

# Implementation of the Comarch Solution for MVNOs

## Auchan Telecom

After having successfully entered the French MVNO pre-paid voice market in 2006, Auchan Telecom, a member of Auchan Group, extended its offer to mobile Internet service. Subscriptions are made available in its numerous hypermarkets located throughout the country. The whole service delivery platform, provided by Comarch, was enhanced to grant customers IP network access, depending on the real-time voucher account balance. As a Software Oriented Architecture, using HTTP and web services as main access tools, Comarch's integration gateway easily interfaced with the dedicated Mobile Network Operator that Auchan Telecom chose to collect IP traffic.

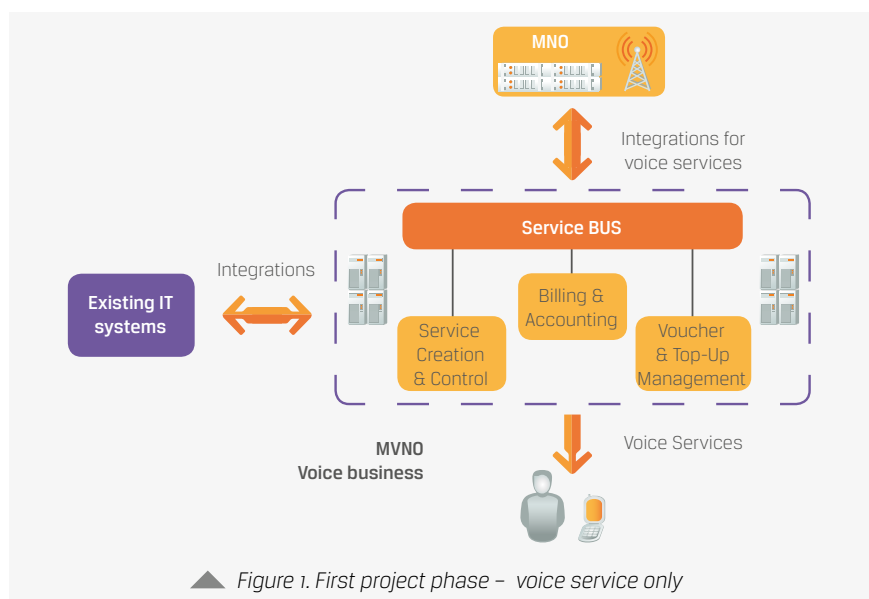
### The Business Need

Auchan Telecom decided to quickly extend its MVNO activity to mobile Internet, choosing to work with a different MNO for that particular business. Comarch has been able to provide a very short time to market: 1 month dedicated to in-depth analysis of requirements and 3 more months to complete the implementation. The whole project started in September and was completed at the end of December, 2007.

Comarch provided Auchan Telecom with more than just software with a range of required capabilities. The company acted as a partner and an advisor on the best practices commonly agreed upon among MVNOs all around Europe, where Comarch has many telecom customers. This knowledge also helped to sharpen requirements and quickly drive the analysis phase.

The general architecture and integration for Auchan Telecom's voice business is presented in the following picture.

The main challenge during the solution implementation was the enormous number of integrations between many systems from different domains and in different technologies.



### Customer:

Auchan Telecom, France

### Industry:

Communications

Auchan is an international retail group and multinational corporation with its headquarters in Lille, France. In May 2006, Auchan announced that it would become an MVNO, thus being the first retail-based MVNO in France.

### Comarch products:

Comarch Convergent Billing

Comarch Customer Management

Comarch Business Process Management

Comarch 3ARTS

Comarch Dealer Care

Comarch Self Care

Comarch Integration Gateway

All complex business processes important for offering and delivering services are connected with the use of certain small features implemented in distributed systems.

The problem with integrations was solved during the first project phase connected with voice services and it was extremely important not to increase this complexity of business processes and integration during data service implementation. This would increase the costs of maintenance or even have an impact on existing services.

## The Approach

After the introduction of Auchan Telecom requirements in terms of expanding the actual business and entering the data card market, Comarch decided to perform a multi level approach to convince Auchan Telecom to use eTOM compliant software from Comarch. The first stage of the solution creation process is always dedicated to gathering all the information and requirements from a customer and ends with a draft that usually does not cover all the necessary customer needs. This is why the final step of designing a solution appropriate for Auchan Telecom requirements was prefaced by:

- business analysis with a description of all processes and parties
- technical analysis with details of integration and interactions
- proof of concept using all the components that will be part of the final solution

## Working towards a solution

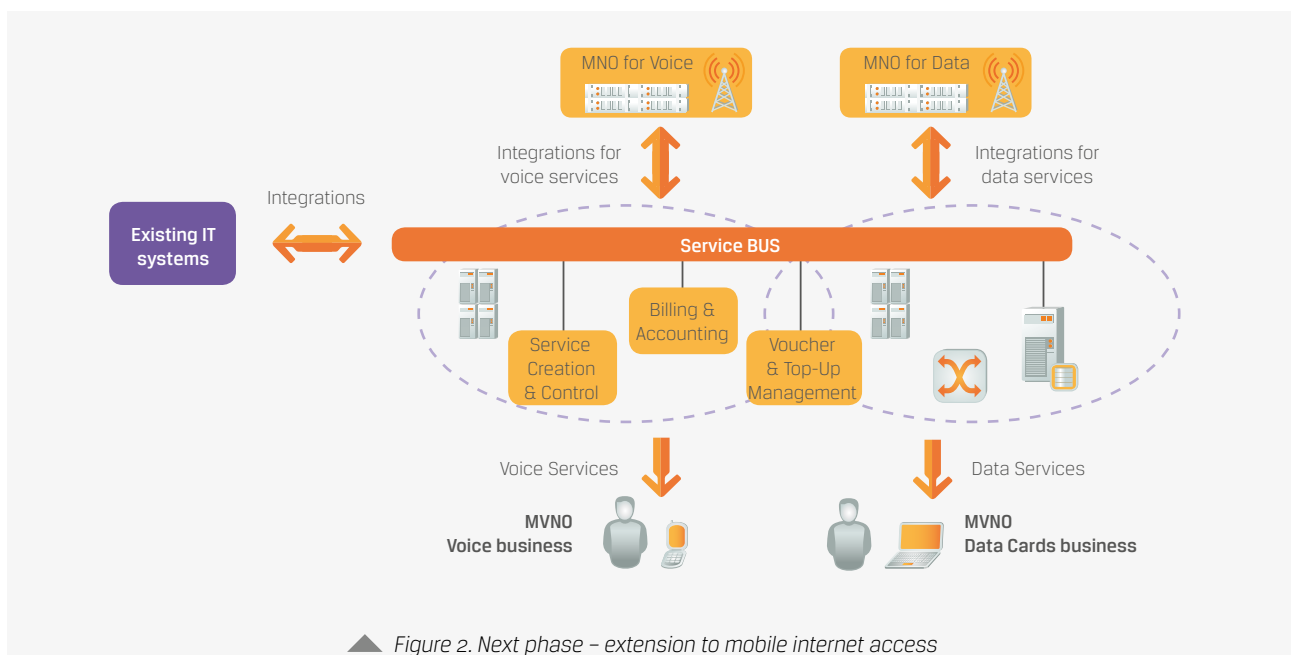
### Prepaid Data Card service

Comarch Solution for MVNOs extended the service portfolio of the operator by providing a simple wireless Internet access for subscribers. The subscriber can buy the wireless data cards from points of sales, e.g. during a visit to a supermarket. After purchasing the data card, the subscriber can connect to the Internet with his/her laptop, or if the account balance is too low, the subscriber is redirected to an open garden captive portal. The open garden can be accessed even if the subscriber does not have credit on his/her account. In addition, the open garden enables the subscriber to recharge the account with a credit card or a PIN code. It is also possible to display advertisements on the open garden captive portal. The subscriber can also recharge his/her account automatically each month via an automatic recharge function. Previous usage data regarding the data service is available for a subscriber to view on a web-based Self Care application.

When the subscriber visits the web portal, the system recognizes the subscriber automatically based on the MSISDN. This way, the subscriber does not have to enter the username and password each time the portal is accessed. As soon as the balance reaches zero, the session is disconnected and the customer is taken to the captive portal to refill the account.

Adding this new data card business was related to a new integration with the MNO providing data service for the MVNO and adding a hardware platform for handling and controlling data traffic.

Existing integrations with customer systems and interfaces for business process management have been reused.



▲ Figure 2. Next phase – extension to mobile internet access

The Data Card business is fully controlled by the MVNO operator which delivers the Internet connection to users, controls all sessions and balances and has full control over the product catalog.

**Service orchestration**

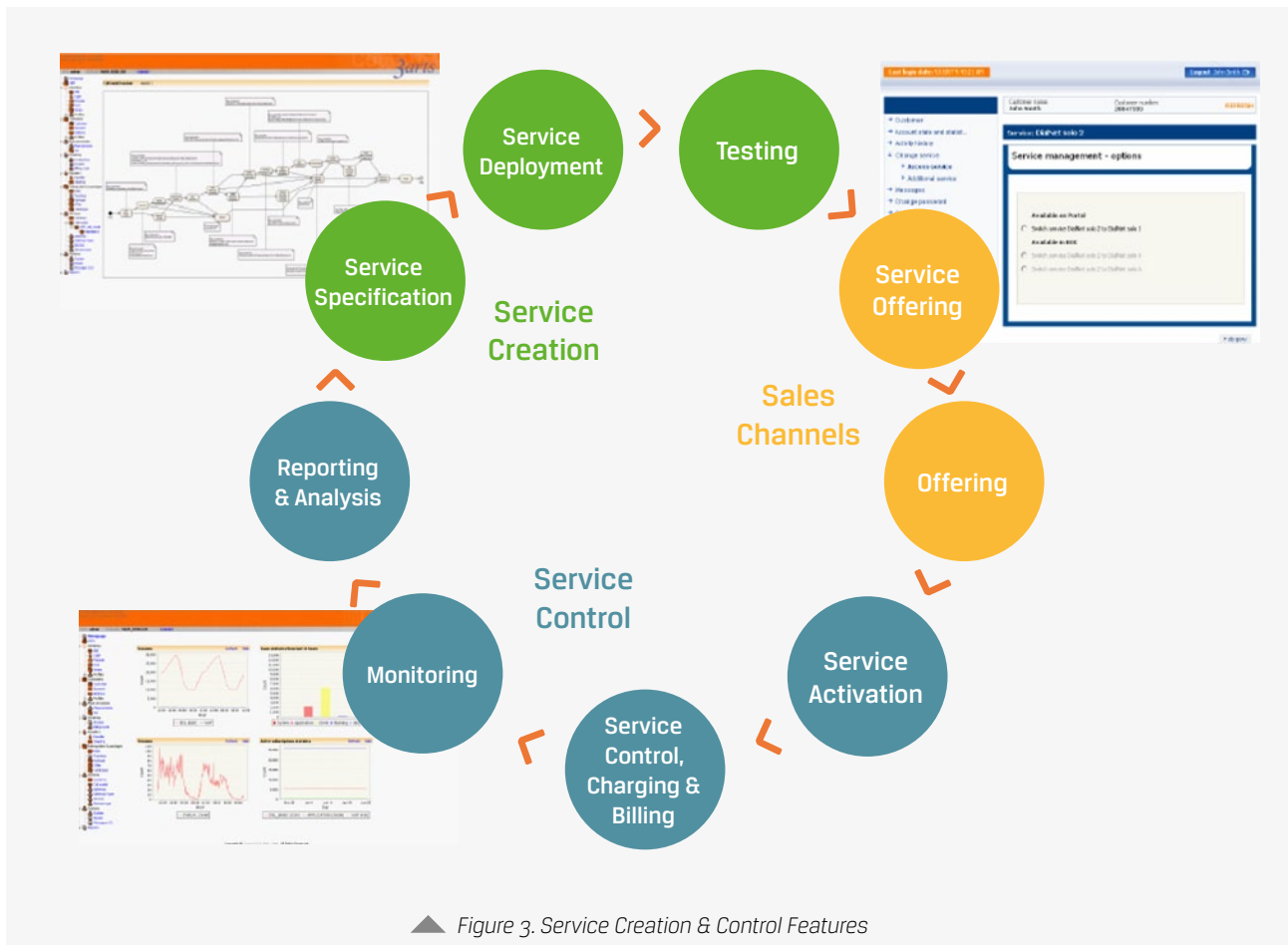
All integrations have been performed with SOA architecture where multiple interfaces from different domains and in different technologies have been connected to the service bus. The service bus exposes business features as web services which are then used internally by Comarch solution modules and certain operator systems. This approach allowed keeping the architecture simple even after the addition of new services. Building completely new business processes for the Data Card business was not necessary.

**Service Creation, Control & Delivery**

IP-based services are fully controlled by the Service Creation & Control module which is in fact delivered by Comarch 3ARTS. Its flexibility enables building new services very quickly and easily. It covers the entire process of product preparation, defining the details of the services offered to customers, publishing and selling those services over available sales channels, activating, controlling and billing those services as well as monitoring and reporting.

This component covers the following functional blocks:

- Service creation (call model and service logic modeling with a graphical UML tool). Multiple service types are supported: Broadband access control, Network Policy Control, VoIP prepaid and postpaid, WLAN prepaid and postpaid with captive portal and content control. Other service types may be easily added.
- Service control (session authorization, control and termination)
- Real-time rating (for setup, recurring and usage fees as well as bonuses, discounts and more)
- Invoicing and payment management – optional functionality
- Product Catalog based on SID specification
- White labeling (separate virtual instances and brands for resellers) – optional, functionality not currently used which provides for new possibilities in the future
- Trouble ticketing
- Customer management
- Service activation
- Web-based registration and customer Self Care
- Reporting



▲ Figure 3. Service Creation & Control Features

The **SID-compliant Product Catalog** allows for straightforward product specification and implementation based on standards.

- Contains service specifications and products
- Supports basic product lifecycle management
- Defines associations between products and services (e.g. the possibility of creating sub-products or products which require the user to have existing subscriptions)
- Enables transitions between products (e.g. which product may be subscribed to, what changes to existing subscription are possible and what are the costs of such changes for the user)
- Makes it possible to create packages and product bundles which allow creating special prices and promotions for bundled products and preconfigured packages
- Enables creating offers (containing separate or bundled products) and managing their lifecycles
- Lets you manage and publish catalogs for different parties and applications; allows preparing different offers for resellers, operators and end users

For the best service quality and for full service control, Cisco SSG has been used as a Service Delivery Platform. This component has been integrated with the MNO network and Service Creation & Control to facilitate data stream control.

## The Result

Thanks to this platform, Auchan implemented a solution similar to WiFi hotspots but on edge technology, thus benefiting from the agility and competitive price available for such technologies. Having been able to integrate an IP traffic controlling device (Cisco SSG) within the MNO network, Auchan Telecom has full control of end-customer traffic entitlement. Auchan Telecom increased its average revenue per user as well as the loyalty of its customers. The current service creation environment platform might be used in the future to enhance features of the mobile Internet service, for instance to provide a geo-positioning service for customers, allowing them to get closer to their community.

### Comarch SA

Al. Jana Pawła II 39 a  
31-864 Kraków  
Poland

**phone:** +48 12 64 61 000

**fax:** +48 12 64 61 100

**e-mail:** info@comarch.com

### About Comarch:

Comarch is a global supplier of IT products and services for the telecommunication industry. The company's flexible solutions are industry standard compliant and developed in-house. Comarch solutions constantly evolve based on customer demand. Since 1993, the company has accumulated experience and knowledge in the fields of designing, implementing, and integrating IT solutions. Comarch serves some of the market's largest players - such as Telekom Deutschland (former T-Mobile Germany), T-Mobile Austria, E-Plus Germany, Vodafone Germany and Telefónica O2 Germany, as well as companies from the KPN and France Telecom groups. Comarch provides COTS products in the areas of BSS, CRM, OSS as well as a range of comprehensive services.

[www.telecoms.comarch.com](http://www.telecoms.comarch.com)

[comarch.com](http://comarch.com) [comarch.pl](http://comarch.pl) [comarch.de](http://comarch.de)

Comarch Spółka Akcyjna with its registered seat in Kraków at Aleja Jana Pawła II 39A, entered in the National Court Register kept by the District Court for Kraków-Śródmieście in Kraków, the 11th Commercial Division of the National Court Register under no. KRS 000057567. The share capital amounts to 8,051,637.00 zł. The share capital was fully paid, NIP 677-00-65-406  
Copyright © Comarch 2011. All Rights Reserved.

EN-2011.06

**COMARCH**