

Reference for the Automation of Data Exchange between VZP and the eReceipt System

– Export of Insured Persons' Data from the Central Register of Insured Persons

CLIENT:

General Health Insurance Company of the Czech Republic (VZP ČR)



VŠEOBECNÁ
ZDRAVOTNÍ POJIŠŤOVNA
ČESKÉ REPUBLIKY



PROJECT CONTEXT

Following the amendment to Act No. 48/1997 Coll., on public health insurance, which introduced protective limits for eligible co-payments for medicinal products, a need arose to significantly modernise the data flow concerning insured persons between VZP and the eReceipt system operated by the State Institute for Drug Control (SÚKL).

The objective of the project was to enable pharmacies across the Czech Republic to verify, in real time, the current status of an insured person's protective limit directly at the point of dispensing medicinal products. The solution was

implemented within the environment of public healthcare information systems, where high service availability, security, data consistency and minimisation of operational risks are key factors.

At the same time, it was essential to ensure that the new integration mechanisms would not have a negative impact on the performance and stability of the core CRP systems and that they would fully comply with legislative and security requirements applicable to public administration.



ARCHITECTURAL AND TECHNICAL APPROACH

Based on these requirements, an architectural approach was selected that separates the publishing layer from the operational CRP systems and enables controlled, secure and auditable provision of selected data to external consumers.

The architecture was designed with regard to:

- ✓ high availability and scalability,
- ✓ end-to-end management of the data lifecycle, from data creation through to publication,
- ✓ elimination of impacts on operational systems,
- ✓ long-term sustainability and readiness for future legislative changes.

The selected approach reflects GEM System's long-standing experience in designing and implementing integration solutions for public administration and systems with high requirements for availability and security.

The proposed architecture is based on general enterprise integration principles that are also applicable in other sectors. The solution is designed as a scalable integration pattern that can also be used outside the healthcare sector, for example in environments with regulatory requirements for data exchange between internal systems and external partners.

SCOPE AND IMPLEMENTATION OF THE SOLUTION



1 | CRPPUBLIK publishing component

A dedicated CRPPUBLIK component was implemented within the integration platform environment (IPF), serving as an isolated data publishing source for external systems.

This component ensures high availability of published data without any impact on the performance of the primary operational CRP systems and creates a stable integration point for the further development of publishing scenarios.

2 | Data synchronisation and change tracking

The solution includes an automated mechanism that identifies changes in the master data of insured persons in real time and immediately propagates them to

the publishing database. This approach ensures data consistency across systems and eliminates the need for manual intervention.

3 | Publishing services via ISSS

A set of CtiData, CtiZmeny and Probe services was implemented, enabling both synchronous and asynchronous access to data on insured persons. Communication

takes place through the standardised eGSB/ISSS interface, ensuring compatibility with the environment of public administration information systems.



4 | Integration with AISV and operational monitoring

The solution was extended with a connection to the Notification Agenda Information System (AISV/ISZR) through the E308 aisvEvidujZmenu service, which is used for the automatic notification of changes in the data of insured persons identified against the Population Register (ROB).

The delivery also includes a graphical user interface (GUI) enabling the administration of AIS permissions, detailed journaling of communication with ISSS, AISV and CRP, and reporting of access to published insured persons' data. This emphasis on auditability and operational transparency significantly facilitates the day-to-day operation of the solution.



TECHNOLOGIES USED



- ✓ **Platform and integration:** J2EE WebLogic, Oracle SOA Suite, WS/SOAP
- ✓ **Database and application tools:** Oracle Database, Oracle AQ (Advanced Queuing for guaranteed message delivery), Oracle APEX, ORDS

BENEFITS AND BUSINESS VALUE

The solution enables fully automated and online checking of protective co-payment limits when medicinal products are dispensed, thereby eliminating the need for subsequent manual settlement of overpayments and bringing a measurable reduction in administrative workload.

Insured persons pay at the pharmacy only the amount corresponding to the current status of their protective limit, which provides a direct and immediate benefit to the end users of the system.

From the client's perspective, the solution represents a stable integration foundation that supports further process digitalisation and enables flexible responses to future legislative and technological changes.

FINAL ASSESSMENT

The project is an example of the successful implementation of a complex integration solution in the environment of public administration systems, where legislative requirements intersect with IT technologies.

With more than 21 years of experience in delivering IT solutions, GEM System demonstrated within the project its ability to design sustainable architecture, manage both technical and operational risks, and deliver a solution with long-term added value for both the client and end users.

SHORT REFERENCE VERSION / EXECUTIVE VERSION

Automation of Data Exchange between VZP and the eRecept System (SÚKL)



GEM System implemented a complex integration solution for the **General Health Insurance Company of the Czech Republic (VZP ČR)**, enabling online verification of protective co-payment limits for medicinal products within the eRecept system operated by SÚKL.

The project responded to legislative changes introduced by Act No. 48/1997 Coll. and was implemented within the **environment of public healthcare information systems**, where high availability, security, data consistency and minimisation of operational risks are key requirements.

The selected architectural approach is based on **separating the publishing layer from the core CRP systems**, enabling secure and controlled provision of data to external consumers without negatively affecting operational systems. The solution ensures automatic propagation of changes in the master data of insured persons and their real-time availability through the standardised ISSS interface.

The delivery also includes integration with the e-Government environment (AISV/ISZR), including support for identification against the Population Register, as well as operation-

al tools for auditability, monitoring and access management for published data.

The result is a fully automated, operationally stable and legally compliant solution that:

- ✓ eliminates the need for subsequent manual settlement of overpayments,
- ✓ provides an immediate benefit to insured persons directly when medicinal products are dispensed,
- ✓ creates a long-term sustainable integration foundation for further development.

Thanks to more than **21 years of experience in delivering IT solutions** for public administration, GEM System demonstrated its ability to manage both technical and operational risks and deliver a solution that meets the requirements for the operation of large-scale public health insurance information systems.

