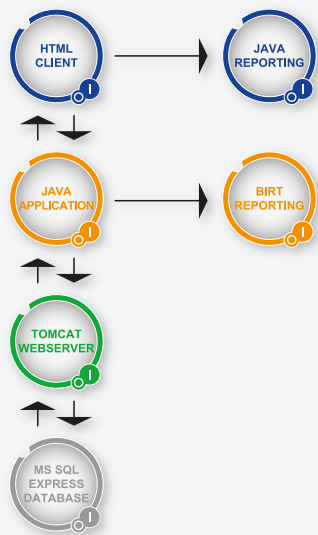


Web-based Applications

Challenges

Governmental, non-governmental and commercial organizations worldwide increasingly face the challenge of improving their service, efficiency and revenue. In addition to changes in organizational and management processes, software solutions can easily contribute to reach related goals.



In general, any kind of software tool will enhance the efficiency of data capture, limit the number of times a single piece of information is entered or written and perform automatic validation and calculation procedures on the entered data. Moreover, software provides better transparency of the information and the progress projects as a whole or individual employees make since data may be tracked and reported easily. In combination with the establishment of work routines these factors result in a higher sustainability of projects and organizations.

Web-based software solutions offer further advantages. Questions of merging and sharing data and the accessibility of the application are solved directly. Publishing information for constituents, clients or the public becomes more manageable and much simpler. Last but not least, web-based software usually entails a lower cost of ownership and installation since the number of clients

is not relevant (and therefore licenses that need to be purchased).

Many commercial software products currently on the market may provide all the mentioned advantages but have considerable deficits. They tend to be hard to customize, oversized, too fragile for developing countries. Also, they take a long time to implement and configure, and mostly are very expensive.

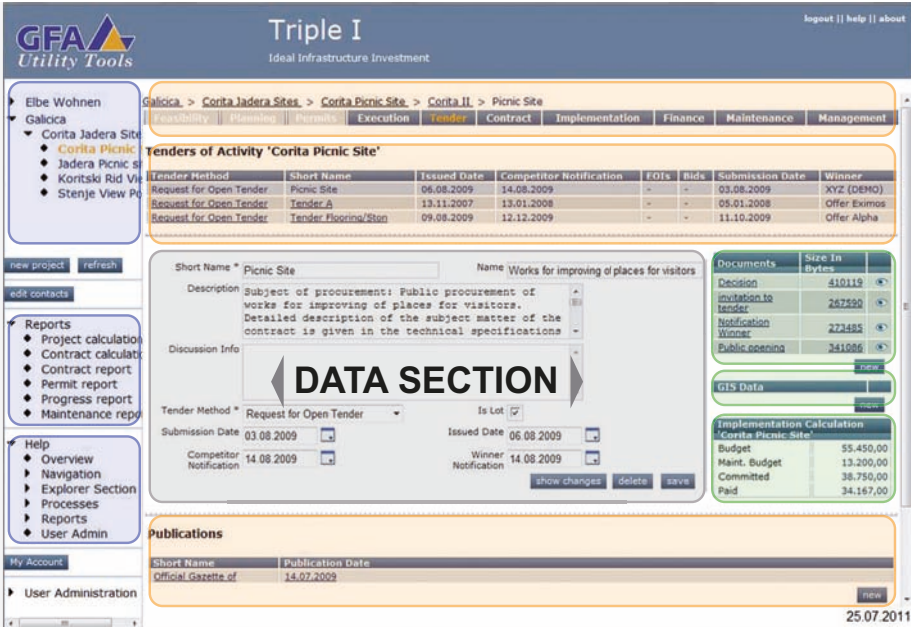
GFA B.I.S. Services

Therefore, GFA B.I.S., together with experts from other GFA units, decided to develop its own line of web-based products: GFA Utility Tools. The tools have a modular approach, separating different sets of data such as reference, accounting, language and project data. This modularity facilitates the customization of existing tools according to specific requirements, the scalability of a tool's functions and the development of additional applications. Currently, tools are available for the management of decentralized water units and for the planning and monitoring of infrastructure investments.

All applications are based on freeware databases, i.e. Microsoft SQL Express, PostgreSQL, and are written in Java. Hibernate, an open source Java persistence framework, performs powerful object relational mapping and query databases. Additional frameworks such as Struts and BIRT are used for the presentation layer and for online reporting. Hence, no license cost ensues. The lack of any licensing requirements and the web-based approach provide the basis for completely scalable tools: a single user, an entire office through intranet or the internet.

Thanks to the company's expert knowledge in Java programming and its long-standing experience in implementing software and supporting development projects around the globe, GFA B.I.S. can offer tailor-made solutions which comprise software, hardware, consultancy and training.

GFA B.I.S. at Work



The screenshot displays the Triple I software interface with the following sections highlighted:

- EXPLORER SECTION**: Located on the left side, showing a tree view of projects and sites.
- REPORTS**: A section on the left side with a list of report types such as Project calculation, Contract calculation, Contract report, Permit report, Progress report, and Maintenance report.
- HELP**: A section on the left side with a list of help topics including Overview, Navigation, Explorer Section, Processes, Reports, and User Admin.
- PROCESS SECTION**: A top navigation bar with tabs for Feasibility, Planning, Periods, Execution, Tender, Contract, Implementation, Finance, Maintenance, and Management.
- SELECTION SECTION**: A table titled 'Tenders of Activity 'Corita Picnic Site'' showing tender details.
- DOCUMENTS SECTION**: A table listing documents like Decision, Invitation to tender, Notification, and Public opening with their sizes.
- GTS SECTION**: A section for GIS Data.
- BUDGET SECTION**: A table titled 'Implementation Calculation' showing budget details.
- RELATED OBJECTS**: A section at the bottom showing publications.

The central area is labeled **DATA SECTION** and contains a form for editing a picnic site, including fields for Short Name, Description, Tender Method, Submission Date, Issued Date, and Winner Notification.

Triple I – Ideal Infrastructure Investment Various Clients, since 2011

Local governance, sustainable human settlements, cost-efficient and needs-oriented use of resources, and improved municipal infrastructure delivery are major issues of development cooperation. GFA Consulting Group, together with GFA B.I.S. and Dr. Schindler Geo Consult International (GCI), has developed an IT-based management tool for improved infrastructure investment, tailored to the specific circumstances and requirements of developing countries. TRIPLE I is designed to assist public authorities and privately owned service providers in managing all aspects of an infrastructure investment process – from needs-oriented and cost-efficient planning and budgeting to maintenance, including financial and land administration issues. The tool also offers an efficient monitoring and documentation system which allows users to upload all relevant documents, and to add individual explanations. In addition, TRIPLE I is supplemented by a geo-referencing feature (GIS). The illustration above shows TRIPLE I's major features.

Based on this holistic approach, the tool provides an excellent management device for ensuring ability, durability and transparency of investments in public infrastructure. TRIPLE I is fully web-based so that hardware and installation costs are very low. Based on open source components such as Java, Triple I is not subject to any license fees.

Rural Water and Sanitation in Syria European Investment Bank, since 2010

The objective of the project is to improve the technical and financial performance of the Damascus Water Supply and Sewerage Authority's water and sanitation services in the area of Rural Damascus. The project develops operation and maintenance procedures that will serve as best practice experiences in Syria. GFA experts provide inputs in business planning and benchmarking, technical work planning, water loss reduction, customer information, billing and accounting as well as human resources development. GFA B.I.S. is commissioned by GFA Consulting Group to provide a customer service software to four units of the service area. The GFA utility tool Water Billing is a software package that handles customers, connections, meters, invoices and outstanding debts based on an interface in Arabic. The tool will help the units become more independent from headquarters as calculating and printing invoices is decentralized. The units also receive a full picture of all customer related activities using customized reports.

Contact

GFA B.I.S. GmbH
 Harald Litterscheid
 Phone: +49 (228) 28 03 52 0
 E-Mail: litterscheid@gfa-bis.de