



PLAN DE COMPETENCIAS  
DIGITALES PARA LA EMPLEABILIDAD  
EN EXTREMADURA

nccextremadura.org

# PROYECTOS DE INNOVACIÓN SOCIAL PABLO J. DELGADO SAAVEDRA 2021-2022

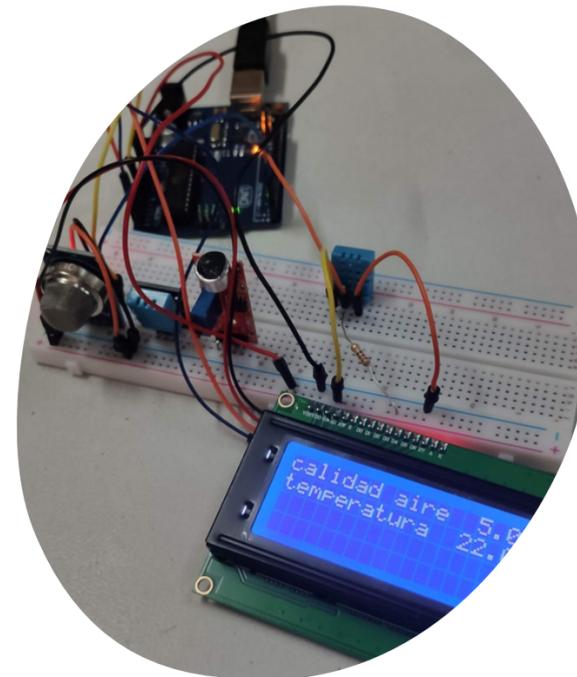


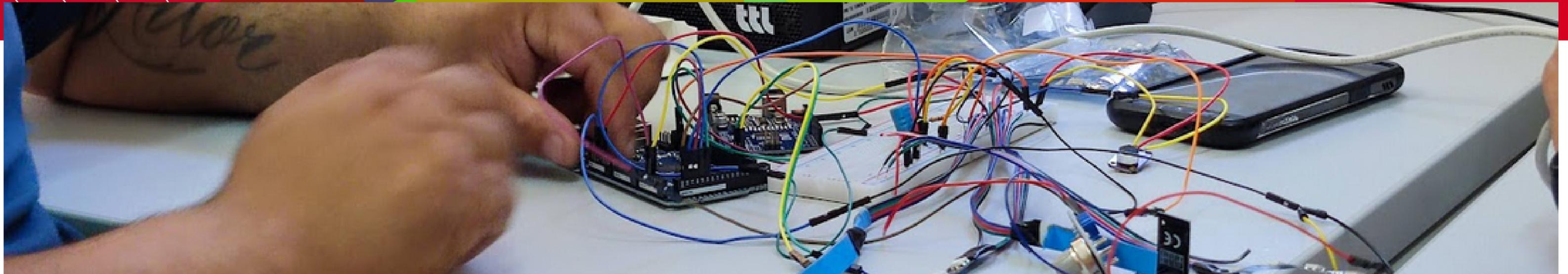
Programa financiado por la Junta de Extremadura -Consejería de Educación y Empleo-, a través del Servicio Extremeño Público de Empleo (SEXPE), gestionado por la Asociación de Universidades Populares de Extremadura (AUPEX).



# DIGITAL SOCIAL LABORATORY

The Digital Social Laboratory is an opportunity to advance in the digital training process of young people, entrepreneurs or those seeking new job opportunities. The Lab includes actions that improve the digital skills of these groups in relation to programming, robotics, design and 3D printing or the do-it-yourself philosophy or maker culture, i.e. with the second wave of digital skills, which pave the way towards the professions of the 21st century and which are included in the European Commission's Digital Education Action Plan.





## 2021-2022 PROJECTS

**AULASUREX**

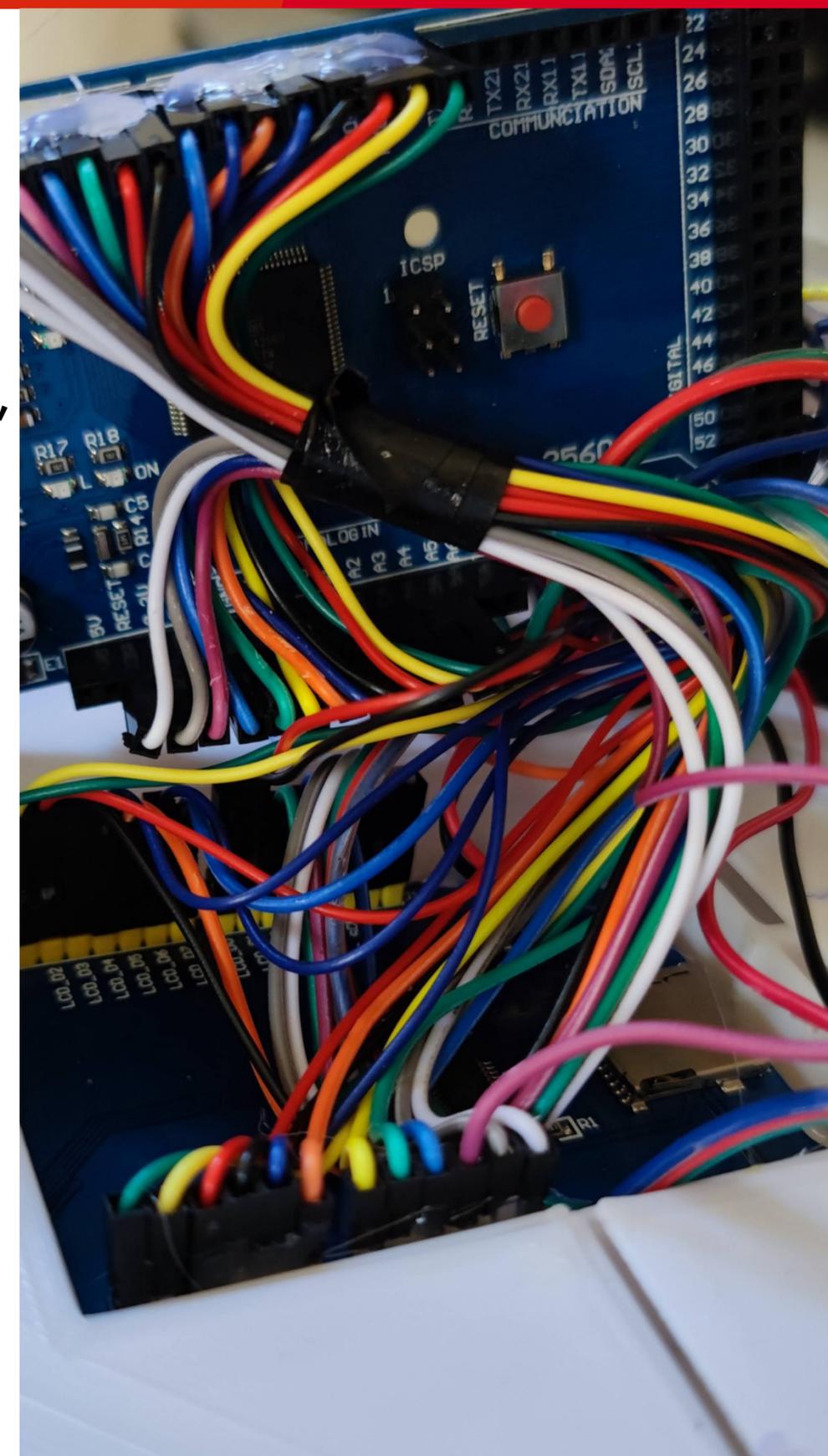


**EXVITAL**

# AULASUREX

The creation of an arduino-based device is proposed, which will allow end users to have real-time information on air quality (adjusting to COVID regulations in classrooms and interiors), information on temperature, humidity and noise pollution (according to regulations), allowing early decisions to be taken in classrooms or closed places regarding CO2 concentration, guaranteeing energy efficiency, comfort and bringing users and entities closer to the fulfilment of SDGs 3, 4, 11, 12 and 13.

The device is designed as an information system, understandable for all age ranges, providing data on screen and through a system of traffic lights and pictograms that notify the different states in a very graphic and visual way. For example: if the area indicating the air quality (CO2 concentration) lights up red, it means that it would be advisable to open the windows or activate the air purifiers, at least until the light indicator returns to green.



# AULASUREX



Among the objectives of the project is the integration of the device with a third-party app that includes it within the IoT, for this we use the Cayenne platform that supports mobile and desktop apps.

What do we achieve by integrating this device into the Internet of Things?

# WHAT DO WE ACHIEVE BY INTEGRATING THIS DEVICE INTO THE INTERNET OF THINGS?



- THE PEOPLE RESPONSIBLE FOR THE CENTRE OR AUTHORISED PERSONS WILL BE ABLE TO HAVE UPDATED INFORMATION EVERY 20 SECONDS OF ALL THE DEVICES INSTALLED IN THE DIFFERENT CLASSROOMS, ALL VISIBLE THROUGH THE SMARTPHONE OR COMPUTER.
- THE SCHOOL MANAGERS OR AUTHORISED PERSONS WILL BE ABLE TO OBTAIN STATISTICAL INFORMATION ON THE EVENTS OCCURRING IN THE CLASSROOM CONCERNING AIR QUALITY, TEMPERATURE, HUMIDITY AND NOISE POLLUTION, INFORMATION WHICH THEY CAN USE FOR THE BENEFIT OF THE USERS TO TAKE PREVENTIVE MEASURES CONCERNING THE ENVIRONMENTAL QUALITY AND COMFORT IN THE CLASSROOM.
- THE PERSONS IN CHARGE OF THE CENTRE OR AUTHORISED PERSONS WILL RECEIVE NOTIFICATIONS BY E-MAIL OR SMS WHEN AN INCIDENT PERSISTS IN THE CLASSROOM AND HAS NOT BEEN SOLVED.

# EXVITAL

Proposes the creation of a wearable (bracelet/pendant), based on NFC technology, whose main objective will be to collect vital data such as: name, surname, address, allergies, blood group, organ donor, pathologies, medicines and emergency contacts. This data will be digitally recorded by an app on the NFC tag that will be embedded in one of the links of the bracelet referenced with the "Exvital" logo.



# EXVITAL

The project aims to facilitate assistance to people and animals in the following circumstances:  
People who have suffered some kind of accident and whose details recorded on the bracelet provide relevant data for the health workers.

- **Name and Surname.**
- **Address**
- **Pathologies**
- **Medicines and allergies**
- **Contact person**
- **Lost or disoriented people / animals.**
- **Children on beaches.**
- **Shopping centres.**
- **Trade fairs.**
- **Lost animals.**
- **Daily data record for kindergarten and camp pupils.**
- **Allergies in restaurants.**



## HOW DOES IT WORK?



**THE OPERATION IS SIMPLE, JUST TOUCH AN NFC-ENABLED SMARTPHONE TO THE BRACELET OR PENDANT AND THE WEARER'S VITAL DATA IS AUTOMATICALLY DISPLAYED.**



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# THANK YOU



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Consejería de Educación y Empleo

