



European Union



## Customer overview

- **Member States : 27**
- **Political Centres : Brussels, Strasbourg, Luxembourg**
- **Population : 494 070 000 inhabitants**
- **Density : 114 inhabitants/km<sup>2</sup>**
- **Area: 4 324 782 km<sup>2</sup>**
- **Official Languages : 23**

### Biodev II: A new biometric Visa application solution in Europe

As a follow-up to the Biodev I project, 8 leading countries in the European Union decided to take the next step in the biometric Visa application project. The countries participating in this project are France, Germany, Luxembourg, United Kingdom, Austria, Belgium, Spain and Portugal. Different technology providers are working together to prove interoperability of the various technological solutions. The project is running over a period of 15 months, after which an evaluation will be made before deploying this solution on a broader scale.

Zetes and partners are providing the biometric enrolment, communication, AFIS and Border Control solutions for the Consular Post and Border Control for Belgium and Germany.





## The scope of the project

From a border control point-of-view, the main objective of the Biodev II initiative is to evaluate the feasibility of introducing biometric verification equipment, both hardware and software, and to determine its impact on the efficiency of border control process in its fight against ID and Visa-fraud.

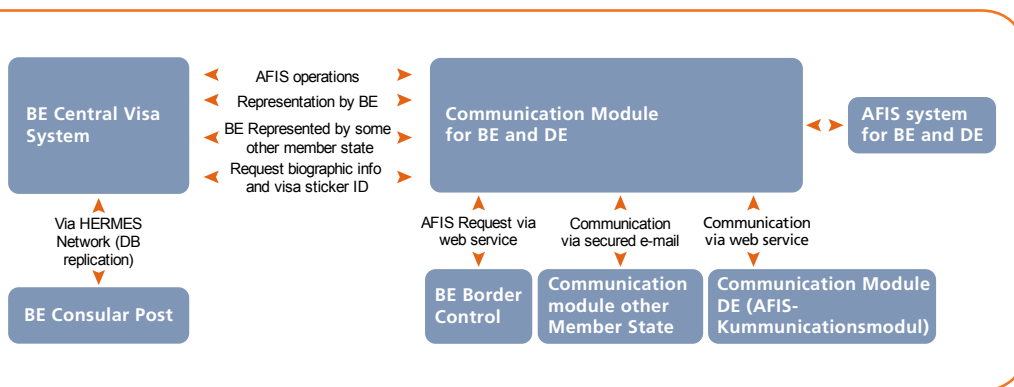
In Europe, there are only a few airports that bear the brunt of the non-Schengen traffic. It is essential that the biometric verification process does not impact the border control procedure in such a way as to hinder the normal speed of passenger processing. The following criteria are used to check the usability of the integrated biometric solution and the impact it has on the checking procedure:

- the feasibility of biometric acquisition and the use of that biometric data in a remote biometric verification system (AFIS);
- performance and accuracy for each step in the verification flow;
- health and safety considerations;
- ergonomics;
- the use of two different types of fingerprint scanners.

## The Solution implemented

In the overall system different large functional blocks can be distinguished, the consular post application, the border control application and the communication module. In cooperation with the Belgian and the German government agencies, Zetes has integrated different components at the different modules depicted in the illustration below.

At the level of the consular posts, Zetes has provided the functionality to take ICAO-compliant pictures of the person requesting the visa. Because of the different operating environments in each post, a multitude of solutions have been implemented and are used today. The obvious options to acquire pictures are commercial off-the-shelf (COTS) cameras and flatbed scanners. However, as the first and only in the world Zetes has opted in cooperation with the Belgian Government agencies to also introduce the use of a flexible photo booth concept in order to guarantee ICAO compliant pictures to be used with the visa application. In such a photo booth, the optical and illumination parameters can be controlled whereas in an open environment using a COTS camera this is hardly possible. A special module is built into the software solution in order to validate the pictures taken against most of the ICAO guidelines when it comes to photographs used in a visa or passport application.



In addition to the picture of the person, also the fingerprints for the visa application are taken. In this respect there are different approaches for the fingerprint acquisition, where a 4-4-2 scanner is used during the visa application at the consular post and the fingerprint verification at the border control station. At this latter station a first fingerprint verification is performed using only one finger. Depending on the search result by the AFIS system, a more comprehensive verification based on the acquired 10 fingerprints may be performed at a second level.

Although Zetes has worked closely with the Belgian and the German authorities, it is possible that those authorities represent other Biodev countries in certain cities worldwide. In that case, Zetes has built the communication module to transmit these standardized message packages containing the biometric information to the appropriate communication module of that country's technological solution.

The central AFIS matching system for Belgium and Germany is located in one of those countries. During the enrolment process, the fingerprint information is sent to the AFIS system in order to verify whether the applicant is already known in the system, maybe even under a different identity. If the biometric verification checks out, the visa application can be approved and the person will be admitted into the EU.

When arriving at the EU border, the biometric information stored in the central AFIS system is consulted when the person presents himself/herself at the border control inspection station. Depending on the biometric verification decision, the person can either be admitted to the EU or be subjected to a further biometric validation.