

# Solutions for Telecommunications

*Bring a new vision to life*

## Introduction

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Comarch has been developing BSS/OSS solutions for telecommunications since 1991. Today our solutions and managed services are chosen by incumbent operators, broadband and Triple-Play carriers, MVNOs/MVNEs, as well as start-up operators worldwide. We specialize in optimizing business operations and forging relationships to maximize customer profitability. Our new generation of billing, network and service management systems enable the launching of next-gen services and support innovative business models. Comarch's primary advantage lies in its extensive domain knowledge amassed in our software which we use to deliver and integrate sophisticated business IT solutions.

Comarch offers a comprehensive suite of BSS/OSS solutions that address the critical strategic activities of fulfilment, assurance and billing and enable communication providers to cre-

ate and secure new revenue streams. Comarch's flagship product lines include:

### **Comarch BSS Suite**

for management of billing, fulfilment and customer management,

### **Comarch OSS Suite**

for service and network management.

The two suites are state-of-the-art, innovative software systems that have been carefully designed and are constantly developed with the latest technologies. The systems' modular, open architecture enables their functionality to be maximized through combining with other systems, to form an end-to-end solution. Individual modules can be implemented independently and integrated seamlessly with existing third-party and legacy systems.

Comarch advantages lie in the relatively new generation of technologies supported by the products. Especially for InsightNet,\* the architectural underpinnings of the product leverage the experiences of more mature products and advances in software and networking tools.

\* previous name for Comarch OSS Suite

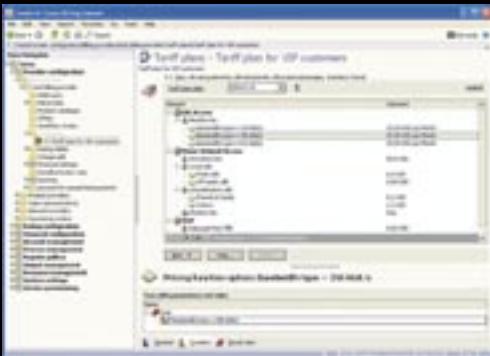
*Comarch OSS/BSS Vendor Profile, Elizabeth Rainge, IDC, October 2004*

## Sectors Served

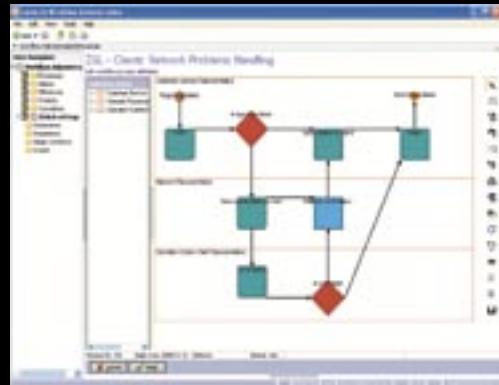
Comarch's solutions address the requirements of the following players of telecommunication services market:

- incumbent operators,
- broadband and TriplePlay carriers,
- MVNOs and MVNEs,
- lean operators,
- start-up operators.

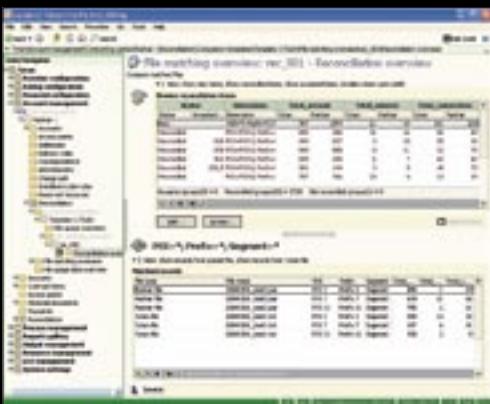
Comarch's flexible solutions are ideally suited to the growing convergence in technologies and business models that is taking place among telecommunications operators. Increasingly competitive environments and market deregulation are fading existing delimitations in the business models and technologies used by each type of telco operator.



Comarch Billing System – Tariff Management



Comarch Customer Management  
– Business Process Management



Partner	Amount	Status
Partner 1	1000	OK
Partner 2	2000	OK
Partner 3	3000	OK
Partner 4	4000	OK
Partner 5	5000	OK
Partner 6	6000	OK
Partner 7	7000	OK
Partner 8	8000	OK
Partner 9	9000	OK
Partner 10	10000	OK

Comarch InterPartner Billing  
– Reconciliation process



Comarch Fault Management – alarm list view

## Comarch BSS Suite

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Award-winning Comarch BSS Suite is a billing and fulfillment solution that enables a variety of communication providers to achieve their business objectives and prepare them for next generation technology and services. Comarch BSS Suite covers in an integrated approach a comprehensive range of operators' processes. Its flexible, scalable and open architecture that supports the entire billing chain.

Use of the latest technology facilitates the delivery of a certified high-performance, robust and efficient solution that can be integrated with most third party systems. With Comarch BSS Suite, providers can address the industry's most formidable challenges, including revenue sharing and settlements, the deployment of next generation services, and convergent billing

## Comarch OSS Suite

Comarch OSS Suite is a comprehensive network and services management platform that enables communication providers and enterprises to enhance reliability and performance of their services and networks. It is a NGOSS-compliant suite consisting of modules that can be tailored to meet individual operator's needs while helping accelerate ROI and decrease operating costs. The suite covers all functional areas of contemporary OSS.

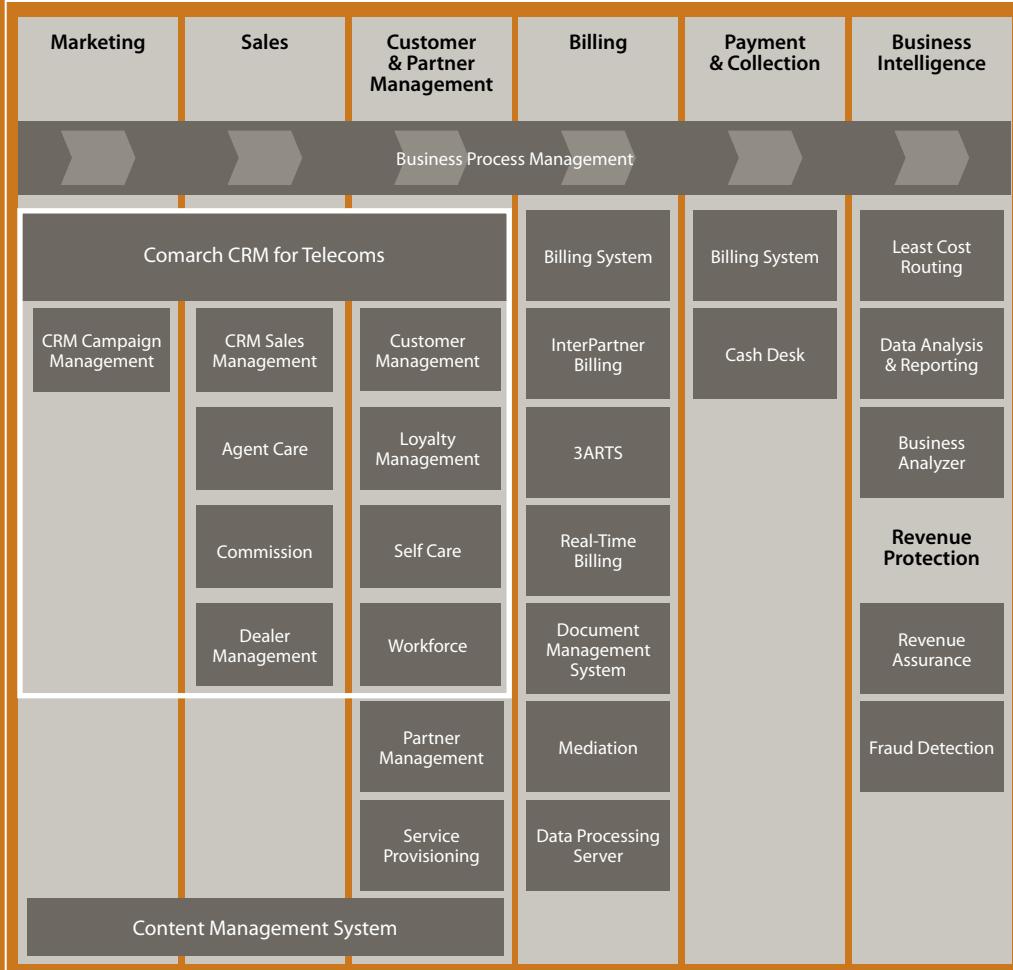
Developed with the most modern technologies (J2EE, Corba and RMI) and with a communication bus based on XML and SOAP, Comarch OSS Suite ensures seamless integration of IT systems (including BSS, OSS, CRM, ERP and others) and the efficient flow of information through various platforms and systems.

Comarch (...) Mediation Device and Service Provisioning platform turned out to be one of the more advanced products available on the market and nowadays allows us not only to introduce the sophisticated Next Generation services, but also offers technology that does not pose performance limitations which is a critical value for MDC.

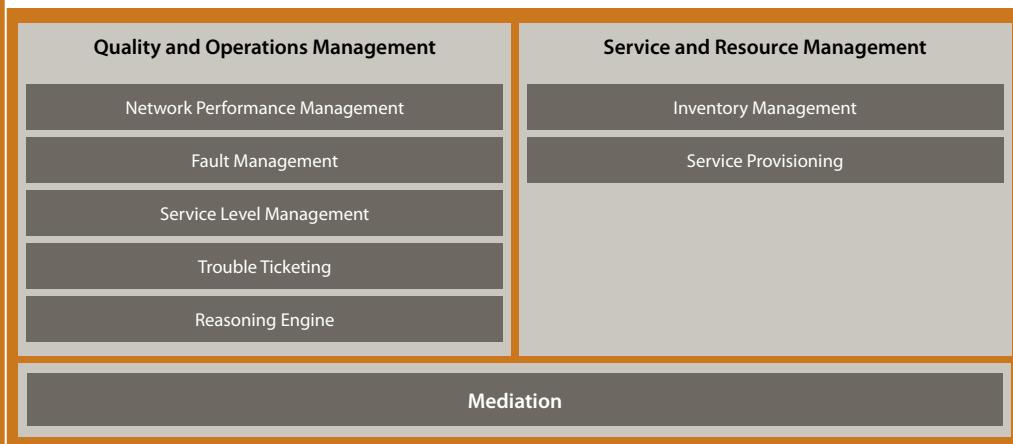
*Sergey Zubkov, IT Director, MDC, Belarus*

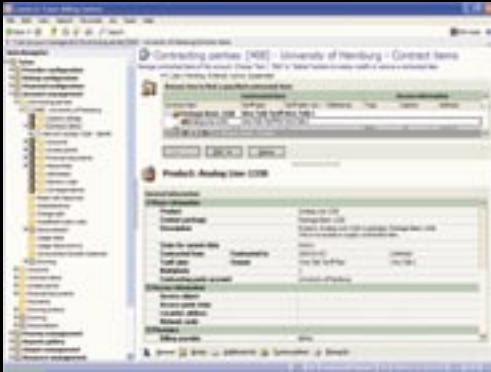
## Customers and partners

### Comarch BSS/CRM Suite

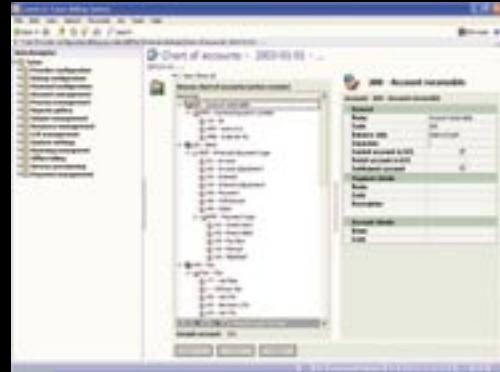


### Comarch OSS Suite

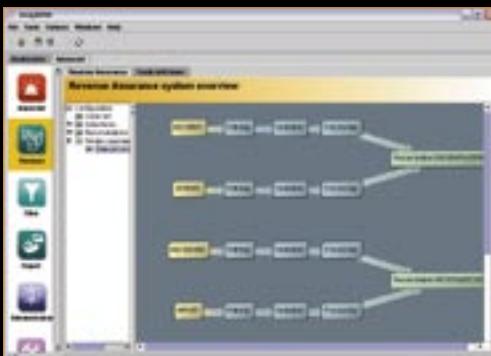




*Comarch Billing System & Customer Management  
Review of contracting party*



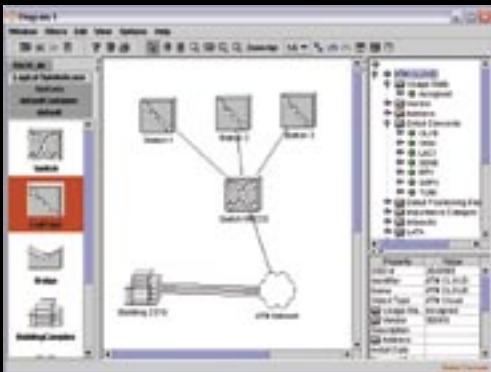
*Comarch Billing System & Customer Management  
Operator's financial setting configuration*



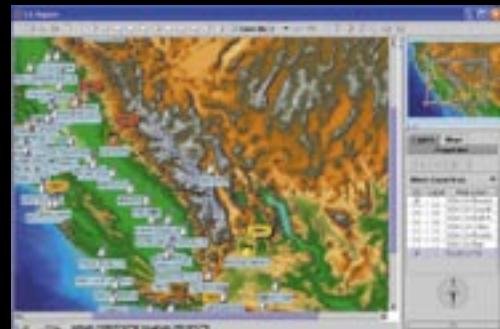
*Comarch Revenue Assurance  
Monitoring Configuration*



*Comarch Self Care  
Customer Self Care*



*Comarch Inventory Management  
Logical view*



*Comarch OSS Suite – geographical view*

In less than one year, we were able to implement Comarch solution with the full range of offers and sharing models we hoped for, despite the complexity of some of them. The system has been up and running for six months and we feel confident in the future to answer simply and rapidly to new demands of the market.

*Emmanuel Micol, Access and Interconnect Director  
Bouygues Telecom, France*

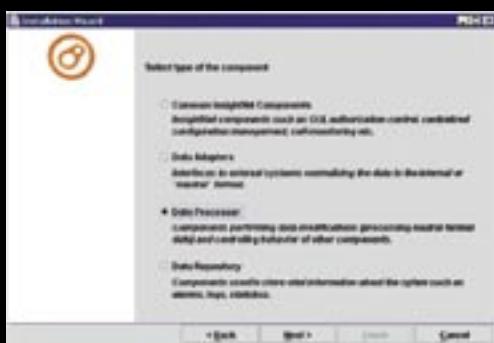
# Solutions

Comarch Solutions are based on Comarch's BSS and OSS modules. These have been chosen, integrated and pre-configured to meet requirements of specific customer groups in a rapid implementation. Thanks to their modular architecture, Solutions can still be customized to fulfill specific needs of individual customer and enable him to maximize competitive differentiation and advantage.

## Pre-Configured MVNO/MVNE Billing and Customer Care

In its solution Comarch offers a range of systems for managing crucial processes of an MVNO/MVNE. Additionally, since different MVNOs cover different activities, Comarch offers them a selection of additional components to choose from. All the systems and components are pre-configured according to the unique needs of an MVNO and ready for quick launch. As a result a carrier acquires in a short implementation time a tightly integrated and open platform, which delivers a selected range of functionalities. Basic components of the solution include:

- Billing System,
- InterPartner Billing,
- Customer Management,
- Self Care,
- Mediation.



Comarch OSS Suite  
Wizard-based installation



Comarch OSS Suite  
GUI driven configuration

### Service Quality Management

Comarch offers a solution built on its Quality and Operations Management products, pre-configured for quick launch. The solution provides monitoring of SLA and QoS based on performance and event data and enables near-real-time monitoring of delivered services. The solution is based on the following Comarch's products:

- Service Level Management,
- Network Performance Management,
- Fault Management,
- Mediation.

### TriplePlay Service Management

The solution enables Triple Play operators to efficiently manage their services in terms of service provisioning and quality monitoring. It also allows them to effectively manage events/faults within network infrastructure. The solution is based on the following Comarch's products:

- Service Provisioning,
- Network Performance Management,
- Fault Management,
- Mediation.

Introduction of Comarch InsightNet\* is a major step in operations optimization by integrating the management of our transition technologies into one homogeneous platform.

\* previous name for Comarch OSS Suite

*Günter Kaufmann, Manager Operations Support Systems, O<sub>2</sub> Germany*

# Services

Services have a strategic importance for Comarch and are a way to leverage experience and knowledge of the company's staff. Comarch renders a broad range of services from consulting, through implementing individual solutions to outsourcing.

## Hosted Billing Services for Telecoms

Comarch Hosted Billing Services offer carriers the opportunity to use Comarch's complete end-to-end Billing and Customer Management systems without incurring in the hardware and software investments needed to deploy a fully operational billing platform.

Comarch HBS are ideally suited for a full range of telecommunication operators – MNVOs, start-up carriers, new service providers, VNP operators which intend to avoid or delay upfront costs and/or of a billing system.

## Managed Services for Telecoms

Comarch Managed Services for Telecoms, while based on the same Billing and Customer Modules, go a step further. They cover the entire range of telecoms' billing and customer management processes and enable them to focus on innovations in packaging communication services and tariffs. The Services address all types of telecommunication operators and allows them to quickly introduce new services to the market, without facing the issues of incompatible billing solutions, unrealistic development timescales, extortionate development costs and limited service support. In the same time, Managed Services provide a possibility to improve and control operators' cost efficiency in an easy and effective way, without compromises on quality of processes.

Comarch provided us with a very sophisticated solution which has fulfilled all our demands. We are very satisfied with the speed of the projects and the results of the billing system. The Comarch team has proven the ability to produce quality results with skill and precision.

*Joel Esquenazi, CEO, Terra Telecommunications Group, USA*

## General Services

Services rendered by Comarch are an especially important and effective way to leverage its competences. Successful execution of many software development and implementation projects for a broad range of businesses enabled us to acquire a unique mix of technical and business experience and to develop a highly competent team. Our experience is also reflected in numerous certificates and partnership rights granted to Comarch. A broad range of Comarch's IT services is rendered in a highly competent and reliable manner.

Comarch offers the following services:

- Business Process Management
- Systems Integration
- Software & Turn-Key Systems Development
- IT Outsourcing
- Security & Data Protection
- Consulting
- Education & Training

We have found Comarch to be a reliable and professional company that has provided us not only with a sophisticated solution for the Mediation and Collection of billing data, but also high quality of services. All tasks, including implementation, delivery of hardware, installation and configuration, have been completed and delivered on-time. We also appreciate the flexibility while rendering technical support services after the completion of the project.

*Catherine Sweeney, CIO, eTel Group, Ireland*

# Comarch

Comarch is a global IT company delivering solutions for telecommunications, finance and banking, trade and industry, public administration and small and medium businesses. Headquartered in Poland, it has branch offices in more than ten countries including USA, Germany, France, Belgium, United Arab Emirates, Panama and Russia.

Comarch delivers software and services to customers in over 20 countries on 4 continents. Our responsibility for the businesses of our clients is mirrored in over 2000 successfully completed complex IT implementations for corporate customers.

Comarch employs over 1800 specialists, 80% of whom are experienced programmers, system engineers, IT consultants and, especially important, business analysts.

Established as a university spin-off, the company maintains a strong focus on R&D and close cooperation with academic environment. Comarch is the innovation-driven company, investing 15% of its revenues into R&D.

Comarch's principle business objectives are:

- balanced growth over a long time horizon,
- development of application software based on deep domain knowledge,
- maximization of added value in offered products and services,
- diversification of markets and services.

Comarch's unique business model enables us to offer the most technologically advanced, flexible and cost-effective solutions that change the way people do business.

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