



**IT Solutions for  
Consumer Protection**





## Preface

Consumer health protection is undergoing transformation. Global commodity flows, increasing product diversification, and the growing importance of online trading are shaping the food industry and creating new challenges for official monitoring. At the same time, the public is becoming more sensitive to food quality and food safety. Consumers are becoming increasingly aware of factors such as animal-welfare and transparency, both on the part of industry and monitoring.



All this is accompanied by the growing importance of digitization in all areas of society. E-governance, the digitization of communications between governmental bodies and the public, is not only high on the political agenda, but is also a crucial instrument for addressing the tasks of the state and strengthening Germany's competitiveness.

As a software producer and consultancy firm with more than 20 years of experience in the field of consumer health protection, we are the ideal partner to work together with you to develop a veterinary and food and feed monitoring system that increases the long-term safety of food and agricultural products by providing monitoring authorities with appropriate IT tools to meet new challenges.

With the conversion of the verified system BALVI iP to its web-based successor BALVI iP2, we are laying the foundation for a modern software architecture that meets the requirements of extensibility, networking, and necessary automation to the highest degree. In this brochure, we would like to introduce our innovative projects, which are continually being developed up to the point of their operational implementation, and which will decisively influence the development of IT in health care protection in the coming years.

On behalf of the entire management and BALVI employees,

Sincerely,

Sascha Leichsenring

## Company Information



**1993**  
founded



**2 Locations**  
Lübeck & Potsdam



**48**  
Employees



Our Mission

Security for the consumer by optimizing administrative processes, digitization, and networking for the modern and professional monitoring of food chains.

## IT Solutions for Consumer Protection

BALVI GmbH specializes in information processing and process-supportive counselling in official consumer protection. In the field of official veterinary and food and feed monitoring, we have developed a special position over the past two decades. The software system BALVI iP will be used by all veterinary authorities in Germany for risk-based planning, documentation, and the evaluation of control and sampling procedures.

In this way, we are making a decisive contribution to ensuring food safety. By 2020, the verified system will be transferred to the modularized web-based application BALVI iP2. The central application has already been flanked for many years by the contemporary mobile program BALVI mobil XT - a powerful and modern system with a special focus on external service processes.

In the coming years, we will also be able to create efficient software solutions for government monitoring tasks in the agricultural market based on modern iP2 architecture and the verified BALVI mobile system. The range of supported fields will include fertilizer monitoring, seed control, organic farming, the monitoring of brands and specialties, poultry and egg production, and livestock and meat classification.

We have given ourselves the goal of similarly standardizing IT processes in consumer health protection for agricultural market control and other areas of government monitoring tasks in the field of consumer protection.



## IT solutions for official food, feed & veterinary monitoring



Within the next five years, the existing Windows-based program system BALVI iP will be replaced by the new modular web program BALVI iP2. The transition will occur step-by-step while maintaining the current database.

The program system will be converted to modern web standards. This will provide users with a contemporary user experience in a modern web interface. The improved integration into current infrastructures will ensure a smooth data exchange with other software systems via automatic interfaces.

The development of BALVI iP2 has been carried out in close cooperation with specialist working groups from Germany's federal states.

### Improvements with BALVI iP2

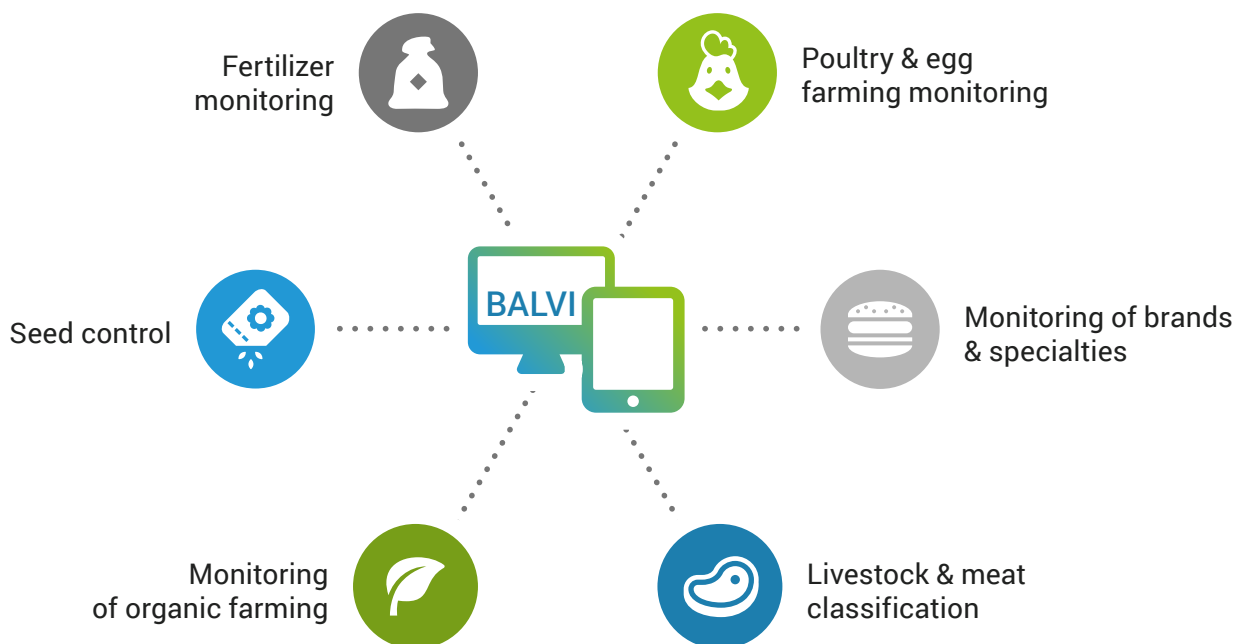
- ✓ Platform independence
- ✓ Modern web interfaces
- ✓ Processor-oriented data acquisition
- ✓ Tests on data validity and plausibility
- ✓ Separation of collected data and evaluation data
- ✓ Improved authorization system
- ✓ Improved user experience

## Monitoring the agricultural market with BALVI iP2

In 2016, in cooperation with the State of North Rhine-Westphalia, we set out to henceforth support monitoring processes in the agricultural market with modern and efficient modules.

The fertilizer monitoring module will begin active operation in the first quarter of 2017. In addition to fertilizer monitoring, the range of supported areas in the future will include seed control, the monitoring of organic farming (inspection bodies for organic certification), the monitoring of brands and specialties, poultry and egg farming, and livestock and meat classification.

- ✓ Ergonomic check-lists
- ✓ Risk-based inspection planning
- ✓ Appointment management
- ✓ Mobile data collection
- ✓ Interfacing with testing facilities for sample results
- ✓ Powerful report generator

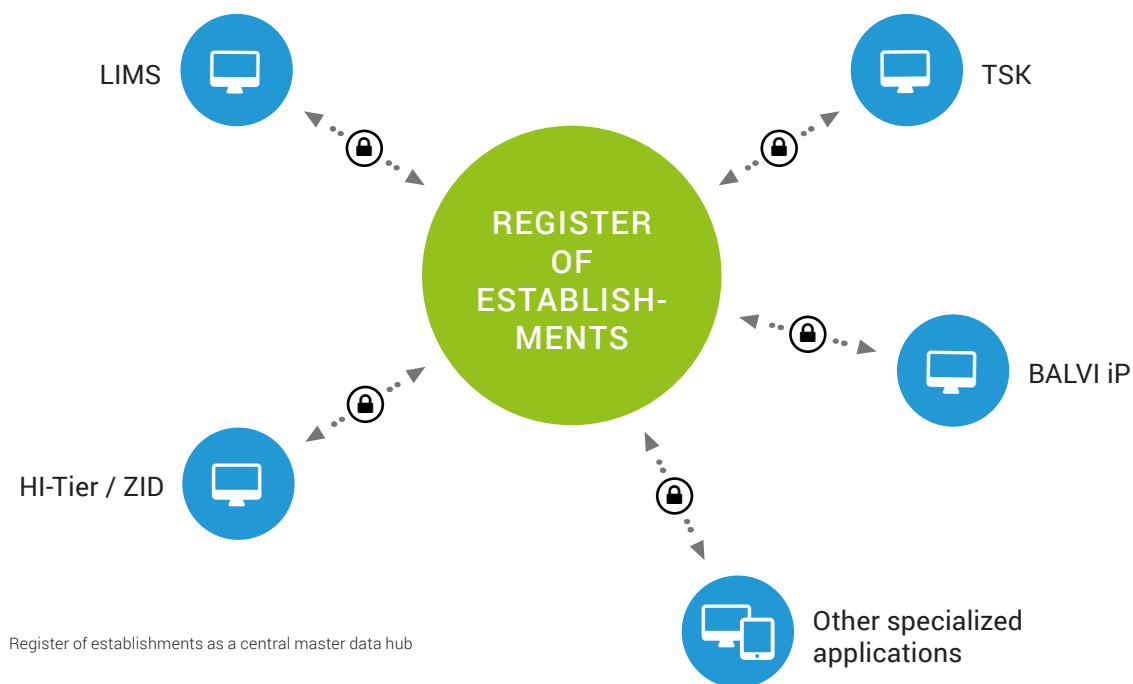


All modules are based on the powerful iP2 framework for web applications and the BALVI mobile XT program, which is optimized for the field of external service. They will also be deployed in governmental monitoring areas such as food and feed safety, as well as veterinary monitoring nationwide.

## Modern master data management and master data exchange

### Focus

Various institutions in the field of official consumer protection hold company registers in order to perform the assigned tasks. The master data required by the particular specialist application overlap in large parts. The central operating register (zBR) serves as a data disk for the shared data of different IT systems, and, through the unification and standardization of the master data from different specialist software, forms the basis for an efficient and reliable exchange of specialist data.



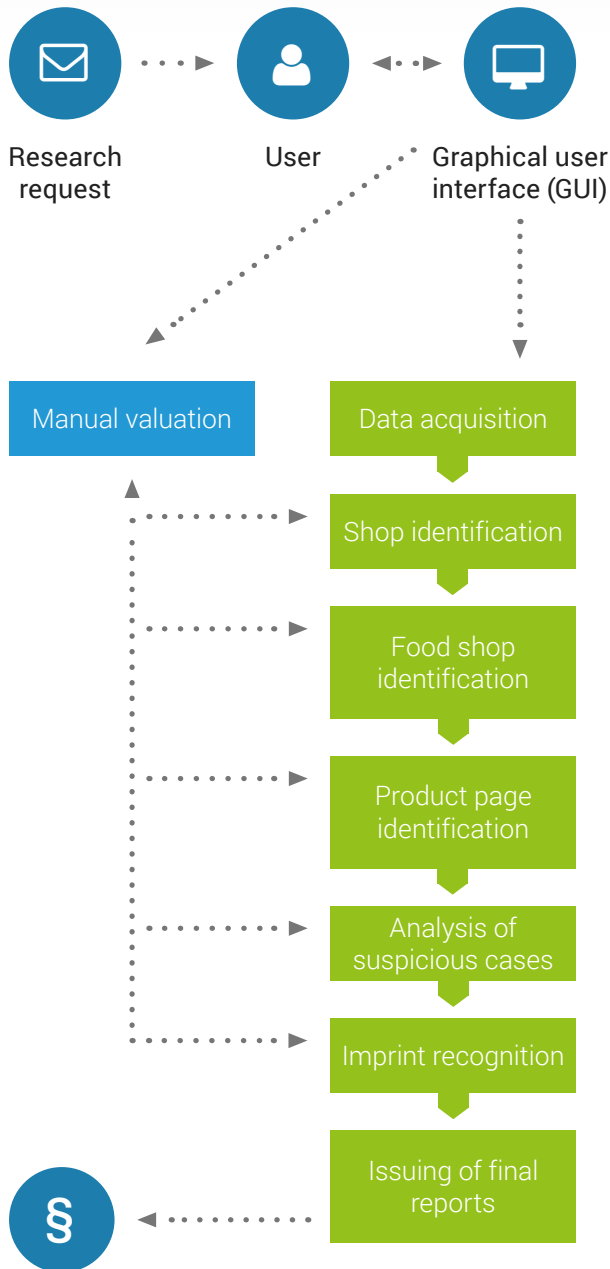
### Improvements by the zBR

- ✓ Improved communication between institutions and their specialist systems
- ✓ Efficient media-free data exchange between BALVI iP, TSK, HI-Tier, LIMS, Agricultural Offices, and others
- ✓ Significantly reduced administrative and technical maintenance costs compared to many bilateral interfaces
- ✓ Increased validity of the master data
- ✓ Synchronous master data in connected specialist applications
- ✓ Convenient use of central services (web services) through connected specialist applications



# Funding Project AAPVL

## IT tools for monitoring online trading



Processing, legal examination and where appropriate, official measures

For several years now, online trading in food has become increasingly important, with an upward tendency. Authorities are also obliged to supervise online trading and the distance selling of food. However, the processes of online trading differ fundamentally from those of in-house trade, and therefore supervisory authorities require new methods and tools that are tailored towards the specificities of online trading.

The AAPVL<sup>1</sup> research project deals with content and technical requirements to realize a solution to this situation. Within the framework of the project, a concept for monitoring the online trading of food will be developed together with the Hamburg University of Applied Sciences (HAW) and the Federal Office for Consumer Protection and Food Safety (BVL). A software tool for automated monitoring will be created on this basis.

The software will generate automatic search queries on the web and scan the hit pages to identify food shops as well as products and suspicious cases of improper food trading. These suspicious cases will be automatically forwarded via interfaces to the IT system of the responsible enforcement authorities.

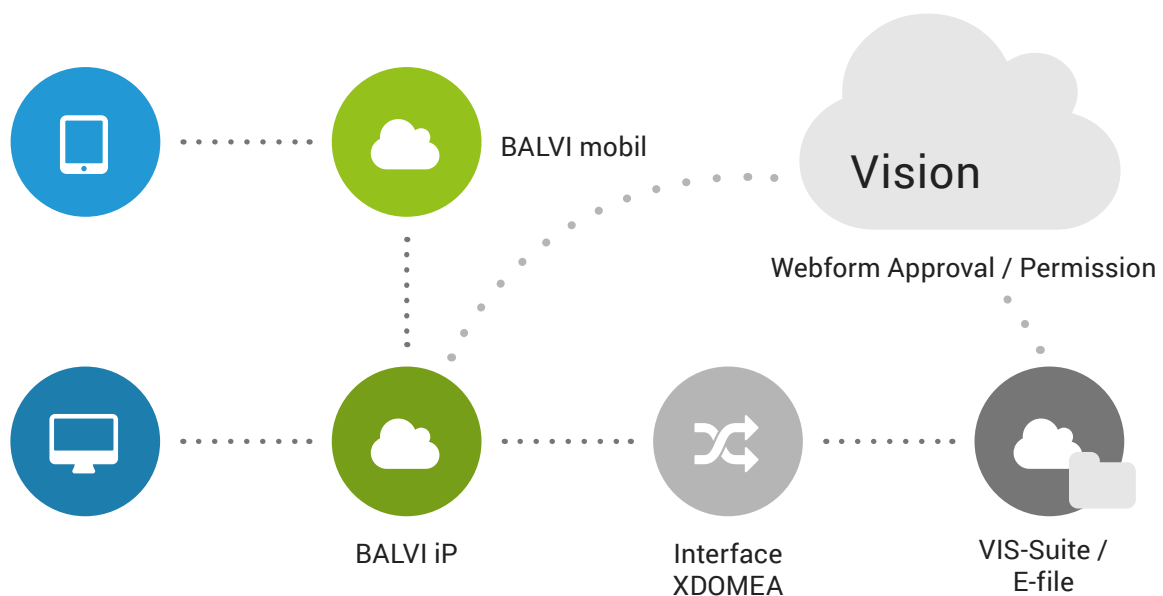
Process flow for an autom. control of electronically sold food products (see A. Krewinkel et al., Food Control 61 (2016) 204-212)

<sup>1</sup> AAPVL - (Automated analysis procedures for the identification and assessment of non-marketable products of the virtual food market)

# Integration of Document Management Systems

## E-governance strategies in consumer health protection

With the introduction of nationwide mobile data collection, in recent years we have strongly promoted digitization and media-consistent process support in the areas of food, feed, and veterinary drug monitoring. Electronic file management, a trend that can be witnessed at all levels of administration, will be supported by the integration of document management systems. BALVI iP2 has already taken its first steps to make a decisive contribution to this process. Within the framework of a funding project in the district of Görlitz, a web service interface based on the standard XDOMEA was created by the partners PDV Systeme GmbH and BALVI GmbH, forming a generic interface for the integration of DMS.



### Interface between BALVI iP and VIS Suite / E-file (and other DMS)

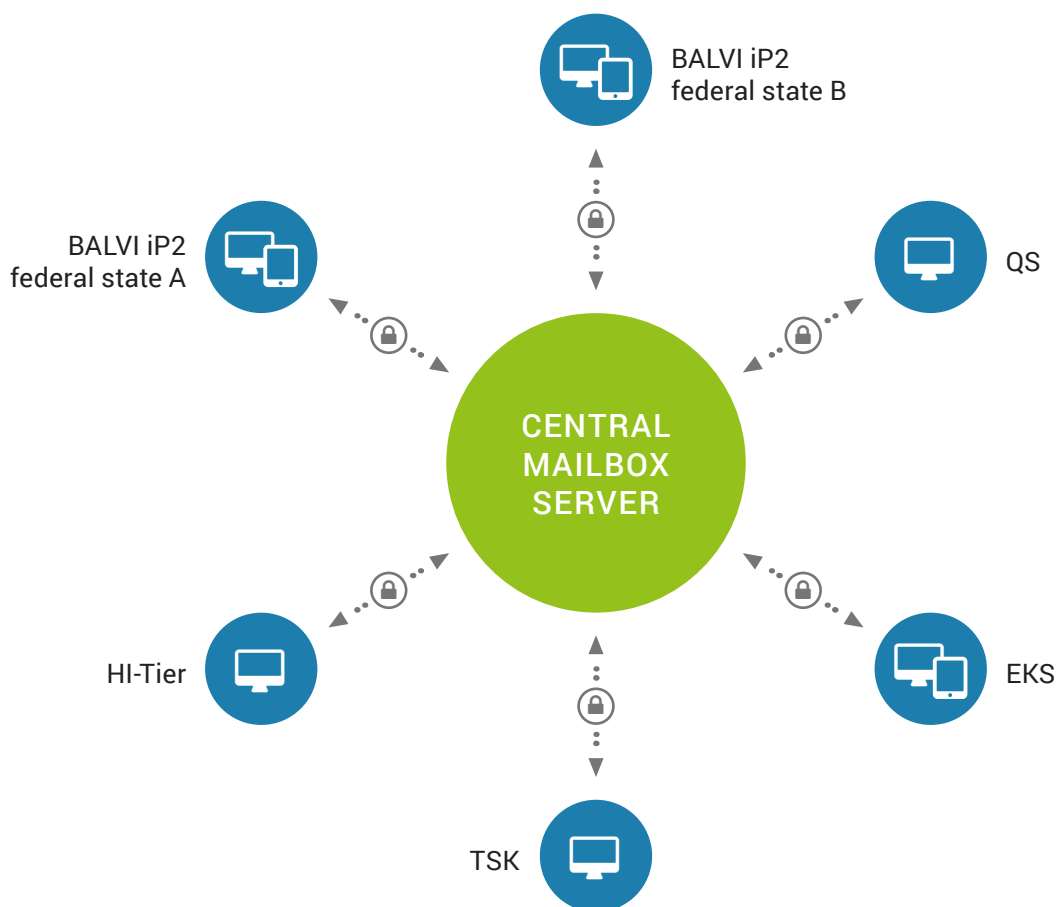
- ✓ Automatic installation and updating of operational and control files in the VIS suite
- ✓ Automatic transfer of all mobile documents to the E-file
- ✓ Media-consistent processing of files and easier filing
- ✓ Support for subsequent processes, such as handing over electronic court files

The integration of specialist software and DMS, as well as the further development of the e-governance approach in the field of consumer health protection, will shape the coming years. For example, the nearly complete electronic processing of communication processes between citizens and authorities, such as authorization and approval procedures, is made possible by linking the corresponding web forms to BALVI iP and E-file.

# Vision: Central Mailbox Server

## Networking food industry & official monitoring

In addition to BALVI iP, the nationwide software for veterinary and food monitoring authorities, other IT systems and databases are being used in the field of consumer health protection, collecting and administering highly relevant data for official monitoring. Examples include the LIMS, HI-Tier, TSK, trade registers as well as economic control systems (for example, Qualitäts und Sicherheit GmbH), and the increasingly self-controlled systems (EKS) of the food companies.



A media-consistent data exchange between BALVI iP and these IT systems is indispensable for efficient monitoring. However, data exchange between BALVI iP authorities from individual federal states is also gaining importance, as the food companies are increasingly active throughout Germany and the processes to be monitored in the food chain exceed federal boundaries.

With the new web application BALVI iP2 and the ZPS communication platform, a foundation will be created to efficiently implement media-consistent data exchanges between the mentioned IT systems with modern web services in compliance with current BSI safety standards.



**BALVI GmbH**

☎ +49 451 7 02 80-0  
📠 +49 451 7 02 80-40

✉ info@balvi.de  
🌐 www.balvi.de

**Registered office**

Isaac-Newton-Strasse 11  
23562 Lübeck

**Branch**

Charlottenstrasse 40  
14467 Potsdam