DEVELOPMENT OF AN INTEGRATED SCHOOL ADMINISTARTION MANAGEMENT SYSTEM IN THE COMMUNITY OF CASTILLA Y LEÓN

In 2000, education competences were transferred to the Regional Ministry of Education. Since the transfer, IT applications to manage schools administration have been created in a dispersed manner, each conceived as an autonomous whole in itself, isolated from the rest. This solution was effective for a time, but today due to the technological evolution, citizen demands and the laws themselves, public administrations are now obligated to implement e-tools that simplify administrative management tasks and provide greater inoperability. For this, centralized integrated systems with consistently updated data are needed. The Stilus project was created for this purpose, and with two basic objectives:

1. Develop the core elements of a common integrated system and establish procedures for existing and future applications to be integrated in that system.
2. Develop a new web application for school administration to take the place of the current technologically obsolete applications.

Regarding the first, the following basic common elements have been identified:

▪ Digital ID: The system assigns a digital ID, user name and password to all users, so that each individual (whether employee teacher/non-teacher; student, father, mother, legal guardian, DDPP or SSCC administrator) can access all of the applications and services available for their profile.

▪ Data bases: The system maintains a consistently updated repository of the common, reusable elements: students, employees, curricula, administrative or teaching center, as well as structural information (local entities, countries, nationalities, bank entities, etc.).

▪ Working environment: The system develops large unique user group working environments (schools, administrators and families) where each group can find all of the information applications needed for their profile use/work.

Regarding the second objective, a new web technology based academic management application is being developed that will serve the needs of every school type, whatever the curriculum or subjects taught. It is conceived not as a unique application, but rather as a fully integrated system of multiple applications, each of which manages one or several processes. The modular evolution design (applications are integrated as available), makes for greater flexibility and easier incorporation of technological advances.

As a minimum, it will be comprised of the following modules: Basic school identification and configuration, basic student and employee data, educational offerings, student calendar and classroom hours, departments and positions, buildings and facilities, groups, textbooks, schedules, enrollment, evaluation, academic record, student discipline and attendance records, and teacher absences.

The public funding for this PO project´s duration (2014-2020) was €500.000, with 50% (€ 250.000) co-funded by the ERDF.

The most representative project impact indicators are the figures provided below on the number of digital ID users and volume of use (hours) as well as the number of modules added to system:

The number of users in 2017 was 367.505. A total of 32 modules were integrated in the system, which recorded 423.154 accesses and 68.105 hours of work.
Considered a good practice because:
- **The action was duly disseminated** and communicated to beneficiaries, potential beneficiaries and to the general public**.**

As of summer 2014, all documents (specifications, reports, etc.) underlying the contracts incorporated the European logos, and stated that the project received ERDF funding. "This project was co-funded by ERDF PO 2014-20"·
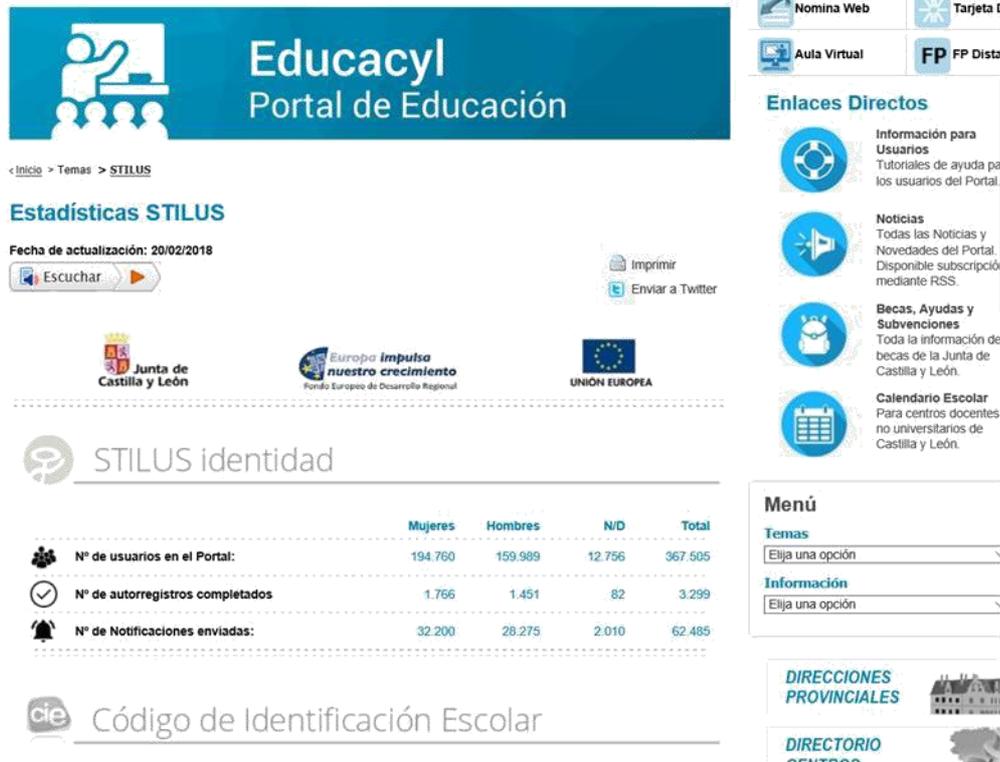
The project was disseminated as prescribed by project information and communication instructions:
- *Website information* was complied with: Information on ERDF project funding was posted in the Stilus section of the Portal de Educación website. In 2014 the Portal received an average of 169.472 visits per day. Indicator: No. of visits per year
    - Incorporation of European logos (September 2014), ERDF co-funding phrase with link to the European Funds website (February 2015) was included in the Stilus content section of *Portal de Educación.* Indicator: Nº of annual visits to the content.
    - Documents explaining the project posted on website: One Word and one PowerPoint document. April 2015.

STILUS section of Portal Educacyl

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- *Instructions to participants* was complied with: Stilus usage manuals and guides were posted on the Portal de Educación (15 documents as of October 2015); users were sent their passwords with instructions for use and for password /user ID recovery.
  - Incorporation of logo and informative phrase included in the module instruction manuals and guides on processes available on Stilus section of the Portal de Educación. February 2015. Indicator: No. of downloads
  - Incorporation of the logo and standard phrase added to credentials of the Portal de Educación. February 2015. Indicator: No. of communications per year.

The homepage of STILUS-ENSEÑA

Example of   School administrators can access the e-invoice platform

Other communication actions:
- Inclusion of the logo on technical documents (functional analysis, data model…) available on Stilus Share Point and on Stilus Share Point home page. April 2015. Indicator: No. of Share Point accesses
- Inclusion of ERDF logo in *Stilus enseña* homepage design February 2015. Indicator: No. of accesses per year
- Inclusion of ERDF logos in *Stilus servicios* homepage design February 2015. Indicator: No. of accesses per year
- Incorporation of the logo and standard phrase in the enrollment error reports sent to schools. February 2015. Indicator: No. of reports sent per year

- **The action incorporates innovative elements.**

The innovative element of this action is the system architecture. The project is to construct a fully integrated centralized and complete information system that serves the needs of the entire educational community of Castilla y León, based on two concepts: evolution and modularity.

The evolving system concept means that the previously existing systems and developments can be fully integrated immediately, and that new components and implementations can be added and integrated as they become available. Thus, it is not conceived as a finished product, but rather, as a system in constant evolution.

It is a modular system, conceived as a combination of independent function-specific modules that consistently integrate common elements, and perform functions as needed. The fact that it is modular means that new technological advances can be more easily incorporated, as they occur.

- **Adequacy of results obtained to objectives established**

The results obtained clearly meet the project objectives. One of the challenges posed in the ERDF strategy in Castilla y León 2014-2020 is to promote the development of information and communication technologies that enable the region to compete in the Digital Single Market, as set out in the Digital Agenda for Europe, and in the new knowledge-based economy, a path leading to sustainable economic recovery.

For this, the objective was set of improving ICT access, use and quality. The Stilus project contributes to achievement of the objective in two basic ways: It provides a unique, robust identification system that substantially improves access to all of the Regional Ministry of Education´s web services; it provides an array of integrated data bases, which facilitates the construction of electronic administrative services and interoperability. The pillars of the system (data bases and digital identity) are currently in production, and development of the web modules for the academic and administrative management application is in progress.

These objectives could not have been satisfactorily met without ERDF funding, which has helped lay the groundwork needed for future development of electronic administration of the education system.

- **Contribution to the resolution of a problem or weakness detected within the territorial scope of execution**

The project solves the main problems of the Regional Ministry of Education´s IT system: Data dispersion: non-reusable data on multiple isolated systems that do not ´talk´ to each other; non-integration of existing data, and incomplete data. The system design, (creation of unique data bases, unique identity and unified work environments) and the web technology selected, provide solutions precisely to these problems.

The availability of a system of this kind lays the groundwork for electronic administration, interoperability and for easier access by citizens to documents and services provided by the Regional Ministry of Education.

- High degree of coverage of the target population
The project integrates all of the curriculum management processes done by the Regional Ministry of Education and schools. Because some courses are compulsory, and the project serves administrators, teachers, students and their families, which over time represent a very high percentage of the total population of Castilla y León, the degree of coverage of the target population is very high.

- **Consideration of the horizontal criteria of equal opportunity, non-discrimination, social responsibility and environmental sustainability**
Regarding the criteria of promotion of equal opportunity between men and women, in our view, it is not very applicable to a project of this kind, which is to develop an information system that will be made available to multiple users. However, as a cross-cutting measure, the project monitoring indicators do record the gender of physical persons using the system.

Regarding the promotion of sustainable development, these systems will ultimately contribute to ´paperless offices´, and in that sense will serve to reduce the use of paper in administration and communications.

- Synergies with other public policies or instruments
This operation is integrated in the Castilla y León Regional Research Innovation for Intelligent Specialization Strategy (RIS3) and the Digital Agenda for Castilla y León. Specific objectives (Objective 6.3.) are to boost e-administration, improve the efficiency, effectiveness and quality of public services through intensive use of ICT. In the field of education, the impulse to ICT will be the promotion of improved management and administration, and the integration of all of the services and applications available.