



# ElectionPro case study

## Summary

**ElectionPro** application is intended to provide an automated building of document package for the Central Election Committee of Ukraine.



### Service

- Software development
- Database development

### Industry

- Government workflow

### Project Size

- Team size:  
2 software engineers  
1 QA engineer
- Duration:  
2 months

### Technology

- MS Visual C++
- ASP/HTML/DOM/XML
- IIS/COM+/ MS SQL Server
- SQL/T-SQL/Stored Procedures
- MS Word/Excel automation
- Own coded business logic modules

## Challenge

Final user requirements were to allow the user to:

- generate and edit a lists of election commissions
- manage user accounts and access rights
- manage user access to the documents
- keep track and manage the total documents workflow process
- audit the trail of users and system actions
- generation reports in HTML, MS Word, and MS Excel formats

## Solution

In order to ensure the end product meeting Client's expectations NRJETIX has developed a detailed software requirements specifications (SRS).

The final product enables more than 100 users to work simultaneously without using special equipment. The application has a simple, friendly, and intuitive Web UI.

The application architecture design and UI design were both developed by NRJETIX.

Demo version was provided to the Client at each milestone. Change requests delivered by Client were carefully evaluated and implemented.

## Specification

**ElectionPro** it is a multi-tier Web application developed using MS Visual C++, ASP. From an engineering point of view it is a software complex consisting of several servers: a Web server - MS IIS, an application server - COM+ Server, and a database - MS SQL Server connected via the broadband network. User interface functions are performed by a Web browser. The client part was implemented using DHTML, JavaScript generated by the Web server MS IIS. The business services tier were implemented as the COM+ application connected to the database layer, using ADO in accordance with the transaction model. The data service tier interacts with persistent data stored in the database. This is the actual database access layer. It consists of highly efficient T-SQL stored procedures and user-defined functions and is accessible through the business rules layer. User can build reports in several formats: HTML, MS Word and MS Excel via automation services. NRJETIX built a solution that successfully achieved goals of government agencies for a new and improved workflow. The system simplifies daily operations, allows for an increase in efficiency and productivity, and allows for a more comprehensive citizens servicing. Additionally, the information and documentation are tracked and maintained in the database, providing for more control and security over confidential citizen information.