European Schoolnet delivers advanced initiatives for technology in education. Network of ministries of education uses Adobe ColdFusion to provide innovative solutions for schools, researchers, and industry partners.

"Adobe ColdFusion is an industry standard and the ideal development platform for ongoing technical innovation over rapidly evolving, multi-year projects."

Bart Vanhulle, technical manager and lead developer, European Schoolnet

**SOLUTION**
Adobe ColdFusion

**RESULTS**

**40% FASTER**

RAPID DEVELOPMENT
Building with ColdFusion is typically 40% faster than developments of similar scope using other technologies

SYSTEM INTEGRATION
Tied in seamlessly with multiple third-party databases and content management systems

SAFE ENVIRONMENT
Provided commercial-free space appropriate for school-age users

SCALABILITY
Positioned organization to rapidly meet development and support requirements to serve more than 250,000 users in 25 different languages
Improving education across Europe

European Schoolnet is a consortium of 31 European Ministries of Education that brings innovative technology solutions to K-12 schools across the continent. Founded in 1997, the organization provides development and support services to teachers, pupils, researchers, and industry partners who work together to improve the quality of education in Europe.

European Schoolnet develops programs and projects where teachers can exchange ideas and share resources for classroom activities, tap into online and offline professional development opportunities, and keep abreast of outreach campaigns on timely topics—all in a protected environment appropriate for school-age users.

Serving more than a quarter million users in 25 different languages, European Schoolnet adopted Adobe ColdFusion in 2000 as its core development platform and has been standardized on it ever since. "Cost efficiency is the primary factor for continuing to build and deliver innovative, educational solutions with Adobe ColdFusion as it has evolved over time. It lets us leverage our knowledge base and allows for extensive customization of new and existing solutions," says Bart Vanhulle, technical manager and lead developer at European Schoolnet.

The organization's largest project is the eTwinning platform—an online portal that enables teachers and students to connect with schools in other countries, set up and work on classroom projects together, share ideas, and exchange best practices. Recently, European Schoolnet launched eTwinning Plus, an expanded portal that welcomes neighboring countries including Armenia, Azerbaijan, Georgia, Moldova, Tunisia, and Ukraine.

Thousands of schools are engaged in new learning activities and technologies in the classroom through the eTwinning portal, many of which explore use of new tools for teaching science, technology, engineering and math (STEM) subjects. More than 35,000 projects have been undertaken between two or more schools across Europe on eTwinning. For example, the e-cultural Kaleidoscope project encourages the learning of foreign languages and educates children to be curious and respectful of other cultures and languages. The Health4Life project helps students acquire knowledge about their health, risk factors, and the outcomes.

Checked all the boxes

The main technical requirements for the eTwinning project were to provide a safe and permanent infrastructure for users; have the ability to integrate smoothly with a wide range of third-party technologies, APIs, frameworks, and the organization’s existing Oracle databases; and preserve the organization’s commitment to a rapid development methodology. Additionally, the European Commission—one of European Schoolnet’s key partners—was already standardized on Adobe ColdFusion for its web portals and development projects.
The eTwinning solution also had to be easily scalable in conjunction with an enterprise-level EE back end; built and sustained by a small team of developers who could respond quickly to new demands and requests over time; and easily customizable. To secure resources for this project, the European Schoolnet team had to commit to funding entities that the latest technologies were being used, and that the platform would continue to be supported as the project matures.

"Adobe ColdFusion is an industry standard and the ideal development platform for ongoing technical innovation over rapidly evolving, multi-year projects," says Vanhulle.

**Rapid development for cost efficiency**

The eTwinning project has undergone several development iterations on the presentation level and the back end. Driven by user feedback, improvements range from better end-user features to the inclusion of data mining and analytical functionality for stakeholders including national support services and the European Commission. The platform has also been given a more modern look and feel while staying true to its main purpose.

"Development in Adobe ColdFusion is easily 40% faster than in other development environments. Significant time efficiencies are found in early development stages, faster coding, extensive code reusability, testing, and debugging," says Vanhulle. "In addition, any conceptual, integration, and methodological challenges are readily addressed through the highly effective Adobe ColdFusion online developer community."

A small team of four full-time developers at European Schoolnet is responsible for all web development activities. One developer comes from a ColdFusion background and the other three specialize in back-end Java development. Some of the Java staff have been easily cross-trained on the ColdFusion language, principles, and methodologies and have gotten up to speed with just a basic introduction.

**Integrated environment**

As the eTwinning project is under development nearly all the time, developers strive to keep workflows smooth. Working with an integrated set of tools results in time efficiencies as new features and tools are designed, analyzed, and implemented, while existing features are deprecated or undergoing maintenance and updates.
For example, European Schoolnet is investigating adding a web conferencing component to eTwinning using Adobe Connect. Use of Adobe ColdFusion Builder accelerated the development cycle because of its integration with third-party tools and plug-ins, subversion support, advanced code insight functionality, and superior debugging capabilities. Additionally, it allowed the team to seamlessly interface with the organization’s server array comprised of Adobe ColdFusion Enterprise Servers, Apache web server, and other Linux-based operating systems.

According to Vanhulle, if European Schoolnet were to migrate off the ColdFusion platform, greater resources would be required for initial builds as well as for continued development and support of new and existing initiatives, particularly for the eTwinning project. “Having been standardized on the Adobe ColdFusion platform for more than a dozen years, we are ideally positioned for scalability and to propose new ways of online collaboration, partnerships, and community building in education,” says Vanhulle.