



*Una manera de hacer Europa*



# BUENAS PRÁCTICAS Actuaciones Cofinanciadas

"Educational Digital Transformation"

Department of Education

## Programa Operativo de Cataluña

Año 2022

### Fondo Europeo de Desarrollo Regional



### **The project "Educational Digital Transformation" is presented as good practice**

The "Educational Digital Transformation" project is part of axis 3, *Quality and efficient electronic administration*, of the Digital Agenda in Catalonia 2020, whereby public administrations must use ICT to develop advanced procedures that improve the efficiency and quality of services provided to citizens.

In this context, the Educational Digital Transformation operation contributes to building a more efficient public administration and offering higher quality services, by providing public schools in Catalonia with the information and communication technology (ICT) tools necessary for pupils to acquire the basic digital skills defined in the curriculum, as well as improving educational outcomes and reducing dropout and school failure rates. In addition, it should be noted that the evolutions implemented in the information systems of the Department of Education would allow progress towards the digital transformation of public administration.



With this action, laptops and desktop terminals for administrative use were renovated in 2,106 public centers, distributing a total of 14.342 computers. 2.252 servers have also been renewed for educational centers and services, as well as the global transformation of 178 compulsory education centers, making available 8.229 laptops and desktops, 10.639 touch tablet devices or Chromebooks and 1.325 large-format projection systems with interactivity.

The total project cost is € 56.731.317,13, of which € 46.885.386,07 is eligible for funding from ERDF with a grant of € 23.442.693,04.

In terms of the impact of the project, the number of users who are covered by a given electronic public service measures it. Specifically, the project has benefited 51,949 students enrolled in compulsory education in public schools in Catalonia, who have gained access to transformed digital education services thanks to this operation.

This operation is presented as Good Practice because it meets the following criteria:

## 1. High awareness among potential beneficiaries and the public

This operation has been conveniently disseminated through the following actions:


### Dissemination of the project on web pages

<https://educacio.gencat.cat/ca/departament/linies-estrategiques/transformacio-digital-educativa/>

Ini | Departament | Àmbits d'actuació | Tràmits | Serveis | Actualitat | Escola segura

Ini | Departament | Línies estratègiques | Transformació digital educativa

## Transformació digital educativa

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El projecte Transformació Digital Educativa és una operació cofinançada en el marc del Programa Operatiu FEDER de Catalunya 2014-2020. A través d'aquest projecte, el Departament d'Educació ha millorat l'ús i la qualitat de les tecnologies de la informació i la comunicació (TIC) de què disposa el sistema educatiu públic català. El cost total subvencionable del projecte és de més de 46 milions d'euros.

### Objectius

Els objectius del projecte són:

- Posar a disposició dels centres educatius públics de Catalunya les eines TIC necessàries per tal que els alumnes puguin assolir les competències digitals bàsiques definides en els currículums vigents.
- Contribuir a l'acompliment dels objectius educatius inclosos en el marc de l'Estratègia Europa 2020 (ET-2020).
- Millorar els serveis associats a la gestió dels alumnes del sistema educatiu de Catalunya: avançar cap al registre únic d'alumnes, l'accés als serveis i la gestió personalitzada de l'expedient.
- Digitalitzar el procés d'accés de la ciutadania a diferents serveis del sistema educatiu.
- Millorar la gestió acadèmica dels centres, especialment pel que fa a l'expedient acadèmic dels alumnes.
- La millora del procés de gestió de les assignacions de professorat a centres docents. Actualment, el nombre de docents al sistema educatiu públic català és de 72.500.
- La millora dels serveis associats a la Xarxa Telemàtica Educativa de Catalunya que es posen a disposició de la comunitat educativa i dels professionals del servei d'educació de Catalunya, com per exemple Àgora, Nodes i Moodle.

<https://politiquesdigitals.gencat.cat/ca/infraestructures/ajuts-europeus/programa-feder-cat-2014-2020/>

Políticas Digitales

Inicio | Ciudadanía | Economía digital | Infraestructuras | Eventos internacionales | Trámites | Actualidad

Inicio | Infraestructuras | Ayudas europeas | Programa Operativo FEDER de Cataluña 2014-2020

## Programa Operativo FEDER de Cataluña 2014-2020

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La Secretaría de Políticas Digitales dentro del marco del Programa Operativo FEDER de Cataluña 2014-2020, tiene otorgada las funciones de agente facilitador, con el fin de impulsar el desarrollo de proyectos TIC con encaje dentro del Eje 2 (Mejorar el uso y calidad de las TIC y el acceso a las mismas) del Programa Operativo. Estas operaciones son cofinanciadas en un 50% por el Fondo Europeo de Desarrollo Regional (FEDER).

Actualmente, dentro de este objetivo estratégico y enmarcados en la Agenda Digital en Cataluña, hay aprobadas 16 operaciones, que en su conjunto tienen una afectación transversal a diferentes ámbitos de la administración (Justicia, Agricultura, Enseñanza, Cultura, Empresa, Gobernación y Trabajo) y cumplen alguna de las siguientes funciones:

- Fomento del despliegue de redes y servicios para garantizar la conectividad digital.
- Desarrollo de la economía digital, incluyendo el comercio electrónico, para el crecimiento, competitividad e internacionalización de las empresas.
- Promoción de la administración electrónica y mejora de la calidad de la prestación de servicios públicos.

Conviene destacar que la SPD sigue trabajando para incluir nuevas operaciones TIC que encajen con el Programa Operativo FEDER. En este sentido, se prevé un gasto elegible global por estas operaciones de unos 300M€, que supondrá una ayuda FEDER de aproximadamente 150M€.

Puede consultar más información de las operaciones programadas clicando en el enlace "Resumen programación FEDER 2014-2020".

### Destacamos

- Resumen programación FEDER 2014 - 2020
- Antecedentes / Operaciones Programa Operativo FEDER de Cataluña 2007-2013





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Dins de l'objectiu temàtic 2 del FEDER (Millora l'ús i la qualitat de les TIC i el seu accés) trobem emmarcat el projecte de Transformació digital educativa.



### Objectius

Aquesta operació persegueix els següents objectius:

- Posar a disposició dels 2.519 centres educatius públics les eines TIC necessàries, amb la finalitat que els alumnes de cada centre puguin assolir les competències digitals bàsiques definides en els currículums vigents.
- Acomplir els objectius educatius inclosos en el marc de l'Estratègia Europa 2020 (ET-2020).
- Dotar el centre de recursos TIC per a la part administrativa i de gestió, de manera que sigui viable la digitalització de l'Administració.
- Millorar els serveis associats a la gestió dels alumnes del sistema educatiu de Catalunya: registre d'alumnes, accés als serveis i gestió personalitzada de l'expedient. El nombre d'alumnes actual als centres públics de Catalunya és d'1.582.000.
- Registrar en una base de dades única els alumnes beneficiaris del sistema educatiu de Catalunya.
- Digitalitzar el procés d'accés de la ciutadania als diferents serveis del sistema educatiu.

**Poster** informing of the operation, which is located in the administrative headquarters of the Department of Education and in all educational centers of public ownership:



Generalitat de Catalunya  
**Centre de Telecomunicacions  
i Tecnologies de la Informació**



Generalitat de Catalunya  
**Departament d'Educació**

## TRANSFORMACIÓ DIGITAL EDUCATIVA

### Garantir un millor ús de les tecnologies d'informació

La transformació del sistema educatiu públic català cap a la digitalització forma part del projecte Transformació Digital Educativa que està cofinançat amb un ajut global de 23M€ del Fons Europeu de Desenvolupament Regional de la Unió Europea en el marc del Programa Operatiu FEDER de Catalunya 2014-2020.



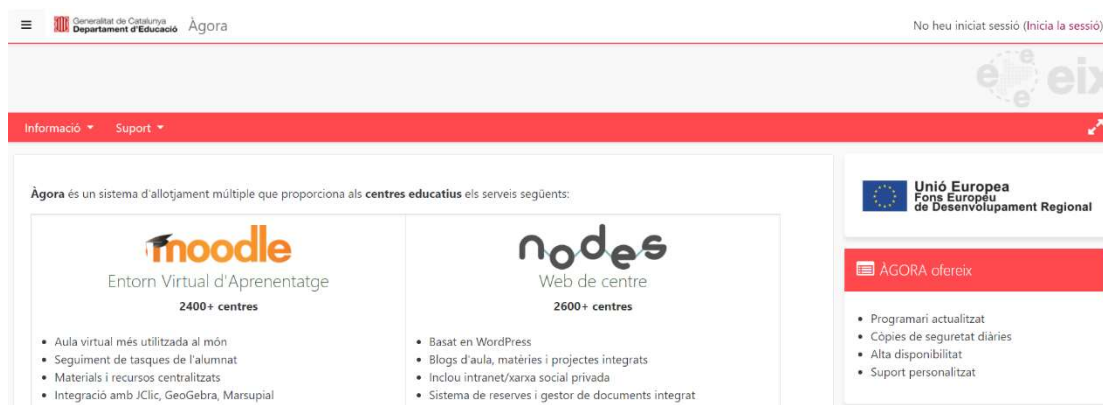
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**Generalitat  
de Catalunya**

**Screen of virtual** learning environments for more than 2,400 centers of the Education Service of Catalonia

<https://educacioidigital.cat/moodle/moodle/>



Àgora és un sistema d'allotjament múltiple que proporciona als centres educatius els serveis següents:

moodle	nodes
Entorn Virtual d'Aprenentatge 2400+ centres	Web de centre 2600+ centres
<ul style="list-style-type: none"><li>Aula virtual més utilitzada al món</li><li>Seguiment de tasques de l'alumnat</li><li>Materials i recursos centralitzats</li><li>Integració amb JClík, GeoGebra, Marsupial</li></ul>	<ul style="list-style-type: none"><li>Basat en WordPress</li><li>Blogs d'aula, matèries i projectes integrats</li><li>Inclou intranet/xarxa social privada</li><li>Sistema de reserves i gestor de documents integrat</li></ul>

**Unió Europea Fons Europeu de Desenvolupament Regional**

**ÀGORA ofereix**

- Programari actualitzat
- Còpies de seguretat diàries
- Alta disponibilitat
- Support personalitzat

## 2. Incorporation of innovative elements

Before this program, the deployment of technological elements for educational use in public schools in Catalonia had been carried out progressively, but only partially. Thanks to the ERDF operational program 2014-2020, it has been possible to carry out the complete deployment of the necessary technology in order to comply with the educational project of each center. In this way, the latest educational technology available has been introduced in public schools: interactive panels that allow increasing fluency in the explanations of the syllabuses of all subjects, robotics to develop project-based learning, and computers so that students can achieve the basic digital skills defined by the Department of Education.

On the other hand, the evolutions of the existing computer applications, as well as the creation of enhanced functionalities have made it possible to simplify procedures with families, to have a digital register of pupils, as well as to improve the administration of the educational center. These developments have been designed using updated programming trends, simplifying administrative procedures, making them more agile and straightforward.



### **3. Adequacy of the results obtained from the operation to the objectives set**

Through the "Educational Digital Transformation" operation, the overall goal is to digitalize all aspects of the Catalan educational ecosystem to improve the efficiency and quality of services provided in the educational community.

To this end, the necessary technological tools have been made available to public schools so that the students of each center can achieve the basic digital skills defined in the current curricula.

The provision of ICT resources to the centers has helped the administration and management of the centers progress in administrative digitalization. An example of this progress is the improvement of services associated with the management of pupils in Catalonia's education system, which includes the creation of the Register of Students of Catalonia (RALC), which allows access to services and personalized management for each of the 1.582.000 files, representing all the students in Catalonia's public centers.

For its part, the digitalization of processes has also improved how assignments are managed, making the procedure more effective for the 72.500 teachers in the Catalan public education system.

Finally, it should be noted that the services associated with the Educational Telematics Network of Catalonia (XTEC) that are available to the educational community and professionals of the education service of Catalonia have been improved. The Educational Telematics Network of Catalonia is a public telematics network for primary and secondary schools in Catalonia. It offers a series of telematics tools such as email, interactive blogs, pedagogical resources, information and pedagogical games for students, access to databases, teacher training, etc. In this sense, new services have been developed within the XTEC environment so that schools have been able to have new ICT resources and tools for learning and networking.

Through all the above objectives, a digitalization of the educational tools of the educational establishments in Catalonia is being achieved, as well as the facilitation of the learning process for the students through technology and the simplification of administrative tasks within the educational centers.



#### **4. Contribution to the resolution of a regional problem or weakness**

The operation has contributed to the transformation of the administrative and academic workplace, since the educational centers had obsolete hardware, mainly due to security problems. To accomplish this, the Department of Education and the public educational centers have provided updated hardware, allowing them to update the necessary security measures to be able to carry out their administrative tasks.

On the other hand, the students of the educational centers, included in the program, have been able to have the necessary tools to be able to achieve the basic digital competences of the digital field established in the curriculum, in order to improve educational results and reduce the rates of dropping out of studies and school failure.

Likewise, these operations have also sought to digitally strengthen regions with increased difficulties accessing the digital world. In order to balance the opportunities for digital competence for all students, many of these new pieces of equipment have been distributed to those students from less digitally developed areas.

The operation has therefore acquired a special significance in contributing to the transformation of administrative and academic settings, replacing obsolete equipment in educational facilities. In addition, thanks to the change in machinery, it has been possible to update and optimize security measures when performing tasks.

#### **5. Degree of coverage of the target population**

The Educational Digital Transformation has a direct impact on the administrative tasks of the staff of the Department of Education (approximately 11.000 people), as well as on the educational tasks of teachers in public schools in Catalonia (about 81.000 professionals), and on the 51.949 students who enjoy the transformed digital educational services.

This impact is also reflected in students and their families, thanks to the incorporation of technology and software to facilitate both administrative procedures and learning. In particular, the operation has implemented updated functionality for schools and families, which includes the digitization of the automated management of student continuity in the center. This is sent to families so that the center assigns a place for the next school year in a simple and agile way.

The Department of Education manages the human teams of all schools and the various administrative units, representing more than 90.000 people. The Educational Digital Transformation has improved the management of all staff, from the definition of templates, budget management, substitutions, staff additions and telematics notifications associated with previous processes.





## **6. Compliance with horizontal principles (sustainable development, equality between men and women and principle of non-discrimination) and environmental legislation**

CTTI demonstrates a firm commitment to the effective equality of women and men. The beginning of work in this area dates back to 2011, when the Equality Commission of CTTI was created. Today, the company has already developed a defined Equality Plan (approved in the second half of 2015) with a set of measures aimed at achieving equal opportunity and treatment for both men and women and eliminating any discrimination based on gender. As part of this framework, the "Digital Educational Transformation" operation applies, transversally, the principles of equality between men and women and non-discrimination.

In addition, the project is located in a context in which the digital gender divide has led to the unequal participation of women and men in the development of the technological field. As a result, the operation promotes equal opportunities, since the development of digital competences and skills that is promoted through the action favours both equal access to technology for children who study in public schools in Catalonia and equal conditions for access to technology between the sexes. Therefore, the various actions implemented apply the principle of non-discrimination, guaranteeing that all children and girls have the same opportunities, without distinction based on gender, culture or geographical area, in accessing technologies, contributing to reducing the digital divide.

CTTI's activities are focused on environmental regulations involving respect for and protection of the environment. These regulations involve the preservation and life of terrestrial ecosystems, the fight against climate change, responsible and sustainable consumption, and environmental awareness and education. In this operation, thanks to the implicit digitalization that it involves, the use of paper and printing for different administrative processes has been reduced by a great deal, as well as through the use of educational resources by students, contributing to greater sustainability and compliance with environmental regulations within the framework of the Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development.

## **7. Synergies with other public intervention policies or instruments**

The "Digital Education Transformation" operation is fulfilling the educational purposes included in the framework of the Europe 2020 strategy (ET 2020), in order to ensure that school dropout rates are below 10% and that at least 40% of people between 30 and 34 years old can complete tertiary level studies.

In order to obtain the maximum performance of the deployment of services carried out within the framework of the Educational Digital Transformation project; this has been done in coordination with the deployment of optical fiber connectivity throughout the territory, as well as the deployment of high-density wireless internal connectivity in schools. With access to fiber optics, the Government guarantees territorial cohesion and equal opportunities throughout the country. Furthermore, it encourages the economic development of the region and the promotion of economic and social progress, reaching 84% of the Catalan population.

It should be noted that the evolution of these Information Systems also contributes to reducing travel needs, for both teaching staff and families. This transformation allows more remote actions, which favour the reduction of displacements and, consequently, the reduction of CO2 emissions (fact directly related to objective 13: "Climate action", of the SDGs, Sustainable Development Objectives).

The Digital Agenda in Catalonia 2020, for its part, is included in Axis 4 Innovation Environment of the Research and Innovation Strategy for Smart Specialisation in Catalonia (RIS3CAT) with the aim of globally improving the Catalan innovative system and working towards the creation of a greener, digital, renewable socio-economic model. Entity and fair. The RIS3CAT represents Catalonia's response to the European Commission's demand that the States and regions of the European Union develop research and innovation strategies for smart specialisation (*Research Innovation Strategies for Smart Specialisation*, RIS3) that match their innovation potential. In this sense, RIS3CAT promotes the vision of a Catalonia with an open, competitive and sustainable economy that combines creativity, talent, a diversified business fabric and its own research system of excellence.



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# BUENAS PRÁCTICAS

## Actuaciones Cofinanciadas

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