document management to electronic case management, overseeing the steps that need to be taken to deal with a case.

The platform consists of integrated systems: Comarch e-Urząd, Comarch EZD, Comarch ERGO and Comarch ERP Egeria. Case handling is based on electronic documents, the data of which are transferred to the systems involved in case handling using Comarch BPMN. The Comarch EOS platform provides GIS functions used in case handling, which can be run directly from the level of systems included in the platform.

Comarch ERGO – system supporting the implementation of public tasks related to spatial management. It allows keeping over 60 registers and records in the areas of geodesy and cartography, real estate management, spatial planning, road infrastructure management, construction, environmental protection, agricultural and forestry land protection, protection of monuments, spatial information portals. The modular structure of the system enables the exchange of information between local government units and cooperating units, their departments and employees. Comarch ERGO is a comprehensive solution enabling the launch of the electronic platform of the Spatial Management Shared Services Center.

Comarch Workflow – the platform supports the electronic (as well as paper) circulation of documents in companies and institutions (branch versions specialized for particular entities have been created). The solution makes it possible to manage documents in institutions in accordance with the guidelines of the office instruction and to define and support any workflow and document processes. 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 fully customisable Workflow class system.

Comarch e-Government – is an online public services platform allowing local government units and central offices to perform their tasks. Intuitive tools enable self-management of the application, providing support for content creation and publishing processes. The components available on the platform include: The Digital Office, the Resident's Profile with support for electronic payments for liabilities to institutions, the Public Information Bulletin, the Information Portal and the Intranet, as well as elements supporting social activity related to the handling of the civic budget or opinions on legal acts.

Comarch ERP Egeria – is an integrated ERP II system which supports organization management, administration and accounting/financial service of public institutions, hospitals, universities and enterprises. The system ensures data security, rapid access to information, transparency and integration of processes. Comarch ERP Egeria is a tool that effectively supports and streamlines management of institutions and offers comprehensive support in decisionmaking processes that are necessary for functioning of institutions in today's economic and legal environment. It is highly configurable and flexible, allowing the system to be adapted to the individual needs of each Client. It ensures full support of the implemented business processes and efficient exchange of information with the environment. It facilitates and automates the daily recording of data and the decision-making process.

Comarch Security Platform – is a range of products dedicated to clients associated with national and physical security and defence. The solutions are based on original and innovative projects, which are implemented within products related to video analytics, personal and object protection systems, as well as in advanced tools for controlling financial flow and monitoring ICT networks.

Comarch Video Cut – is a solution for quick analysis of secured video materials conducted post factum. The tool effectively reduces the working time of forensic analysts or security services. It enables the detection of all objects recorded on secured video footage from various devices, recorders, CCTV systems and in various formats.

The system enables events and objects to be found and video footage to be quickly filtered based on characteristics. The solution is used in special units, security services and facilities such as airports, stadiums, railway stations, car parks, large-format shops or other restricted access zones.

Comarch Smart Parking - an extensive platform for the comprehensive management of Smart City parking policies. The solution makes it possible to connect a number of sensor systems based on different technologies, such as RFID tags, radar, radio sensors, surface sensors (e.g. magnetic), cameras with video analytics, providing basic information on parking space occupancy in real time. In addition, it offers a range of configuration and management tools to improve the work of municipal units and subordinate services. Comarch offers its own sensor layer based on cameras and intelligent video analysis (IVA) technology, which makes it possible to detect not only free parking spaces but also potential offences, together with vehicle identification - number plates (ANPR). Development work in this area focused on hardware (cooperation with many camera models, including PTZ cameras), as well as functionality - new modules were created, such as billing, control, or related to payments based on e-Wallet.

Comarch Monitoring & Automation Platform – a tool for monitoring infrastructure and configuration items of client systems. The primary goal of creating Comarch MAP was to provide a single, consistent tool for monitoring

a client's extensive infrastructure, along with the ability to model business processes and track architectural dependencies. The complex infrastructure detection and maintenance process is fully automated thanks to the Discovery module. The unified and consistent interface provides visualization of the monitored infrastructure while maintaining business logic.

Comarch eRecording – is a comprehensive and coherent solution combining the convenience of classic audio/video recorders with sound systems and a dedicated application for controlling the audio/video recording process. The system makes it possible to record meetings, sessions or public speeches along with the associated metadata and comments to enable efficient search of the recording during playback. Additional sources of recorded data can be external multimedia data and remote transmissions carried out via videoterminals. Comarch eRecording provides (along with the recording) a platform-independent multi-track media player.

Comarch Video Terminal – is a solution which supports popular connection and audio-video transmission standards. It is a perfect complement to Comarch eRecording solution, ensuring point-to-point connections as well as setting up multi-party calls based on standards and infrastructure of videoconferencing bridges of leading suppliers and popular platforms supporting Simulcast technology.



Comarch Building, Łódź



## **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 2020



## 15 BILLION

DOCUMENTS STORED IN COMARCH ECM



## **20 MILLION**

GENERATED DELIVERY ORDERS IN THE COMARCH SFA SYSTEM



## **14 DATA CENTERS**

AROUND THE WORLD

## **Services Division**

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

The Services Sector carries out projects in 40 countries on five continents. Among our clients are BP, Circle K, Mapco, Prudential, Livelo, Carlsberg, Unilever, X5 Retail Group, Carrefour, Metro-Nom, Auchan, Heathrow Airport, Etihad, Scandinavian Airlines, XL Axiata and True Telecommunications.

## Loyalty management and marketing solutions

The offer is addressed to medium and large enterprises, and constitutes a comprehensive package of IT solutions and services that helps to build and manage loyalty programs, implement personalized and multi-channel communication, automate marketing processes and increase profits. Big data analysis tools and gamification-based systems for building engagement enable relationships between customers, partners and the brand to be strengthened.

#### Solutions offered:

Comarch Loyalty Management – a system for managingloyaltyprograms, supporting B2C and B2B operators. It enables the launch of multiple programs on one platform and support for all areas related to running those programs (customer registration, profile management, promotions based on different currencies, communication with participants, rewarding with gifts and offers). The product is also targeted at transport and tourism companies, in particular airlines. The platform supports loyalty programs of all types of carriers, for individual customers (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 – a system that enables companies to comprehensively manage the full lifecycle of a loyalty program, from analysis of collected data to configuration of promotions and rewards and multi-channel targeted communication. The application is available in the service model, based on monthly subscription fees. Just a few days after signing the contract, Comarch customers can use the range of application functionalities, and access system configuration services and comprehensive business support for their loyalty program. Comarch Loyalty Cloud is periodically updated in terms of functionality, and extensions are implemented in accordance with the Comarch roadmap.

Comarch Campaign Management – is a solution enabling rapid and cost-effective design and launch of customer-oriented marketing campaigns. The system optimizes the campaign planning process, provides an intuitive segmentation tool, simplifies the management and creation of personalized messages, automates multi-channel

communication with customers, and allows you to monitor campaign progress and shipment statistics. The solution also helps to optimize the strategy and frequency of contact with customers.

Comarch Business Intelligence – the solution supports companies that want to build loyalty strategies through in-depth analysis of a large amount of collected data and provide a detailed picture of purchasing patterns, shopping cart value, campaign effectiveness and statistics related to the program. The system offers many types of interactive visualizations, such as charts, graphs, trend indicators, maps and tables that facilitate the presentation and interpretation of data.

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

Comarch Location Based Services – a modern technological platform enabling highly personalized marketing communication directed through mobile application channels to people, customers, residents or passengers who are currently in a given location. The solution uses geolocation and micro-location data, on the basis of which it sends notifications via native iOS and Android applications. The platform also has a navigation module, thanks to which the user of the mobile application can find

their way inside a given building. This is very helpful for large facilities such as shopping malls, hospitals, and municipal offices. Comarch Location Based Services is integrated with beacons produced by Comarch, thanks to which the microlocation of a user is determined via the Bluetooth channel.

## 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 electronic exchange of product, commercial, logistics and financial data, allows companies to achieve tangible benefits including faster access to information and a significant reduction in costs.

As part of data exchange and document management, the following solutions are offered:

## Comarch EDI (Electronic Data Interchange) -

a B2B2G platform based on cloud technology, which enables the automation of business processes through rapid and secure data exchange, connecting partners in the supply chain around the world regardless of the sector in which they operate. In an accessible, modern and comprehensive way, it enables business communication, allows you to fully manage the purchase and sales processes, increases the efficiency of cooperation by synchronizing data with partners, and fully controls and manages the flow of documents. It offers a number of solutions for everyone, from handling automatic document transmission processes and full integration, to support for web service and API solutions, and a web portal that does not require any integration.

## Comarch MDM (Master Data Management) -

a catalog of product data in the cloud based on GS1 standards, which is a certified data pool that enables direct exchange of information between business partners within the GDSN network and outside it. Data can be entered manually or automatically thanks to integration with external systems such as EDI, ERP, etc. This enables the initiation of adding products to the portfolio by creating inquiries, international cooperation through translation tools, and negotiating prices and margins. The created product cards contain comprehensive data models that can be modified depending on the target market, partner or sales channel (online or offline), ensuring the coherence of information shared within the organization and externally.

Comarch e-Invoicing – a cloud-based product compliant with the latest regulations, improving and automating invoicing processes for buyers (accounts payable) and sellers (accounts receivable). By supporting many document formats (including exchange with public administration entities) and distribution channels (from paper to EDI), it enables the secure and efficient exchange of e-invoices. Comarch e-Invoicing customers can use numerous functionalities as part of the service, such as electronic signature, multi-stage validation of document correctness, electronic archiving, and an e-Invoicing portal tailored to needs.

Comarch Online Distribution – a modern reporting and communication platform used by manufacturers to improve cooperation with a network of commercial partners (distributors, wholesalers and retail chains). It automatically creates detailed reports on inventory and resale, using data collected on an ongoing basis from the systems of trading partners.

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

## Comarch ICT

Comarch ICT solutions allow the easy management of a company's IT infrastructure in the field of telecommunications, outsourcing or data center services based on industry standards and technological partnerships with IT market leaders.

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

Comarch Cloud Infraspace – is a unified and flexible cloud infrastructure with the highest security standards. The platform includes a wide range of tools supporting applications built on the basis of microservices. The cloud solution provided by Comarch was created to help solve the problems related to the lack (or excess) of computing power, allowing performance to be adjusted to the actual demand for IT resources. The solution allows customers to take advantage of all the benefits of the cloud, such as lower IT costs, greater efficiency and flexibility of the company, and full control of resources. All this in a secure IT environment located in 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. Using advanced tools, it provides simplified management virtualization and cloud deployment for AIX, IBM and Linux virtual machines.

Comarch IT Services – due to the dynamic changes on the IT infrastructure market, an experienced technology partner is of key importance for business development. Placing the company's IT environment in the hands of Comarch engineers and analysts is a guarantee of service continuity and required system availability.

The digital (r)evolution continues. As a company with over 25 years of experience, we provide a wide range of IT services designed with the needs of our clients in mind, so that we can deliver appropriate technical and business support.

- Comarch IT Integration services designed to adapt the client's IT environment to new business and technical requirements. We support clients from the stage of analysis and design of a new IT platform, to the delivery of appropriate devices and software and beyond that to the implementation phase.
- IT Outsourcing a set of services aimed at optimizing costs related to IT servicing. We offer full end-user support (Service Desk and on-site care), 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 (such as 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 the customer, providing comprehensive technical support in the field of IT infrastructure monitoring and business applications for all types of enterprises and institutions. Provides customers with up to date knowledge of the availability and performance of individual elements of their IT infrastructure, and helps detect disruptions before they affect the customer's business.
- Comarch Network Services solutions for creating and maintaining data transmission networks (including WAN/LAN/WLAN). CNMS is a comprehensive product for the construction or modernization of existing transmission networks, for the management and administration of these networks, and for their security.
- Comarch Service Desk a 24/7 multi-channel and multilingual single point of contact with a team of Comarch IT specialists. Providing full support for end users, this service is responsible for handling requests (in the form agreed with the client - chat, ticket system or telephone), reporting (in accordance with the service level 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 customers who would rather not expand their own IT infrastructure resources. Comarch SA has 15 data centers all over the world.
- Hosting Managed Services Transforms data center and IT management to provide the technological flexibility you need and maximize application performance and availability. We guarantee the right specialists, processes, security and technology in local cloud and networks to optimize data center services.
- Comarch PowerHosting fully managed services for the IBM Power platform. The comprehensive service for the delivery and maintenance of the IBM Power platform is provided in three models - a virtualized cloud, hosting of the client's hardware in the Comarch Data Center, and remote services implemented on the client's existing equipment on their premises.
- Mainframe Services Provides fully managed support and services for mainframe systems. Provides technical and business assistance in the process of installation, configuration and maintenance of Db2 products. Additionally, we provide consulting 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



MORE THAN

20 THOUSAND

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 Al 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, among other things, 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

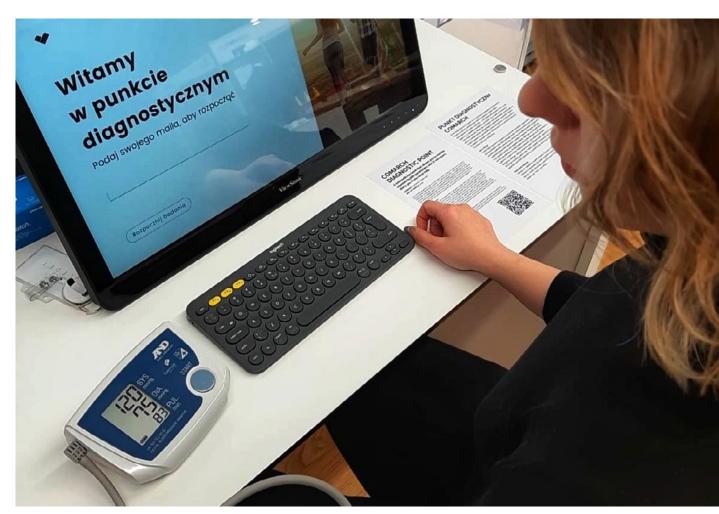
Comarch Healthcare S.A. has implemented and certified ISO 13485 quality management system for medical devices. The Comarch e-Care platform is a class IIa medical device certified for compliance with Directive 93/42/EEC.

#### **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 (CEE) is an ERP-class software developed for large enterprises with an international profile, with particular focus on the needs of manufacturing and trading companies. This modern, browser-based ERP system can successfully map company structures, including those of multi-companies. The solution has very high performance and scalability and works on various database platforms and operating systems. CEE's open architecture allows you to integrate your own modules and applications, and the Business Services Integration Engine (BIS), among others, is responsible for data consistency and ease of integration with external solutions. CEE is an ERP 4.0 system enriched and integrated with a number of modern Comarch solutions: POS, mPOS, MOS, OCR, DMS, eStore or BI. The system is also available in a service model (SaaS).

Comarch ERP XL – for years the most popular ERP system in Poland, used by over 5500 companies from various industries, 400 companies per year 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 a service model (SaaS).

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

Comarch ERP XT –innovative application for online invoicing, warehouse management and simplified and full accounting, available through web browser or mobile applications for Android and iOS. The solution is dedicated to micro and small businesses in Poland and Germany. Its main advantages are simplicity of use, full automation of processes, possibility of integration with an accounting office, Comarch e-Store, Comarch e-Sale and Comarch BI Point. The application is provided with a POS module for fast support of retail sales. The program is available exclusively as a service model (SaaS).

Comarch OCR – is a tool for optical character recognition from scanned invoices. The service reads the documents and then transfers the recognized data to the accounting software, e.g. to VAT registers. With the OCR API available, the service can be integrated with external programs.

Comarch POS and Comarch mPOS are applications dedicated to handling processes in stationary points of sale, both related to the sale of goods and organization of the shop's back office and warehouse. Comarch POS is a solution designed for stationary checkout desks, which allows, among others, sales and after-sales support for shop customers, execution of processes of preparing goods for customer orders placed in other channels within unified commerce, support of deliveries and issues and execution of inventory processes. Comarch mPOS is an application dedicated for mobile devices equipped with the Android system. It enables the implementation of processes at the back of the shop and customer service support directly on the sales floor. The applications, together with the OMS system, constitute a unified environment dedicated to managing multi-channel sales, in line with the idea of unified commerce.

Comarch WMS – a solution enabling comprehensive service of a high-storage warehouse. The package is composed of: Comarch WMS Management and Comarch WMS Warehouse. 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. It allows the user to perform the tasks of receipt and issue of goods from the warehouse, record transfers of goods between warehouses and perform stocktaking.

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

Comarch BI Point – a web-based business intelligence reporting tool that allows you to create, view, and share cross-sectional reports and interactive dashboards. An integrated repository and an embedded rights management mechanism allow 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 visualisation, the application allows even less skilled users to prepare attractive dashboards. 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 IBARD – an easy-to-use, multifunctional tool for, among other things, making and scheduling backups of files, folders and databases from PCs, laptops and servers, for mobile device backup, sharing and secure data storage in the 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 for recording and managing working time, business trips, holidays and other employee-centred processes in a company. The tool enables manual registration of remote working hours from the level of both web and mobile applications. 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 superiors. Comarch CSM Comarch Cloud Service Management a comprehensive platform for sales and management of cloud services that supports providers in offering cloudbased services, applications, infrastructure and other products. Comarch CSM collects all information about orders, prices, validity of services, and enables contact with customers. Possible integration 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 individual customer requirements, which consists in leasing a hardware platform located in the Comarch Data Center along with the necessary licenses from external producers (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 bookkeeping service for enterprises, provided by over 2600 accounting offices using Comarch ERP Optima.

Comarch B2B – an internet platform for remote sales network support in the B2B model. Comarch B2B allows you to place orders, create several baskets at the same time (for example, indicating a different shipping address for each), as well as view your order history, payments and sales offers. Customers will be able to view an always up-to-date sales offer via a web browser, which may be different for each customer. Thanks to online working directly on Comarch ERP system's own database, all changes and news are visible in Comarch B2B immediately without any delays.

Comarch e-Sklep – online shop software for small and medium businesses fully integrated with Comarch ERP management systems. Comarch e-Store enables sales in both B2C and B2B models.

Integration with the ERP system allows for comprehensive handling of the entire order process, management of the goods base and contractors, as well as conducting logistical operations, including integration with couriers, Poczta Polska, Paczkomaty and other suppliers. In addition, Comarch e-Store provides many functions and modules for effective e-commerce, including integration with auction platforms, wholesalers, online payment systems, price comparison services and tools supporting marketing activities. Comarch e-Store allows you to shop from a web browser and from mobile applications running on iOS and Android.

Comarch e-Sale – is an intuitive solution for integration with popular auction services: Allegro, eBay and Amazon (available soon). Thanks to Comarch e-Sale, it is possible to list goods on popular auction services from the range available in Comarch ERP system. Orders from issued auctions are available in the administration panel, and thanks to direct integration with the ERP system, they are sent in the process of automatic synchronisation to a given system where further order processing takes place. Comarch e-Sale makes it possible to view all auctions, including those prepared directly in the auction service or by means of another integration. Such auctions can be linked to goods from the ERP system and auction management can be automated with regard to, among other things, prices or stock levels.

Wszystko.pl – a commercial portal that enables sales on the Internet directly from the ERP system. Any company with Comarch ERP management software can offer its products there. Wszystko.pl gives you the opportunity to distribute your goods for free through an additional sales channel and increase your customer base.

Comarch HRM – an application for employee self-service, operating in a web browser or from the level of a mobile application, intended 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/leaves, 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 DMS (Document Management System)

is a multiplatform, flexible tool for handling various types of business processes. The system allows the digitization of areas related to the registration, description, acceptance and archiving of documents (e.g. invoices, contracts), as well as the processing of important, non-standard data and information. Thanks to the built-in low-code platform (graphical process configurator), it is possible to easily and quickly adapt the system's operation to any company, regardless of its industry or scale of operation. Working with Comarch DMS is possible on the level of desktop application, web browser, as well as native applications for iOS and Android devices which, combined with automatically generated notifications, allows for shortening the time necessary for task execution. Comarch DMS cooperates with Comarch ERP systems: XL, Optima, CEE and Altum, and is also available in a Standalone variant.

Comarch e-Reports – a program for creating electronic financial statements in accordance with the Accounting Act, distinguished by extensive functionality (with the possibility of electronic signature in the application), ease of use and the possibility of integration 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 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 Moje BR – free software for invoicing and communication with the accounting office. The dashboard of the app collects information about the current payments of your company. Cost documents are added to the program by taking pictures of invoices thanks to the Comarch OCR service. The application is designed for the smallest companies and the self-employed needing a mobile tool for invoicing and cost document entry in order to grow rapidly and save as much time as possible.

Comarch Shipping – a service that communicates with courier companies' programs in order to prepare waybills and dispatch shipments. Preparation of these documents can be done on the basis of commercial documents downloaded automatically from Comarch ERP systems as well as manually entered shipping orders.

Systems by Comarch Software und Beratung AG is a line of ERP and financial-accounting systems for small and medium-sized enterprises in the German-speaking market:

Comarch Financials Enterprise – a new generation financial and accounting system, developed as a complement to Comarch ERP Enterprise, enabling complete financial management of a modern enterprise. 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 and large retail and service companies and retail chains. It is also addressed to holding companies. The solution is suited to the Polish market and foreign markets. The system is also available in a service model (SaaS).

Comarch ERP Suite – a classic ERP system, offering proven and industry-specific functional solutions for a wide range of users.

Comarch Financials Suite – an extensive, certified financial and accounting system with controlling modules and electronic document archiving, enabling work in an international environment, also with regard to different accounting standards (US GAAP, IFRS).

Comarch Financials Schilling – a classic financial and accounting system.

Comarch Financials DKS – a financial and accounting system developed for customers from the Austrian market, also equipped with a controlling and HR module.

Comarch eBilanz – an application for the electronic transmission of financial reports to the state administration

in Germany that works with various financial and accounting systems.

Comarch eRechnung – an application for handling e-invoices in Germany in accordance with the applicable legal regulations, working with the German financial and accounting systems of Comarch.



Comarch Innovation Space, Kraków



Comarch IoT Plant, Kraków



## **25 YEARS** OF EXPERIENCE



MORE THAN
10 000
CLIENTS EACH YEAR



MORE THAN
300
TRAINING PROGRAMS



90 CERTIFIED INSTRUCTORS



COURSES IN

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.
- 3. E-learning courses: training courses that do not require the trainer's direct participation in the learning process. Courses enable knowledge acquisition according to a set template and scenario, using modern technologies and appropriate equipment (computer, laptop, tablet).

#### 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

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.



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

Dear Stakeholders,

Given 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.

Regardless of the formal requirements, the Comarch Group has been applying good practices in the field of non-financial reporting and corporate social responsibility. This is due to both the inner need to communicate with stakeholders and to fulfill corporate governance recommendations for the company's stock exchanges and the provisions of the Accounting Act.

Because of the business profile of its enterprise, key issues for Comarch relating to sustainable development include social one relating to employment and human rights and matters concerning diversity management, especially concerning 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 a 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, a significant role of "soft" incentives, promotion of physical and cultural activities among employees, increasing awareness of diversity among management staff and employees, as well as constant improvement of management procedures. The Comarch Group constantly works to protect the natural environment and promotes attitudes environmentally friendly among the crew. The Group has also been supporting various initiatives by local communities and numerous charity activities.

The past year has proved that the Comarch Group was very well prepared to operate under the conditions of emergencies caused by the COVID-19 pandemic. We are convinced that the Comarch Group, thanks to a very good financial situation, significant product, industry, and geographic diversification of its offer and employee commitment, will be able to in the coming periods without disruptions to fulfill its mission of worldwide dissemination of innovative technical thought created in Poland innovative technical thought, to the satisfaction of customers, employees, shareholders, and the entire socio-economic environment.

The Management Board of Comarch SA points out that the report on non-financial information includes non-financial information related to Comarch SA and the Comarch Group The report has been prepared in accordance with the requirements of the Accounting Act of September 29, 1994, European Commission guidelines on Directive 2014/95/EU on disclosure of non-financial information information and based on the national Standard of Non-financial Information (SIN) issued by Reporting Standards Foundation. The report includes data for 2020 and comparative data for 2019. No significant adjustments were made to the information contained in the previous reports. The report is not subject to certification or external verification by professional auditors.

Management Board of Comarch SA

## **Integrated Management System**

The Comarch Group places particular emphasis on the quality of its products and services provided. Quality-raising initiatives are therefore undertaken to ensure that the ever-increasing and more specific expectations of customers operating on both the Polish and international market may be satisfied. Through continuous work on improvement and development of the Integrated Management System, Comarch has obtained:

- Integrated Management System certificate in accordance 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-EN ISO/IEC 27001:2017-06 Information Security Management Systems,
- Energy Management System certification in accordance with the requirements of PN-EN ISO 50001:2018-09 Energy Management Systems,
- Internal Control System certificate, meeting the requirements of article 11, paragraph 2, of the Act of

- 29.11.2000 on trade with foreign countries in goods, technologies and services of strategic importance for national security and the maintenance of international peace and security (as amended),
- certificates confirming that the Quality Management System meets the requirements of AQAP 2110:2016 NATO Requirements for Quality Assurance in Design, Development and Production and AQAP 2210:2015 NATO Supplementary Requirements to AQAP 2110 for Software Quality Assurance.

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 certification body for the AQAP system at Comarch S.A. is the Quality Certification Center (CCJ) operating at the Military University of Technology. The Integrated Management System has been implemented and certified at Comarch SA, while the implemented procedures apply to Comarch Group companies. The Integrated Management System ensures the correct and systemmanaged execution of all business processes that affect the quality of products and services. The smooth operation of the system ensures that all processes are monitored for effectiveness and efficiency, improved and adapted to constantly changing market and technological conditions and to changing customer requirements. The high quality of products and services is supported by continued care about the environment and safety of the employees and suppliers. The application by the Comarch Group of the principles of systems implemented and certified at Comarch S.A. contributes to increasing trust between the company and its clients and suppliers. It also strengthens the Comarch Group's image in the eyes of all entities interested in the effects of our company's activities in the areas of the quality of our products and services, environmental impact, energy management, ensuring health and safety at work, as well as ensuring information and data security and control in the trade of goods, technologies and services of strategic importance to national security. The Integrated Management System Policy is the main document of the IMS. This policy contains all the organization's intentions and objectives regarding quality, environmental protection, health and safety at work, energy management and information security, which are expressed in a formal manner by top management.

#### **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 need to meet these requirements means that products supplied by the Comarch Group may be dual-use goods and be used in a manner inconsistent with the principles of national and international law. In order to prevent such practices, an Internal Control System 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:

- to exclude the possibility of profit making in a manner contrary to the requirements of the Internal Control System,
- to refrain from handling trade in goods when it is contrary to national and international law,
- to prevent transactions with counterparties involved in the proliferation of weapons of mass destruction,
- to enforce the principles of the Internal Control System in all workplaces related to the circulation of goods,
- supervision by the Sales Control Supervisor of the Internal Control System processes.

Each of the systems comprising the Integrated Management System covers a different subject area and is characterised by specific risks. Within the Integrated System, risks and opportunities are identified and monitored. The Quality Management System places particular emphasis on risks associated with the overall functioning of the organization and its processes, documentation and relationships with Suppliers. Environmental and energy management address risks related to environmental impacts, while health and safety management addresses risks related to labor issues. The Internal Control System regulates international trade in goods and technologies and ensures that the processes carried out comply with specific legal requirements. The AQAP system, for the implementation of projects for the armed forces, contains stringent requirements and is built on the management of risks within the projects implemented. The opportunity for the organization is to start working with new customers, establishing new business relationships.

Risks are considered and taken into account at various levels – starting with policies defining the main assumptions in a given area, through procedures regulating the functioning of processes, and ending with specific actions embedded in internal mechanisms and IT systems used by the Comarch Group. The risks listed under each system and the mechanisms for managing them are described in the following section.

The Comarch Group is aware of the importance of risk management. As part of its activities, the Integrated Management System is continuously adjusted to the requirements of updated international standards, which place particular emphasis on risk-related issues – a risk-based approach to management and consideration of risk at the system level are recommended.

For the individual systems of the Integrated Management System, the following risks were identified as part of the company-wide process:

Risks identified in relation to the operation of the Quality Management System:

- risk associated with the deterioration of the quality of products and services offered,
- risk of losing customers due to failure to meet their quality expectations,
- risk associated with the occurrence of non-compliance and instability in internal processes.

Risks identified in relation to the operation of the Internal Control System:

- risk associated with the misclassification of products and services within the JCS,
- risk of doing business with a counterparty on the Denial Lists.
- risk of executing transactions with entities from countries subject to trading restrictions or prohibitions or other sanctions,
- risk associated with the occurrence of noncompliance with legal requirements and internal procedures within the scope of the JCS,
- risk of financial penalties for non-compliance with Polish and European legislation.

Risks identified in relation to the operation of the Health and Safety Management System:

- risk associated with inadequate levels of employee health and safety,
- risk associated with the occurrence of accidents, occupational diseases and near misses,
- risk associated with non-compliance with applicable legal requirements,
- risk associated with negative external audit results.

Risks identified in relation to the operation of the Environmental Management System:

- risk associated with non-compliance with applicable legal requirements and incurring financial penalties for breaching environmental obligations,
- risk associated with negative environmental impacts,
- risks associated with the failure of installations, systems and equipment.

Risks identified in relation to the operation of the Energy Management System:

- risk of inadequate future energy supply,
- risk associated with negative environmental impacts,
- risk of penalties for failures under the Energy Efficiency Act.

Risks identified in relation to the operation of the AQAP 2110 and AQAP 2210 System:

- risk of not being able to win a contract to provide products and/or services to the armed forces in Poland and other NATO countries,
- risks associated with failure to meet the requirements of applicable contracts, including the implementation of the Government Quality Assurance process,
- risk of not being able to deliver products and/or services that meet NATO's quality assurance requirements for design, development and production and software quality assurance.

The risks identified in the Information Security Management System together with the mechanisms implemented are described in a separate part of the chapter.

Within the Comarch Group, there are a number of mechanisms whose effective functioning makes it possible to conclude that the company operates in compliance with the applicable internal regulations and laws – both on a national and international level. These mechanisms include, but are not limited to: the establishment of internal procedures defining processes and responsibilities, constant supervision of legal requirements, ongoing verification of the implementation of processes as part of internal audits and the use of internal IT systems dedicated to particular issues.

All the activities described above are aimed at minimizing the identified risk areas, controlling them and exercising ongoing control. The Comarch Group applies the precautionary principle in its operations at all levels of the organizational structure, especially in the development and market launch of new IT products.

In the case of the Internal Control System, an important role play information technology systems dedicated to issues related to them, e.g. a system of the contracts 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.

For communication purposes, email addresses have been made available for employees to submit their comments. Employees also have the possibility to make anonymous reports on violations of the provisions of the implemented policies, which are forwarded to the addressees in paper form via internal mail.

Internal audits are conducted as part of the Integrated Management System, the number of which was 204 in 2020. Internal audits are carried out in all units covered by IMS according to an annual program. Supervision over processes specific for ICS is also carried out as part of internal audits.

As part of the internal audits, statistics are kept on non-compliance in relation to the internal procedures of the Integrated Management System. A register of the strengths and weaknesses of the audited entities is also kept. In 2020, 43 non-conformities and 220 strengths and 217 potentials for improvement were identified.

#### **Sustainable Development Policy for Suppliers**

As a global organization specializing in the design, implementation and integration of advanced IT products, the Comarch Group has a significant impact on the functioning of the supply chain. 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.

Within the Comarch Group, there is a Sustainable Development Policy for Suppliers, which defines the most important principles that the company follows when realising cooperation with its business partners. In addition, the document represents a commitment to a sustainable procurement policy and sets out expectations for key suppliers.

These commitments are implemented mainly through:

- supporting and encouraging our customers and suppliers to be ethical, socially responsible and environmentally responsible in their actions,
- ensuring high quality products and services for customers in the international market, while paying particular attention to the security of information resources, environmental aspects and the health and safety of employees,
- building good partnerships with suppliers, based on mutual cooperation, trust and integrity,
- carrying out procurement activities in accordance with legal and regulatory provisions – national and international,
- selecting suppliers with the belief that only responsible practices in the supply chain can ensure the highest quality of the final product or service, while taking care of the environment, good labor standards, business ethics and local communities.

We are convinced that the high standards of business conduct to which the Comarch Group is committed should also be enforced on our contractors. We therefore expect the following principles from our key suppliers:

- managing environmental impacts in a responsible manner in accordance with ISO 14001 or a similar standard in order to reduce negative environmental impacts,
- applying occupational health and safety standards in accordance with OHSAS 18001 or a similar standard, so as to minimize the risks associated with occupational hazards and prevent injuries,
- applying good business practices, social and environmental issues related to the supplier's operations with an understanding,

- acting in accordance with applicable law,
- recognizing workers' right to organize and to bargain collectively,
- prohibiting discrimination in all its forms on the grounds of: race, social status, ethnic origin, religion, handicap, disability, sex, sexual orientation, union or political affiliation, age or marital status,
- prohibiting the employment of children under 16 years of age and the use of corporal punishment, mental and physical coercion, insults and sexual harassment,
- eliminating forced labor.

The following critical risks were identified in terms of supplier sustainability:

- risk of disturbances in stability and efficiency of processes implemented within the supply chain,
- risk of doing business with counterparties who do not comply with the requirements of the Policy and who violate ethical, social and environmental protection principles,
- risk associated with the insolvency of counterparties,
- risk associated with the occurrence of non-compliance with legal requirements and internal procedures as far as counterparties are concerned.

Cooperation based on principles followed by the Comarch Group, 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.

#### Respect for the Intellectual Property of Third Parties

As a software developer, the Comarch Group is perfectly aware of 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 suppliers and customers. The Comarch Group complies with legal regulations on the principles of respecting the intellectual property of third parties at the level of international, Community and national law, supports the intellectual property protection system and makes every effort to ensure the highest level of protection for the intellectual property rights of third parties.

Within the Comarch Group, a Third-party Intellectual Property Respect Policy has been implemented. The primary policy objectives are:

- ensuring respect for the intellectual property of third parties,
- ensuring respect for 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 the legal regulations and the licences obtained by the Comarch Group,
- using third-party software exclusively within the scope of the licences granted,
- protecting intellectual property, patents, trademarks and other industrial property rights of the Comarch Group,
- protecting the Comarch Group's interests, in particular financial and legal,
- concern for the high quality of products and services offered,
- risk management as covered by the policy,
- management of intellectual property and licences.

Detailed objectives of the Policy resulting from the primary objectives are:

- protecting the intellectual property of Comarch Group suppliers and customers,
- familiarising employees with the policy and enforcing compliance with it,
- achieving transparency on the use of third party intellectual property by employees,
- achieving the highest possible level of understanding and respect for intellectual property rights,
- prohibiting the use by employees and collaborators of the Comarch Group of software which infringes the intellectual property of third parties.

The Comarch Group aims to achieve the objectives of the Policy by training its employees and acting in accordance with procedures that structure the process of evaluating, selecting and acquiring software and storing licenses for:

- software for internal needs of the Comarch Group: tools and office equipment,
- programming components and source codes for use in Comarch Group products,
- programming components and source codes for use in programming services provided in such a way that the effects of Comarch Group's work become the property of the client (dedicated products).

It is the responsibility of each employee and collaborator of the Comarch Group to know and respect the Intellectual Property Rights Respect Policy and the procedures arising therefrom, insofar as they are applicable to them, i.e. in the scope of:

- responsibility for the use of the software by the Comarch Group,
- responsibility for the use of software on Comarch Group hardware by an employee or collaborator,
- how to obtain permission to use third party intellectual property in Comarch Group products and dedicated products,
- how to obtain approval for the purchase of new software.

The following critical risks have been identified within the framework of respect for third party intellectual property:

- risk of using unlicensed software for internal purposes,
- risk of illegal use of third-party software in Comarch Group products,
- risk of possible financial and legal claims and reputational damage,
- risk of non-compliance with legal requirements and internal procedures regarding respect for the intellectual property of third parties.

The minimization of risks related to respect for the intellectual property of third parties is carried out within the mechanisms described in the section on the Integrated Management System. 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 application of appropriate procedures by employees and collaborators of the Comarch Group 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 event of discovering or learning of any non-compliance with this Policy, as well as any infringement of third-party intellectual property, the Comarch Group obliges its employees, collaborators, suppliers and customers to report such cases to the Quality and Health & Safety Department and the Legal Department via a dedicated email address.

#### Quality Management System for Medical Devices Comarch SA and Comarch Healthcare SA

In addition to the core business of manufacturing software and IT systems and providing services in this area, selected Comarch Group companies are also active in the design and development, production and marketing of medical devices and have a certified Medical Device Quality Management System in compliance with EN ISO 13485:2016. The scope of the certificate for Comarch Healthcare SA includes design and development, production, distribution and servicing of systems for monitoring vital signs as well as post-implementation service, whereas for Comarch S.A. – design and development, own and contract production, distribution, implementation and servicing of software, products and accessories and systems for monitoring vital signs as well as post-implementation service in this scope.

The Quality Management System Certificate for Medical Devices has been issued by TÜV Rheinland Polska Sp. z o.o.

All products manufactured by Comarch SA and Comarch Healthcare SA which are medical devices are examined in terms of their impact on health and safety. These products undergo appropriate testing and certification.

With a view to improving the quality of life and sense of security, and out of concern for the health of customers, Comarch Group companies offer a wide range of medical devices. The offered products are created in response to market needs in the area of prevention and treatment, and are prepared on the basis of the latest technologies, as a result of cooperation between qualified employees and the scientific medical community. The companies of the Comarch Group thus guarantee the proper quality and safety of the products offered, professional and ethical service, as well as assistance and advice tailored to the individual needs of customers.

Quality Policies have been implemented in Comarch SA and Comarch Healthcare SA. In order to implement the provisions of the Policy, the Board of Directors and employees of the aforementioned companies undertake to:

- adapt products and services to the expectations and requirements of customers, while complying with the requirements of legal regulations in the field of production and distribution of medical devices and provision of medical services, as well as in the field of IT products and services,
- market products and services that meet quality and safety requirements,
- provide reliable information on the quality and safety of the products and services offered,
- continuously and systematically take care of the quality and competitiveness of the products and services offered,
- develop cooperation with suppliers in order to improve the quality of products and services offered,
- improve their qualifications,
- continuously improve the effectiveness 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 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.

The following critical risks have been identified within the Medical Devices Quality Management System:

- risk of losing certification for medical devices,
- risk of products not complying with quality and safety requirements being placed on the market,
- risk to the health, life and safety of users of medical devices,
- risk of deterioration in the quality of medical devices,
- risk of non-compliance with legal requirements and internal procedures as they relate to medical devices.

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 according to ISO 13485, there is a risk management process 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 so-called 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 at Comarch S.A. and Comarch Healthcare S.A. Since the beginning of the activity, no medical incidents have been identified in the field of medical devices.

#### Quality Management System in iMed24 Medical Center (Comarch Healthcare SA)

The iMed24 Medical Center, founded in 2012, is guided by the principles of professionalism, innovation and cooperation based on trust and understanding. Many years of experience have enabled us to develop the highest standards of service, which is reflected in the certificate we have received confirming that our Quality Management System meets the requirements of ISO 9001:2015. The scope of the certificate includes the provision of health services within the outpatient clinics and laboratories run, including the provision of remote services. The certification process is carried out by TUV Rheinland Polska Sp. z o.o. The quality policy implemented in Comarch Healthcare SA presents the obligations of the Management Board and employees of the company with regard to services as well as products and has been described in detail in the section Quality Management System for Medical Devices Comarch SA and Comarch Healthcare SA.

The scope of activity of the iMed24 Medical Center related to the provision of medical services carries specific risks. Risks within the system are identified at a company-wide level. The system identified:

- risk associated with the occurrence of a medical error,
- risk associated with the exposure of health personnel to harmful agents,
- risk associated with the failure of medical equipment, systems or power supplies,
- risk of unauthorized access to medical data,
- risk associated with the occurrence of non-compliance with legal requirements and procedures in CM iMed24.

Risk management in a healthcare provider is particularly important. The entity has appropriate internal mechanisms in place to minimize identified risk areas, control them and exercise ongoing control.

#### **Quality Management System in Comarch Healthcare SA BU HIS**

Comarch Healthcare SA BU HIS operates in the medical IT sector, developing comprehensive solutions for medical institutions. The company located in Katowice, ul. Baildona 66 has a certified Quality Management System to the ISO 9001:2015 standard. The scope of certification includes the design and development, production, sales, implementation and service and maintenance of IT solutions, as well as consultancy and training in the specified area. The certification process is conducted by Bureau Veritas Polska Sp. z o.o. The quality policy implemented in Comarch Healthcare SA presents the obligations of the Management Board and employees of the company with regard to services as well as products and has been described in detail in the section Quality Management System for Medical Devices Comarch S. and Comarch Healthcare SA.

The following risks were identified within the system implemented at Comarch Healthcare SA BU HIS:

- risk that products do not comply with legal requirements, within the periods set by the legislator,
- risk associated with the occurrence of inconsistencies and instabilities in the internal processes of medical units covered by computerization.

Comarch Healthcare SA BU HIS, operating within the Comarch Group, has a number of mechanisms in place to minimize identified risk areas, control them and exercise ongoing control. The mechanisms are described in detail in the section on the Integrated Management System.

#### Information Security Management System in Comarch S.A.S.

Comarch S.A.S. is a subsidiary of the Comarch Group, which aims to expand on the French market. The company's field of activity is offering IT infrastructure and software, especially in the health sector.

Comarch S.A.S., with a Data Center in Lezennes, France, has an Information Security Management System. The company has obtained the relevant certificate, which proves that the management system meets the requirements of ISO/IEC 27001:2013 Information Security Management Systems. The scope of certification for Comarch S.A.S. covers the infrastructure and services hosted at the Data Center location in Lezennes, France, managed by the Comarch S.A.S. French team at the aforementioned location. The certification process is carried out by Bureau Veritas Certification Holding SAS – UK Branch.

Comarch S.A.S. has also obtained the HDS certificate, which allows it to store and process personal health data and confirms that it operates in this field in accordance with the highest standards of security and data protection. With this certificate, Comarch S.A.S. will be able to offer its customers and partners highly secure data hosting with controllability. The certification process is carried out by Bureau Veritas Certification France.

The assumptions of the Comarch Group Security Policy fully apply to the area of certification in Comarch S.A.S. Additionally, in order to meet the safety requirements associated with HDS, the company has an appropriate internal Policy in place.

Risk management within the system is carried out on a continuous basis using an appropriate methodology. As part of risk management, appropriate internal audit and verification mechanisms are in place for the systems implemented. Company-wide procedures also apply.

#### **Human rights**

The Comarch Group respects and complies with national human rights standards and international labor standards, treating them as fundamental and universal. The Group respects and and implements labour law and health and safety regulations.

Recognizing workers' right to free association, a dialog with Workers' Representatives is undertaken. The Comarch Group has not identified any cases where there may be a violation or a serious risk of violation of the right of employees to associate and conclude collective agreements either within the organization or among suppliers.

The Comarch Group respects the prohibition of discrimination based on race, social status, ethnic origin, religion, handicap, disability, gender, sexual orientation, union or political affiliation, age or marital status.

It guarantees freedom of opinion, conscience and religion and freedom of belief and expression. The Comarch Group promotes teamwork free of any prejudice and consciously draws strength and values 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 the copyrights of its employees and, in relation to international standards, respects intellectual property as an individual good, safe from abuse.

The Comarch Group respects the prohibition of child labor under 16 years of age, forced labor, corporal punishment, mental and physical coercion and insults, as well as the prohibition of sexual harassment, and considers the workplace to be free of such practices.

Neither Comarch SA nor the Comarch Group has identified any cases of human rights violations, child labor or forced labor, including in subcontractors. No complaints about respect for human rights were received.

Employees of the Comarch Group companies are informed about the principles resulting from the adopted Code of Ethics during First Step and onboarding training organized by the employer on the first days of work, and later during IMS training carried out every five years.

#### **Climate policy**

Taking care of climate issues is one of the priorities of the Company's Management Board. While planning new investments and carrying out current activities, the Management Board of Comarch SA takes climate issues into account, which is reflected both in office investments (low- and zero-emission buildings, use of photovoltaic installations) and in established internal rules related to workplace organization and building climate awareness among employees (introduction of company-wide solutions concerning waste segregation, use of energy-efficient lighting solutions, promotion and support of pro-climate initiatives and activities). A preliminary analysis of climate policy developments identified the following potential risks:

- risk associated with negative environmental impacts,
- risk of establishing cooperation with contractors who do not meet the requirements of the climate policy and infringe the principles of environmental protection,
- risk of incidents related to leaks of refrigeration and air-conditioning equipment,
- risk of increased use of energy necessary to power refrigeration and air conditioning equipment (office buildings and CDC) during periods of above-normally high temperatures.

Due to the fact that managing risks and issues related to climate is one of the important responsibilities of the Management Board of Comarch S.A., the identified risks are monitored on an ongoing basis by the Management Board, which takes all necessary actions to minimize the occurrence of events that could have a negative impact on climate and the environment. From 2020 onwards, risk management activities have assumed a systemic character, manifested in annual verification and analysis of the Company's activities in this respect. Regardless of the systemic analytical and verification activities, the Management Board of Comarch SA is adequately prepared to take all necessary preventive measures to minimize the negative impact of potential risks and events occurring on Comarch's climate policy.

### **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 fellowemployees, 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 optimize 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 labor 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 centers 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 centers) 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, minimizing 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.

#### **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 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.

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.







#### 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

### **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,
- unauthorized 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 minimize 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 following critical 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 noncompliance 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:

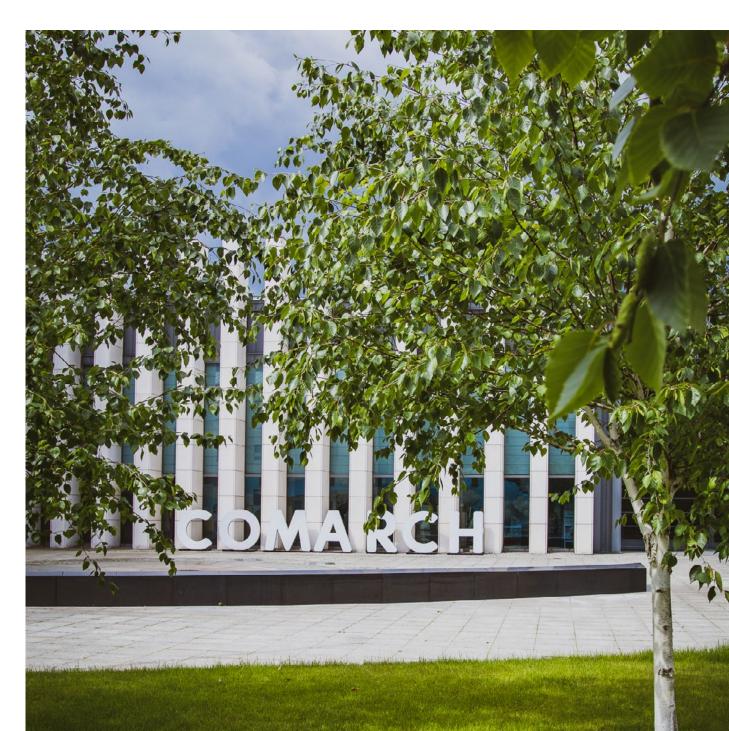
- Risk of using unlicensed software for internal needs,
- Risk of illegal use of software owned by third parties in Comarch products,
- Risk of potential financial and legal claims, as well as image losses,
- Risk related to non-compliance with legal requirements and internal procedures to the extent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

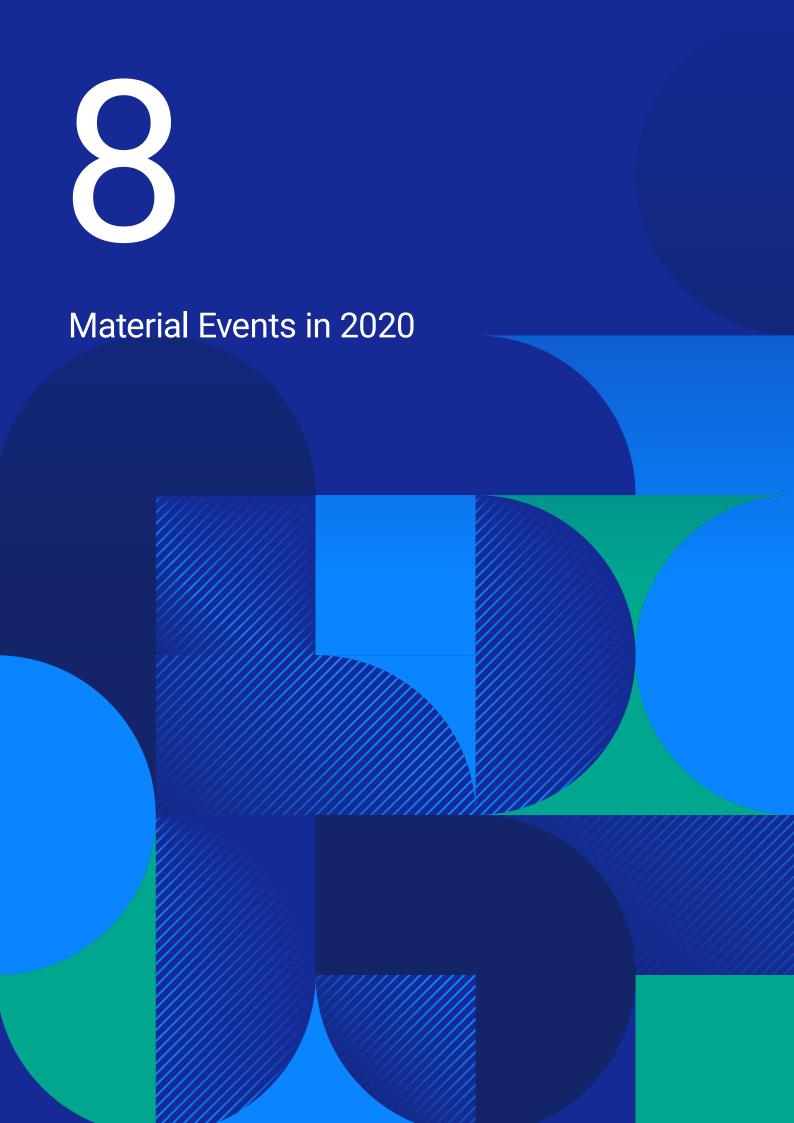
Mitigation of risks related to respect for intellectual property of third parties is carried out as part of the mechanisms described in the section of the Integrated Management System Policy. Both the supplier and the customer of the software have the right to have their intellectual property rights 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 noncompliance 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.

## 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 2020 Non-financial Data Report was published on 29 April 2021. 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/relacje-inwestorskie/raporty-okresowe/2020/





#### 1. Acquisition of the French company 2CSI

Comarch has acquired 100 per cent of shares in the French company CABINET CONSEIL EN STRATEGIE INFORMATIQUE S.A.S. (hereinafter referred to as 2CSI), which specializes in providing IT solutions and services to medical entities on the French market. 2CSI has been present on the market for more than 25 years and develops its own software to support the computerization of medical facilities and companies operating in the market of remote home care for patients. The company has implemented and maintains its systems for more than 100 customers from the healthcare sector, mainly operating on the commercial market, including LVL Medical (international Air Liquide Group), TIMKL (international Roche Group) and several dozen clinics and hospitals.

"In our opinion, the computerization of the healthcare sector and in particular the segment of remote home care of patients is an area that will develop very dynamically. The cumulative annual growth rate of this market in France over the last 10 years is over 8%. In the context of the current situation, we do not doubt that this market will record double-digit growth. At Comarch, we have been preparing for this for many years and investing in research and development of appropriate systems that support companies operating in the healthcare market, including the provision of medical services, mainly in the field of telemedicine, remote medical care and management of specialist documentation. Taking over of 2CSI is a major step towards strengthening Comarch's position in this segment of IT solutions. Specialized staff, a large group of active customers, mature product lines offered by the acquired company will allow us to achieve significant synergies, expand Comarch's portfolio and, as a result, win new contracts on European markets. The acquisition of 2CSI shares has been prepared for nearly 12 months and supported by intensive market analysis. Current events have only strengthened our belief that Comarch, together with 2CSI, with its deep know-how, IT products and infrastructure, will be able to offer comprehensive and innovative tools to support the efforts of the healthcare industry", says Arkadiusz Iłgowski, President of Comarch France.

## 2. The biggest contract in Comarch's history – an agreement with Vodafone New Zealand Limited

In August 2020, Comarch signed an agreement with Vodafone New Zealand. The contract is for 10 years and covers the supply of software and the provision of maintenance services for the operator's IT systems. This is the largest single agreement in the company's history. Its value amounts to almost PLN 300 million.

#### 3. Partnership 2020 Conference

Every year Comarch organizes a conference entitled "Partnership", which is attended by the company's business partners who work every day on the implementation of systems from the ERP family, i.e. enterprise management solutions. This year it was similar, although in a different format, as the conference itself took place online due to the restrictions in place due to the coronavirus pandemic.

The "Partnerships" program is a series of workshops and lectures during which participants have the opportunity to learn about new products offered by Comarch, trends on the IT market, as well as the application of new technologies in IT systems. During the conference, the results of the "Partner of the Year" competition are also announced for companies that have carried out the most interesting implementations of Comarch ERP solutions. Any Comarch ERP partner company, whose representatives were present at the Partnership 2020 conference, could take part in the competition for the title of "Partner of the Year". The condition for participation was to submit a minimum of one material presenting a case study of a customer where the implementation brought measurable benefits, helped achieve business objectives and may be inspiring for other partners.



The awards were given in six categories for the best implementation of individual systems: Comarch ERP XL, Comarch ERP Optima, Comarch WMS, Comarch e-Store, Comarch Mobile and Comarch DMS. The winners of this year's edition were partner companies: BMP Consulting, FIR GTECH Grzegorz Gwóźdź, Infortes, Pracownia Komputeryzacji Przedsiębiorstw "BILANS" Bogdan Pakosz, Prospeo and Sedkomp.

#### 4. Comarch's summer internship comes of age

The 18th edition of Comarch's summer internship ended on the last day of September. This year's internship was held in 12 cities in Poland, and candidates could choose from seven profiles: programming, system engineer, embedded, telecommunications, AI/ML, Cyber Security and UX/UI internship. After three months of learning under the supervision of specialists, as many as 85 per cent

of the trainees decided to sign a contract with the company and start their professional career at Comarch.

The IT summer internships at Comarch are the largest of its kind in Europe. Participants in the program have the opportunity to enter the labor market and gain their first valuable experience.

#### 5. New Comarch offices

In November 2020, Comarch established a company in New Zealand. A presence in this country will allow business in the region to grow even further. The company also has an office in Australia from 2019. The promotional and sales activity of the New Zealand-based Comarch company will focus on solutions aimed at the retail, telecommunications and finance and banking industries.

An office in Zielona Góra was also opened in 2020. The launch of the new location is the implementation of Comarch's sustainable development strategy and the expansion of its business structures. Currently Comarch has offices in nearly 70 cities around the world, 20 of which are located in Poland.



View from the Comarch office in Poznań

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**Corporate Social Responsibility** 

## **Corporate Social Responsibility**

Since the beginning of its activity, Comarch has been widely involved in social activities, promoting the idea of creating a broad social platform on the grounds of which sport and the latest IT technologies are promoted. Also important are activities promoting a healthy lifestyle and environmental protection, helping animals, as well as engaging in culture and supporting local community initiatives.

#### **CSR foundations at Comarch**

The CRS foundations at Comarch constitute the basis in the area of corporate social responsibility there is a Code of Ethics, approved and maintained within the company. A detailed report on CSR in the Comarch Group is documented every year and presented in the Corporate Social Responsibility Report of the Comarch Group, which is posted on the website: <a href="http://www.comarch.pl/o-firmie/zrownowazony-biznes/csr/">http://www.comarch.pl/o-firmie/zrownowazony-biznes/csr/</a>.

#### **Comarch for Culture**

#### Proms and jazz atmospheres

Another year in a row, Comarch sponsored the Kraków edition of the Last Night of the Proms event, which, due to the prevailing sanitary restrictions, took place online. In the interior of St. Catherine's Church we could hear Krzysztof Penderecki's compositions performed by the Beethoven Academy Orchestra and soloists. The concert was held for the 25th time.

Comarch also sponsored the jubilee of the Boba Jazz Band, which during its 30-year activity has performed on stages all over the world, including Germany and the United States.

## Comarch to improve the quality of organ music in St. Mary's Basilica

Comarch has been cooperating with St. Mary's Parish for years. In recent years, the company has made a donation towards the renovation of the organ in the church and was a co-founder of the new instrument and the entire project to revitalise the music space in the church. The middle organ had already been commissioned, and in 2020 work was underway to build a new main organ.



#### **#Comarchcares**

## They shared what was most precious. Blood donation action

Responding to the needs of the regional blood donation center, a safe blood donation event was organized on the company's campus in Kraków, attended by employees. 42 people donated a total of 18,800 ml of blood. The campaign was organized in cooperation with the iMed24 Medical Center and the Regional Center for Blood Donation and Haemotherapy in Kraków. It was also an opportunity to promote the idea of blood donation among Comarch employees, as well as the donation of plasma by people who had suffered from COVID-19.

## Promotion of sport and active lifestyle

## Sponsorship of Cracovia sports club and active and healthy employees

For over 25 years, Comarch Group companies have been actively involved in promoting sport and an active lifestyle among young people and the inhabitants of the Małopolska province. Since 2003, the company has been the title sponsor of the oldest existing football club in Poland, and five-time Polish Champion – Cracovia, as well as the hockey section. The company also promotes an active lifestyle among its employees by organizing various campaigns and participating in external events. On the Comarch campus in Kraków there is a recreation center (swimming pool, gym, sauna) which can be used by employees with their families. Due to sanitary restrictions, the facility operated periodically and on a limited basis in 2020.

#### Cycling to work

Once again, the company has joined the Lesser Poland campaign organized by the Municipal Office of Kraków entitled "Bike to work, that is – home, bike, work... and so on and so forth". Comarch employees took part in the campaign, which aimed to promote cycling as an everyday means of transport, from June to the end of October and covered a distance of 43,199.8 km, making their contribution to the fight for a cleaner environment.

Regular bike commuting is possible thanks to the infrastructure provided by Comarch. In some of the Polish branches of the company there are, among others, lockable bike rooms, racks, lockers with showers and self-service repair stations.



#### Winter season activities

At the beginning of 2020 Comarch enabled its employees and their families to use free tickets to the ice rink of Cracovia sports club.

#### Online activity and integration

The company cares about a good working atmosphere and attaches great importance to employee relations. Despite not being able to organize traditional events, Comarch has taken initiatives to integrate employees and teams. Many actions were taken directly by the managers of the individual teams.

Activities were also carried out to improve and make communication in remote or hybrid teams more attractive (thematic mailings, articles or training for managers).

#### Field game on the occasion of Children's Day

In cooperation with the Central Technology House, a modern educational center of which Comarch is a strategic partner, an online field game was organized for employees' families. Two versions of the game have been prepared – "Lame Pirate Joe" for younger children aged eight to 10 years and "City of Robots" for older children aged 11-13 years.

# Charity sports competition

Three months of competition, three tasks to be completed, three categories, one common goal – financial support for a social organization selected by a vote of the employees. This year's Comarch ONrun/ONbike/ONmove competition attracted 407 employees who collectively cycled and ran over 117,000 km. Thanks to the commitment of the staff, the goal was achieved and financial support was provided to the Elephants on the Balcony Foundation, which helps children with mental health problems. The amount donated has helped fund over 180 psychological and psychotherapeutic consultations for 100 children aged between four and 18.

#### We run and we help

In 2020, employees from branches in Kraków, Silesia, Lublin, Poznań, Łódź and Gdańsk participated in the Poland Business Run 2.0 charity run. This year's edition took place on 8 September in a changed formula, as the participants ran individually and each decided on their own choice of route. The fact that they fought together for a noble cause and to support the charges of the Poland Business Run Foundation – people with physical disabilities – remained unchanged.



#### CS tournament: Global Offensive

The pandemic prevented the company's employees from competing in the stationary sporting events they had participated in earlier in the year, so they got a taste of sport in virtual reality by competing in a Counter-Strike tournament. The competition was organized by the E-sports Company League, integrating fans of this legendary game. Three teams from Comarch took part in the nationwide competition.



# **Popularization of Science**

Since the beginning of its activity, the Comarch Group has been actively cooperating with schools, universities and other educational .institutions, such as the University of Mining and Metallurgy, Wrocław University of Technology, the Silesian University of Technology, the Jagiellonian University, Łódź University of Technology, Cracow University of Economics.

Last year Comarch specialists also took part in, among others, a business game organized by the University of Parma, a room project for French doctors and career days in Poland and Belgium.

There are also staff initiatives in the various departments that involve dedicating time to students on dedicated courses or branch meetings and with study circles. Once again, the company was also a business partner of postgraduate User Experience & Product Design studies at the AGH University of Science and Technology in Kraków.

Comarch also supported financially and in terms of content (lectures and participation in discussion panels) the organization of UX Poland – one of the largest events

for designers in Europe. The event included a two-day conference and over a dozen smaller online events under the banner of UX Poland Discovery.

In addition, in 2020 Comarch sponsored the inter-school IT festival "A grade project". The MFI has been organized for the past 15 years by the School of Communications in cooperation with the Micro-Macro Institute Foundation and the Kraków Technology Park. Technical and secondary school students from all over Poland took part in the competition. The festival prepares young people to develop their own ideas and to enter the labor market not only as employees, but also as young managers who create jobs for themselves.

Additionally, Comarch specialists are willing to share their knowledge by creating expert articles, authoring podcasts and sharing knowledge during meetups for people interested in programming issues (e.g. J/vacon)

The company also organizes internal knowledge-sharing activities such as meetups or cycles of texts on cyber security, created by specialists from the Internal Security Department.





#### Largest trainee program

The 18th edition of the IT internship took place during the holiday season. It is the largest project of its kind in Europe. Out of more than 4,000 applicants, 316 people got into the program.

The internship took place in 12 cities in Poland and students could choose from as many as six IT profiles: programming, system engineer, Embedded, telecommunications, AI/ML, Cyber Security and UX/UI internship. During the three-month paid internship, the students had the opportunity not only to confront their own ideas with the knowledge they have acquired so far, but also to carry out real projects in cooperation with a real client and under the watchful eye of specialists. After its completion, as many as 85% of the trainees found employment in the company.

- Instead of creating projects "for the drawer" during my internship, I could get involved in the process of developing a real product. I ended up in an e-health project where I participated in the redesign of a mobile application. The work required a lot of independence, but I could always count on the support of an experienced team. Now I have the opportunity to work on another product – a web

application and gain further experience – Balbina, an intern in 2020 and currently a junior UX designer.

# Cooperation with the Central House Technology

The Central Technology House is a modern educational center in Poland where knowledge can be gained in an interactive and interdisciplinary way. CDT is an initiative of the Polish Development Fund Foundation Comarch is the strategic partner of the project. In the CDT space, Comarch presents the Diagnostic Point (developed by Comarch Healthcare), which demonstrates the applicability of IT in medical care. The diagnostic point allows fast so-called prescreening, without the participation of the point's operator – anyone willing to participate can, within a few minutes, perform an examination, for example an ECG, on their own (without plugging in cables, just by holding the sensor). Such an examination with a two-channel ECG takes one minute. It is also possible to measure, among other things, saturation, temperature and body weight, BMI, or blood pressure.

A field game was also prepared for the employees' children to celebrate Children's Day in collaboration with the Central Technology House. Two versions of the game have been prepared – "Lame Pirate Joe" for younger children aged eight to 10 years and "City of Robots" for older children aged 11-13 years.



# Cracovia - CSR 2019

Approaching the end of 2020, due to the spreading coronavirus pandemic, was an extremely challenging time. A moment in history that our contemporaries have not yet had to face, a moment in which solidarity and social responsibility were particularly important. Comarch, being fully aware of these needs, has approached the subject of Corporate Social Responsibility with great care and intensification. It should be noted, however, that the emphasis was not only on combating coronavirus per se. "Victims" of the pandemic were also public sentiment or local entrepreneurs, so there was much to do on this front as well. The following are the CSR activities implemented by Comarch through the brand of Cracovia Municipal Sports Club from the beginning of August to the end of November 2020.

# **Academy of Extra Class**

Comarch, in cooperation with MKS Cracovia SSA and Ekstraklasa SA, organized the Ekstra Talent tournament once again. The event is aimed at young people between the ages of 11 and 12. The main objective is to promote physical activity as the best way to spend free time.

# Celebration of winning the Polish Cup

Considering the importance of the Polish Cup win by Cracovia's players for a large part of the city's population, Comarch together with the club organized a post-Cup fete. One of the main ideas behind the organization of the event was a concern to improve public sentiment, which had been affected by the lockdown caused by the coronavirus pandemic.





# European Special Olympics football week

The 5th round match of the 2020/21 PKO BP Ekstraklasa season between Cracovia and Kraków Czestochowa was dedicated to the promotion of the Special Olympics European Football Week. The event, created on the initiative of the competition organizer in cooperation with Comarch, aimed to draw attention to the effort that people with intellectual disabilities put into practising sport. During the match, announcers read out the Special Olympics message and a video promoting athletes with intellectual disabilities appeared on the screens.

# Extra Help

Comarch, together with MKS Cracovia SSA, joined the Ekstrapomoc [Extrahelp] action, which consists in mutual promotion of charity collections and donating memorabilia for auction by all teams participating in Ekstraklasa games. Comarch enrolled Matylda Celejewska, the disabled daughter of one of Cracovia's fans, in the aid project.







# Individual Photos With Polish Cup

Comarch has decided to allow Cracovia fans to take individual photos with the Polish Cup. The decision was based on similar considerations to those for organizing the trophy celebration – the importance of the event for the city's population and the improvement of public sentiment in the wake of the coronavirus pandemic.



# Charity auctions

One of the key areas of Corporate Social Responsibility is care and concern for those in need. For this reason, Comarch donates numerous gadgets to charities that raise funds to help or treat people in difficult life situations.

# Gold Ribbon campaign

Comarch actively joined the Gold Ribbon campaign, whose main objective was to raise funds for the treatment of cancer among children. Using Cracovia's social media, collections for the fight against cancer were promoted. The club's players also joined the campaign, and during matches they counted the kilometers they had run, which was then translated into financial support for the campaign by one of its partners.

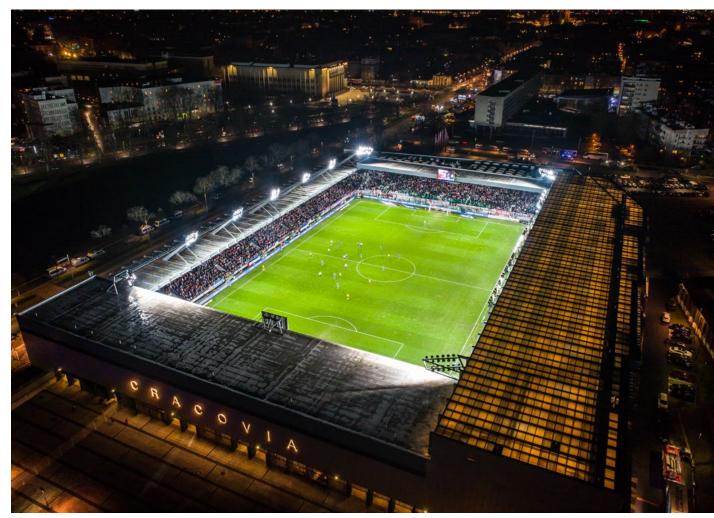
# Fits to help you

Local businesses were undoubtedly among the biggest "victims" of the coronavirus pandemic was local businesses. Caused by the fight against the SARS-CoV-2 virus, decisions to temporarily close restaurants, among others, contributed to great financial losses. For this reason, Comarch offered local service companies free marketing and advertising support using Cracovia's communication channels.

## Movember

November each year is prostate cancer month. Comarch has traditionally joined the Movember action aimed at encouraging men to undergo preventive tests.





Cracovia KS stadium

Prizes and Rankings

# **Awards for Comarch**

In 2020, Comarch was the winner of the "Most important companies for Poland" ranking in the category Capital Group - private companies and financial institutions. The competition is organized by the "Rzeczpospolita" daily newspaper. The ranking "The most important companies for Poland" is a reflection of important trends in contemporary business. The award was granted by the chapter in three equal categories: capital group, individual company, family company. In addition, companies with over 100 years of tradition were honoured. The companies' financial results for 2017-2019 were analyzed. In addition to economic indicators, the editors of "Rzeczpospolita" took into account the role played by the company in the social reality - from tax issues, through the level and forms of employment, activities for local communities, to climate protection activities.

The editors of the "Polityka" weekly awarded Comarch with the White List for its actions in the field of corporate social responsibility and implementation of solutions supporting sustainable development. The Corporate Social Responsibility Review is prepared on the basis of the results of a questionnaire sent to enterprises. As every year, the areas analyzed included corporate governance, human rights, behavior towards employees, environmental protection, customer care, business integrity and social commitment. Partners of the ranking are the advisory company Deloitte and the Responsible Business Forum.



White List CSR Polityka



Ranking "The most important companies for Poland" in the Capital Group, Individual Company and Financial Institute categories"

Comarch was also among the strongest business brands on the Polish market and was awarded **the Business Superbrands 2020 title**. The winners of the Business Superbrands 2020 title are brands that enjoy the greatest recognition and reputation, as well as being successful on the national and international arena in specific industries. In the survey, experts evaluated the brand's market position in Poland, the quality of products or services, the quality of b2b relations and innovation and CSR activities.

Comarch was at the top of the ranking prepared by the analytical and research company Polityka Insight and took eighth place in the "National Champions 2020" list. This was the third edition of the report prepared by analysts at Polityka Insight. The theme of the publication was human capital. In developing the Human Capital (KL) indicator, the following were taken into account: the share of the payroll fund in the value added generated, the number of specialists employed, which takes into account the percentage of staff with higher education, the scale of staff turnover and unionization in the company.

Comarch took first place in as many as six categories of the 2019 edition of the "ITwiz Best 100" ranking. "Gold" was won in the lists: sales to the trade sector, sales to the industrial sector, the largest company with Polish capital selling its own products and services, sales to the telecommunications sector, sales of integration services and sales of cloud computing services.

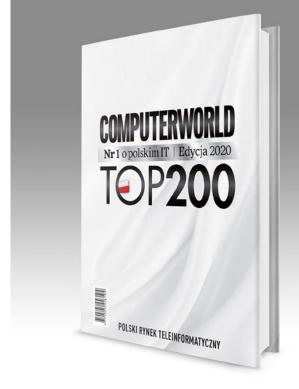
In addition, the company came top in several other categories including: companies with the highest sales to the SME sector (2nd place), sales of ERP systems (2nd place), sales of mobile applications (2nd place) and companies with the highest employment (3rd place), sales of CRM software (3rd place) and sales to the financial sector (3rd place).

The ITwiz Best100 report is a ranking of manufacturers and suppliers of IT solutions and services present on the Polish market, according to their sales results. The publication is prepared by the editors of ITwiz.

In the Computerworld TOP200 Edition 2020 report, Comarch took the first place in the categories: IT solutions and services providers for the telecommunications sector and providers of services in the cloud model. The company won the silver medal, among other things, in the lists of suppliers of solutions and services for the industrial trade, construction and production sectors, as well as IT companies with the largest expenditure on R&D. Comarch took third places in the following categories: the largest providers of Enterprise Resource Planning systems, IT companies with the largest increase in employment and the largest exporters of IT solutions.

**"Computerworld TOP 200"** is a prestigious publication. For more than 25 years, it has been a basic point of reference for people interested in the Polish ICT industry: IT managers, IT specialists and analysts, as well as potential customers seeking knowledge about suppliers' offers.

Comarch has won the **Innovation Award for eHealth** for the development of IT solutions for the healthcare industry on the Italian market. The company offers an entire complex of healthcare solutions that consists of EHR Cloud, Telemedicine Cloud, Hospital Cloud and Medical AI Cloud. The integration of these platforms helps to provide coordinated healthcare and support to patients, carers and healthcare staff.



Computerworld TOP200

For the second time in a row, Comarch won in the "Cloud Services" category in the "Trustworthy Brand 2020" survey conducted among Polish entrepreneurs. Respondents spontaneously answered which brand in a given category they trusted the most. They pointed to Comarch as the most popular provider of services in the cloud model. The "Trustworthy Brand" survey takes place every year and checks the level of trust in business brands. The survey is conducted by the research institute Kantar Polska on behalf of the magazine "MyCompany Polska".

During this year's @Hewlett Packard Enterprise Partners Congress, which took place on 6 February in Łódź. Comarch was awarded the gold partner status – HPE Gold Hybrid IT Partner. The company also received an award in the "Largest sales in as-a-service model" category. This award confirms competence in delivering IT projects using HPE technology in a service model and follows on from the global HPE CEEMA Service Provider of the Year award given to Comarch at the end of 2019.



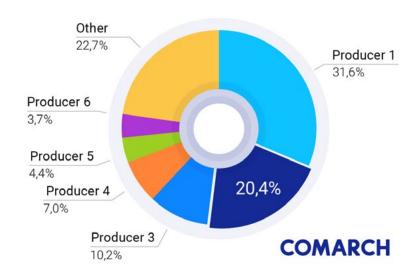
Trust Mark 2020, "MyCompany"

# Comarch in reports of analytical companies

Comarch was featured in the Market Guide for CSP Business Support System Solutions. This is a report prepared by Gartner, a research and advisory firm. The material provides guidance for IT executives and communications providers looking to upgrade or transform their BSS services to a digital platform. The Gartner report provides a detailed market analysis, profiles of BSS vendors and market recommendations that can benefit the IT and telecoms industry.

 Comarch's inclusion in the report confirms our strong position on the market of BSS providers – says Dominik Pacewicz, Head of Product Management at Comarch. Year after year, Comarch strives to successfully meet the everchanging technological and business requirements. 5G, the Internet of Things and other disruptive technologies are challenging telecoms and Internet service providers to modernize and transform their organizations. By providing its customers with innovative OSS / BSS solutions, Comarch not only becomes part of the change, but also drives further market development.

According to the report "Poland Enterprise Application Market 2020 – 2024 Forecast and 2019 Vendor Shares Analysis", Comarch maintains more than 20 per cent of the market for enterprise management IT solutions in Poland and retains its position as the largest Polish ERP systems provider in the domestic market. At the same time, the company is increasing sales to the small and medium-sized business segment. In 2019, sales of Comarch ERP solutions in Poland increased by more than 18 per cent and amounted to PLN 190 million. This represents 20.4 per cent of the total market for business management systems and gives the company second place in the list of manufacturers, taking into account both Polish and foreign companies.



Source: Raport IDC "Poland Enterprise Application Software Market 2020 – 2025 Forecast and 2019 Vendor Shares Analysis"

# 

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