Inclusion Policy Lab: Evaluation Results

EAPN Canarias – REDLAB: Project for Digital Inclusion and Improvement of Employability

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MINISTERIO DE INCLUSIÓN, SEGURIDAD SOCIAL Y MIGRACIONES
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The General Secretariat of Inclusion of the Ministry of Inclusion, Social Security, and Migration has prepared this report within the framework of the Inclusion Policy Lab, as part of the Recovery, Transformation, and Resilience Plan (RTRP) with funding from the Next Generation EU funds. As the agency in charge of carrying out the project, the European Anti-Poverty Network in the Canary Islands (EAPN Canarias) has participated in the writing of this report. This collaborating organization is one of the implementers of the pilot projects and has collaborated with the General Secretariat of Inclusion for the design of the RCT methodology, actively participating in the provision of the necessary information for the design, monitoring, and evaluation of the social inclusion itinerary. Likewise, their collaboration has been essential to gathering informed consents, ensuring that participants in the itinerary were adequately informed and that their participation was voluntary.

A research team coordinated by CEMFI (Center for Monetary and Financial Studies) has substantially contributed to this study. Specifically, Miguel Almunia, professor at the University of CUNEF and Tom Zohar, professor at CEMFI, have participated under the coordination of Mónica Martínez-Bravo (until January 8, 2024) and Samuel Bentolila, professors at CEMFI. The researchers have actively participated in all phases of the project, including the adaptation of the initial proposal to the needs of the evaluation through randomized experiments, the evaluation design, the definition of measurement instruments, data processing, and the performance of econometric estimations that lead to quantitative results.

The partnership with J-PAL Europe has been a vital role in the efforts of the General Secretariat of Inclusion to improve social inclusion in Spain. Their team has provided technical support and shared international experience, assisting the General Secretariat in the comprehensive evaluation of pilot programs. Throughout this partnership, J-PAL Europe has consistently demonstrated a commitment to fostering evidence-based policy adoption and facilitating the integration of empirical data into strategies that seek to promote inclusion and progress within our society.

This evaluation report has been produced using the data available at the time of its writing and it is based on the knowledge acquired about the project up to that date. The researchers reserve the right to clarify, modify, or delve into the results presented in this report in future publications. These potential variations could be based on the availability of additional data, advances in evaluation methodologies, or the emergence of new information related to the project that may affect the interpretation of the results. The researcher is committed to continuing exploring and providing more accurate and updated results for the benefit of the scientific community and society in general.

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Executive Summary

- The **Minimum Income Scheme,** established in May 2020, is a minimum income policy that aims to guarantee a minimum income to vulnerable groups and provide ways to promote their social and labor integration.
- Within the framework of this policy, the Ministry of Inclusion, Social Security, and Migration (MISSM) fosters a strategy to promote inclusion through pilot projects of social innovation, which are conducted in the **Inclusion Policy Lab**. These projects are evaluated according to the standards of scientific rigor and using the methodology of Randomized Controlled Trials.
- This document presents the evaluation results and key findings of the "REDLAB: Digital Inclusion and Employability Improvement Project," which has been conducted in **cooperation between the Ministry of Inclusion, Social Security and Migration (MISSM) and the European Anti-Poverty Network in the Canary Islands (EAPN Canarias)**, an organization of the Third Sector of Social Action dedicated to combating poverty and social exclusion in the Canary Islands.
- This study analyzes **two interventions** aimed at reducing the digital-skill gap: first one focuses on **providing** the necessary **resources** to **access the Internet** and second one, in addition to supplying these resources, includes a **digital training** itinerary. The project is aimed at residents of the Canary Islands who receive the minimum income scheme (MIS) or the Canary Islands Insertion Benefit (PCI), aged between 45 and 65 years, and with a low educational level (up to secondary education at most).
- **Treatment group 1** received a digital kit, which includes a tablet, keyboard, case, and headphones. Additionally, the project provided them with free Internet access for one year. **Treatment group 2**, in addition to receiving the digital kit, participated in the REDLAB pathway, which includes training and advisory measures aimed at improving digital skills and promoting the social and labor inclusion of the participants. The **control group** did not receive any intervention.
- The project was developed on the islands of Tenerife, Gran Canaria, Fuerteventura, Lanzarote, and La Palma, which belong to the two provinces that make up the Autonomous Region of the Canary Islands. The study involved a total of 2,969 people: 986 in the control group, 988 in treatment group 1, and 994 in treatment group 2.
- The sample was mainly composed of women (65%). 85% were unemployed, and 70% had not completed secondary education.
- In treatment group 1, 83% of the participants collected their digital kit. In treatment group 2, 44% of the participants started the treatment, and only 42% completed it.
- The main results of the evaluation are as follows:
    - **Both treatments improve digital skills**, but the **effect** is **greater** for the group participating in the **training program**. Treatment group 1, which received only the digital kit, experienced an improvement in digital skills, with an increase of 0.18 standard deviations. In contrast, treatment group 2, which received both the digital kit and a digital training course, exhibited a higher increase of 0.5 standard deviations. These effects persist in the medium term (six months after the intervention), although they slightly decrease in magnitude.

- **Improvement in job search capability**: The combination of training and the digital kit increased the job search skills of participants in treatment group 2 by 0.2 standard deviations. No significant effects were detected for treatment group 1. The effects persist in the medium term.
- **Increased employability**: Results regarding employability levels show a positive and significant effect for both treatment groups. Again, a larger increase is observed in treatment group 2, with an increase of 0.37 standard deviations, compared to treatment group 1, which experienced an increase of 0.08 standard deviations. The effects persist in the medium term for treatment group 2, with a slight decrease.
- **Improvement in life satisfaction**: In treatment group 2, an increment of 0.12 standard deviations in self-reported life satisfaction is observed, while no significant effects are found in treatment group 1. Over the medium term, both groups exhibit a favorable influence on life satisfaction.

1 Introduction

General Regulatory Framework

The Minimum Income Scheme (MIS), regulated by Law 19/2021[1], is an economic benefit whose main objective is to prevent the risk of poverty and social exclusion of people in situations of economic vulnerability. Thus, it is part of the protective action of the Social Security system in its non-contributory modality and responds to the recommendations of various international organizations to address the problem of inequality and poverty in Spain.

The provision of the MIS has a double objective: to provide economic support to those who need it most and to promote social inclusion and employability in the labor market. This is one of the social inclusion policies designed by the General State Administration, together with the support of the Autonomous Communities, the Third Sector of Social Action, and local corporations[2]. It is a central policy of the Welfare State that aims to provide minimum economic resources to all individuals in Spain, regardless of where they live.

Within the framework of the National Recovery, Transformation, and Resilience Plan (RTRP),[3] the General Secretariat of Inclusion (onward SGI by its acronyms in Spanish) of the Ministry of Inclusion, Social Security, and Migration (MISSM) participates significantly in Component 23 "New public policies for a dynamic, resilient, and inclusive labor market", framed in Policy Area VIII: "New care economy and employment policies".

Investment 7: "Promotion of Inclusive Growth by linking socio-labor inclusion policies to the Minimum Income Scheme" is among the reforms and investments proposed in this Component 23. Investment 7 promotes the implementation of a new model of inclusion based on the MIS which reduces income inequality and poverty rates. Therefore, the MIS goes beyond being a mere economic benefit and supports the development of a series of complementary programs that promote socio-labor inclusion. However, the range of possible inclusion programs is very wide, and the government decides to pilot different programs and interventions to evaluate them and generate knowledge that allows prioritizing certain actions. With the support of investment 7 under component 23, the MISSM establishes a new framework for pilot inclusion projects constituted in two phases through two royal decrees covering a set of pilot projects based on experimentation and evaluation:

[1] Law 19/2021, dated December 20, establishing the Minimum Income Scheme (BOE-A-2021-21007).

[2] Article 31.1 of Law 19/2021, dated December 20, 2021, establishing the Minimum Income Scheme.

[3] The Recovery, Transformation, and Resilience Plan refers to the Recovery Plan for Europe, which was designed by the European Union in response to the economic and social crisis triggered by the COVID-19 pandemic. This plan, also known as Next Generation EU, sets out a framework for the allocation of recovery funds and for boosting the transformation and resilience of member countries' economies.

- **Phase I: Royal Decree 938/2021**[4], through which the MISSM grants subsidies for the execution of 16 pilot projects of inclusion pathways corresponding to autonomous communities, local organizations, and the Third Sector of Social Action organizations. This royal decree contributed to the fulfillment of milestone number 350[5] and monitoring indicator 351.1[6] of the RTRP.
- **Phase II: Royal Decree 378/2022**[7], which grants subsidies for a total of 18 pilot projects of inclusion pathways executed by autonomous communities, local organizations, and the Third Sector of Social Action organizations. Along with the preceding Royal Decree, this one helped the RTRP's monitoring indicator number 351.1 to be fulfilled.

To support the implementation of evidence-based public and social policies, the Government of Spain decided to evaluate the social inclusion pilot projects using the Randomized Controlled Trial (RCT) methodology. This methodology, which has gained relevance in recent years, represents one of the most rigorous tools to measure the causal impact of a public policy intervention or a social program on indicators of interest, such as social and labor insertion or the well-being of beneficiaries.

Specifically, RCT is an experimental method of impact evaluation in which a representative sample of the population potentially benefiting from a public program or policy is randomly assigned either to a group receiving the intervention or to a comparison group that does not receive the intervention for the duration of the evaluation. Thanks to the random allocation of the program, this methodology can statistically identify the causal impact of an intervention on a series of variables of interest. This methodology enables us to analyze the effect of this measure, which helps determine whether the policy is adequate to achieve the planned public policy objectives. Experimental evaluations enable us to obtain rigorous results of the intervention effect, i.e., what changes the participants have experienced in their lives due to the intervention. In addition, these evaluations provide an exhaustive analysis of the program and its effects, providing insights into why the program was effective, who has benefited most from the interventions, whether there were indirect or unexpected effects, and which components of the intervention worked, and which did not.

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[4] Royal Decree 938/2021 dated October 26, which regulates the direct granting of subsidies from the Ministry of Inclusion, Social Security, and Migration in the field of social inclusion, for an amount of €109,787,404, within the framework of the Recovery, Transformation, and Resilience Plan (BOE-A-2021-17464).

[5] Milestone 350 of the RTRP: "Improve the rate of access to the Minimum Income Scheme and increase the effectiveness of the MIS through inclusion policies, which, according to its description, will translate into supporting the socio-economic inclusion of the beneficiaries of the MIS through itineraries: eight collaboration agreements signed with subnational public administrations, social partners and social action entities of the third sector to conduct the itineraries. The objectives of these partnership agreements are: (i) to improve the MVI access rate; ii) increase the effectiveness of the MVI through inclusion policies."

[6] Monitoring indicator 351.1 of the RTRP: "at least 10 additional collaboration agreements signed with subnational public administrations, social partners and social action entities of the third sector to conduct pilot projects to support the socio-economic inclusion of MVI beneficiaries through itineraries".

[7] Royal Decree 378/2022 dated May 17, regulating the direct granting of subsidies from the Ministry of Inclusion, Social Security, and Migration in the field of social inclusion, for an amount of €102,036,066, within the framework of the Recovery, Transformation, and Resilience Plan (BOE-A-2022-8124).

These evaluations have focused on the promotion of social and labor inclusion among MIS beneficiaries, recipients of regional minimum incomes, and other vulnerable groups. In this way, the MISSM establishes a design and impact evaluation of results-oriented inclusion policies, which offers evidence for decision-making and its potential application in the rest of the territories. The promotion and coordination of 32 pilot projects by the Government of Spain has led to the establishment of a laboratory for innovation in public policies of global reference named the Inclusion Policy Lab.

For the implementation and development of the Inclusion Policy Lab, the General Secretariat of Inclusion has established a governance framework that has made it possible to establish a clear and potentially scalable methodology for the design of future evaluations and promoting decision-making based on empirical evidence. The General State Administration has had a triple role as promoter, evaluator, and executive of the different programs. Different regional and local administrations and the Third Sector of Social Action organizations have implemented the programs, collaborating closely in all their facets, including evaluation and monitoring. In addition, the Ministry has had the academic and scientific support of the Abdul Latif Jameel Poverty Action Lab (J-PAL) Europe and the Centre for Monetary and Financial Studies (CEMFI), as strategic partners to ensure scientific rigor in the assessments. Likewise, the Inclusion Policy Lab has an Ethics Committee[8], which has ensured the strictest compliance with the protection of the rights of the people participating in the social inclusion itineraries.

This report refers to "REDLAB: Project for Digital Inclusion and Employability Improvement", executed under **Royal Decree 378/2022**[9] by the European Network Against Poverty and Social Exclusion in the Canary Islands (EAPN Canarias), a Third Sector Social Action organization dedicated to combating poverty and social exclusion in the Canary Islands. This report contributes to the fulfillment of milestone 351 of the RTRP: "Following the completion of at least 18 pilot projects, the publication of an evaluation on the coverage, effectiveness and success of the MIS, including recommendations to increase the level of application and improve the effectiveness of social inclusion policies".

Context of the project

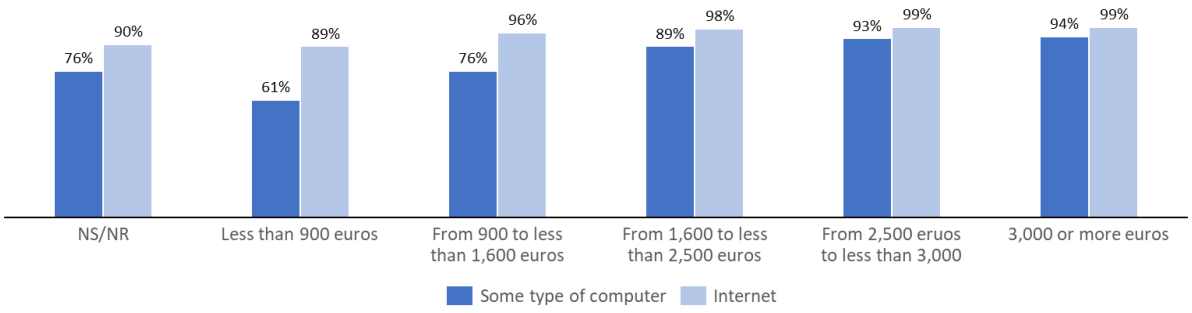
Information and Communication Technologies (ICT) have assumed a critical role, surpassing their conventional function as mere communication tools to become fundamental pillars for access to information, education, employment, and civic participation. The term "digital-skill gap" highlights disparities in the utilization, accessibility, and quality of ICT among different sectors of the population. This complex phenomenon is linked to structural issues such as poverty, social exclusion, and employment difficulties.

[8] Regulated by Order ISM/208/2022, dated March 10, which creates the Ethics Committee linked to social inclusion itineraries, on 20/05/2022 it issued a favorable report for the realization of the project that is the subject of the report.

[9] Royal Decree 378/2022, dated May 17, regulating the direct granting of subsidies by the Ministry of Inclusion, Social Security, and Migration in the field of social inclusion, amounting to 102,036,066 euros, within the framework of the Recovery, Transformation, and Resilience Plan (BOE-A-2022-8124).

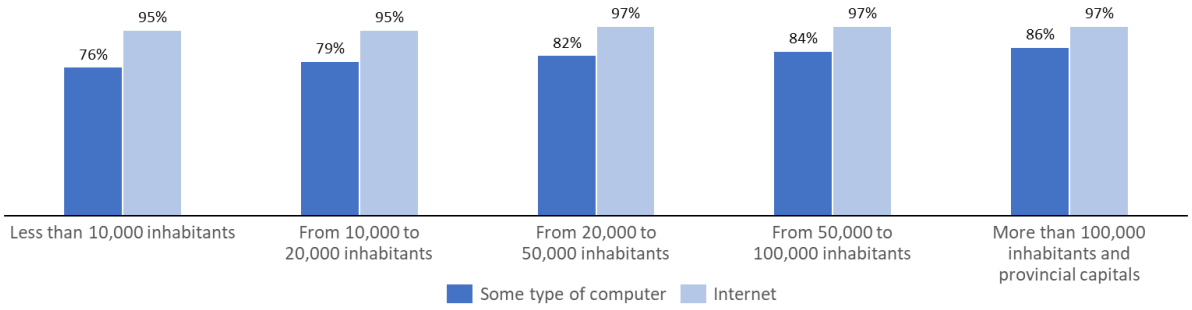
Access disparity is one of the most evident manifestations of this gap, reflecting inequalities in the availability of ICT. According to the results of the Survey on Equipment and Use of Information and Communication Technologies in Households, conducted by the National Statistics Institute (*Instituto Nacional de Estadística* or *INE*, in Spanish) in 2023, factors such as geographical location and economic status contribute to these differences. Rural areas may have limitations in accessing high-speed Internet, and individuals with limited financial resources may face challenges in acquiring technological devices or Internet services.

Figure 1: Percentage of households with computers of any type and internet access according to net monthly household income



Source: Survey on Equipment and Use of Information and Communication Technologies in Households, INE.

Figure 2: Percentage of households with computers of any type and internet access according to the number of inhabitants

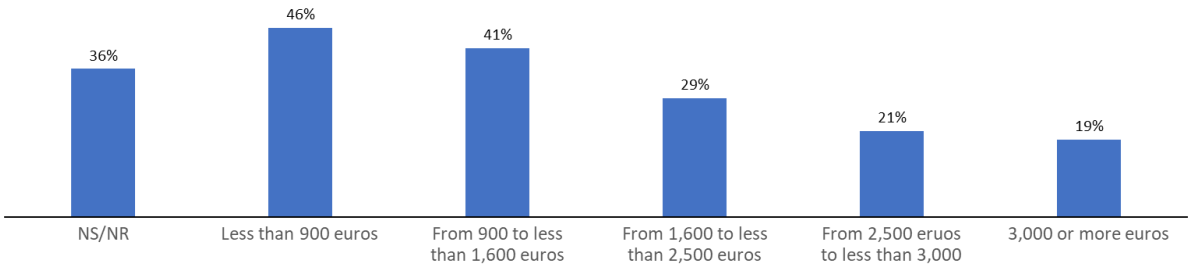


Source: Survey on Equipment and Use of Information and Communication Technologies in Households, INE.

Furthermore, the skills gap presents another significant challenge, underscoring disparities in the ability to effectively utilize ICT. Even when access barriers are overcome, some individuals may lack the necessary skills to fully leverage technological capabilities. This can stem from insufficient education or training in technology use, as well as a lack of confidence or experience in this area, limiting the opportunities offered by ICT, such as access to information, online education, employment, and social integration. The following charts illustrate significant differences in digital

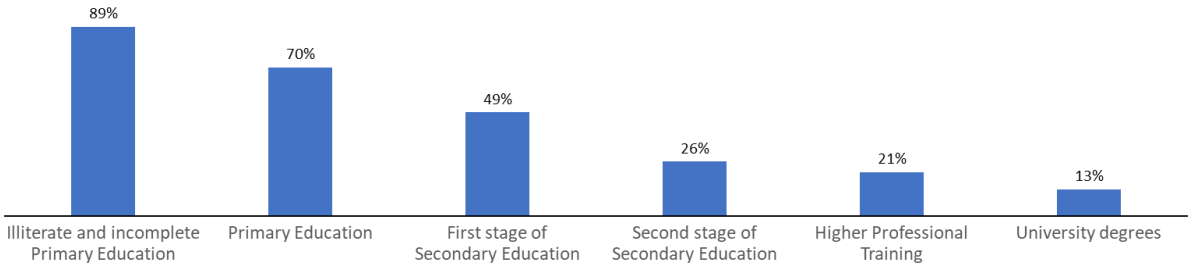
competencies between individuals with lower income and education levels compared to those with higher income and education levels.

Figure 3: Percentage of people with low Digital Skills according to net monthly household income[10]



Source: Survey on Equipment and Use of Information and Communication Technologies in Households, INE.

Figure 4: Percentage of people (16 to 74 years old) with low Digital Skills according to the level of education attained



Source: Survey on Equipment and Use of Information and Communication Technologies in Households, INE.

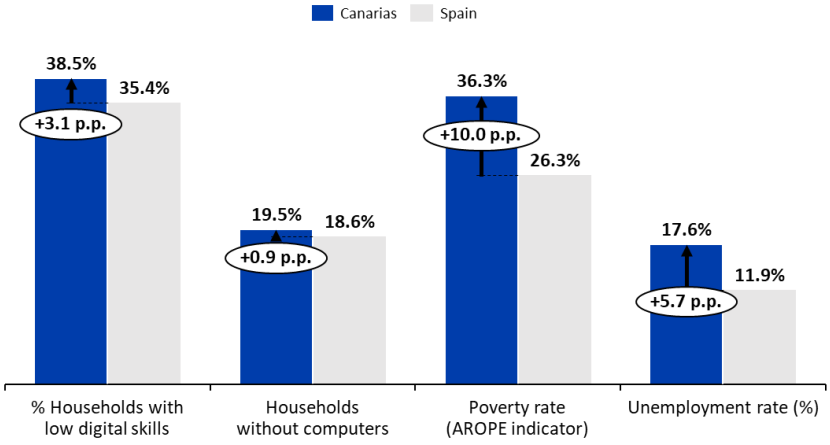
The digital-skill gap poses a risk of disconnection for individuals who, due to their context or personal situation, are excluded from access to these services, thereby exacerbating their vulnerability. This issue becomes critical in the current context as government and public services increasingly move to digital channels, leaving those without internet access facing greater difficulties in obtaining essential benefits and services.

On the other hand, the widespread and inclusive adoption of new technologies presents an exceptional opportunity to enhance the quality of life for citizens experiencing social exclusion. It enables access to educational resources, job opportunities, and healthcare services through digital platforms. Additionally, it can facilitate social connection, allowing these citizens to participate in community networks and access government services more efficiently. Ultimately, integrating new technologies can be a key lever to positively transform the reality of citizens in social exclusion, promoting equity and full participation in the digital era.

[10] Digital competence is based on the Eurostat methodology, which includes only individuals who have used the Internet in the past three months. It categorizes skills into four types: no skills, low skills, basic skills, and advanced skills. These categories are constructed based on the level of proficiency in the fields of Information, Communication, Problem-solving, and Computer skills.

In this context, the Canary Islands emerge as a region with significant potential to benefit from an intervention aimed at reducing the digital-skill gap. The digital situation in this region presents considerable challenges, with 38.5% of users having low or no digital skills, compared to 35.4% nationally. Additionally, 19.5% of households lack access to computers, exceeding the national average of 18.6%. From an economic perspective, INE data reveal that the community exhibits a risk of poverty or social exclusion rate (AROPE indicator) of 33.8%, significantly higher than the national average of 26.5%[11]. Moreover, the Canary Islands have an unemployment rate of 17.6%, which is 5.7 percentage points higher than the national average of 11.9%[12].

Figure 5: Differences between the Canary Islands and the national average in digitalization, poverty rate and labor insertion



Source: Survey on Equipment and Use of Information and Communication Technologies in Households, INE. Living Conditions Survey, INE. Labor Force Survey, INE.

Regulatory framework associated with the project and governance structure

At the European level, two key initiatives have emerged to address this issue. Firstly, the Digital Education Action Plan 2021-2027 aims to improve the quality and accessibility of digital education in Europe by promoting a high-performance digital education ecosystem and enhancing digital skills. Secondly, the Digital Decade for Europe highlights the goal of ensuring that technology and innovation benefit everyone, setting specific targets in areas such as connectivity, digital skills, or digital public services.

At national level, the Government of Spain has contributed with initiatives such as Spain Digital 2026, a roadmap aimed at driving the country's digital transformation to achieve equitable economic growth. Likewise, the National Digital Skills Plan, through the Digital Agenda 2026 and the Recovery,

[11] Survey on Living Conditions, INE (2023)

[12] Labor Force Survey, INE (2022)

Transformation, and Resilience Plan (RTRP), aims to promote digital training and inclusion of the population and workers, with an estimated investment of 3.75 billion euros for the period 2021-2023.

Finally, all European and national regulations are in line with the framework established in the 2030 Agenda and the Sustainable Development Goals (SDGs).

The pilot project subject to this report is aligned with European and national strategies in the field of the digital-skill gap and social exclusion, as well as with the 2030 Agenda for Sustainable Development, specifically contributing to SDGs 1, 4, 8, and 10.

Given the close relationship between economic poverty, low educational levels, and a high digital-skill gap, EAPN Canarias has conceived a project aimed at providing resources and tools to address the digital-skill gap and low employability among the most vulnerable people.

The scientific objective of the project is to understand and evaluate the effect that a reduction in the digital-skill gap has on job search and socio-labor insertion, as well as to assess whether reducing the digital-skill gap should be addressed through digital skills training, or if simply providing devices and stable internet access is sufficient to reduce this gap.

The governance framework set up for the proper execution and evaluation of the project includes the following actors:

- **The European Anti-Poverty and Social Exclusion Network of the Canary Islands (EAPN Canarias)** is the entity responsible for project management and execution. EAPN Canarias was established in 2003 with the mission of preventing and combating poverty and social exclusion within the framework of the Autonomous Community of the Canary Islands. Currently, the network consists of 33 social entities from the Autonomous Community of the Canary Islands. EAPN Canarias aims to improve the effectiveness of actions against poverty and exclusion in the autonomous community, actively participate in policy development, and establish a communication channel among its members to share experiences and resources.
- The **Government of the Canary Islands**, which has formalized an agreement with EAPN-Canarias for various aspects related to specific project contents. This includes providing databases of recipients of the Canarian insertion benefit (PCI by its acronym in Spanish, *Prestación Canaria de Inserción*) and sharing the experience of Basic and Advanced Digital Skills Courses already being offered in the territory.
- **The Ministry of Inclusion, Social Security, and Migration** (MISSM) is the funding source of the project and responsible for the RCT evaluation. For this reason, the General Secretariat of Inclusion assumes a series of commitments with EAPN Canarias:
    - Providing the beneficiary organization with support for the design, execution, and monitoring of the grant's purpose, as well as profiling potential participants of the the pilot project.
    - Designing the randomized controlled trial (RCT) methodology of the pilot project in coordination with the beneficiary organization and scientific collaborators. Also, conducting the evaluation of the project.

  - Ensuring strict compliance with ethical considerations by obtaining approval from the Ethics Committee.
- **CEMFI and J-PAL Europe** are scientific and academic institutions supporting MISSM in the design and RCT evaluation of the project.

In view of the above, the current report follows the following structure: **section 2** provides a description of the project, detailing the issue to be addressed, the specific interventions, and the target audience. Next, **section 3** contains information related to the evaluation design, defining the Theory of Change linked to the project and hypotheses, sources of information, and indicators used. **Section 4** describes the implementation of the intervention, the analysis of the sample, the results of randomization, and the degree of participation and attrition of the intervention. This section is followed by **Section 5**, where the evaluation results are presented, along with a detailed analysis of the econometric analysis conducted and the results for each of the indicators used. Finally, the conclusions of the project evaluation are described in **Section 6**. Besides, in the **Economic and regulatory management appendix** additional information is provided regarding the management instruments and governance of the pilot project.

Ethics Committee linked to the Social Inclusion Itineraries

During research involving human beings, in the field of biology or the social sciences, researchers and workers associated with the program often face ethical or moral dilemmas in the development of the project or its implementation. For this reason, in many countries it is common practice to create ethics committees that verify the ethical viability of a project as well as its compliance with current legislation on research involving human beings. The Belmont Report (1979) and its three fundamental ethical principles – respect for individuals, profit, and justice – constitute the most common frame of reference in which ethics committees operate, in addition to the corresponding legislation in each country.

With the aim of protecting the rights of participants in the development of social inclusion itineraries and ensuring that their dignity and respect for their autonomy and privacy are guaranteed, Order ISM/208/2022 dated March 10 creates the Ethics Committee linked to the Social Inclusion Itineraries. The Ethics Committee, attached to the General Secretariat of Inclusion and Social Welfare Objectives and Policies, is composed of a president – with an outstanding professional career in defense of ethical values, a social scientific profile of recognized prestige and experience in evaluation processes – and two experts appointed as members.

The Ethics Committee has conducted analysis and advice on the ethical issues that have arisen in the execution, development, and evaluation of the itineraries, formulated proposals in those cases that present conflicts of values and approved the evaluation plans of all the itineraries. In particular, the Ethics Committee issued its approval for the development of this evaluation on February 22, 2023.

2 Description of the program and its context

This section describes the program that EAPN Canarias implemented within the framework of the pilot project. Furthermore, it describes the target population and the territorial framework and provides a detailed description of the intervention.

2.1 Introduction

This project aims to reduce the digital skill gap and enhance employability among recipients of the Minimum Income Scheme (MIS) and the Canarian Insertion Benefit (PCI)[13]. The project aims to achieve its goals through training programs tailored to the socio-educational characteristics and digital capabilities of the participants. Additionally, it seeks to gain scientific insight into the impact of narrowing the digital skills gap on job search and socio-economic integration.

The project draws from various scientific publications. A notable publication is the report "The Great Digital Divide: Why bringing the digitally excluded online should be a global priority" by Capgemini Research Institute. This report analyzes the barriers to digital inclusion globally, highlighting Internet usability and high costs as key factors. Another relevant source is the study "Digital-Skill Gap and Social Exclusion" by EAPN Canarias, which analyzes the relationship between the digital-skill gap and social exclusion in the Canary Islands, providing information for the development of effective policies in this area. Additionally, the "XII Report on the State of Poverty" by EAPN examines the situation of poverty and social exclusion in Spain and proposes actions to address these issues and improve citizen well-being.

It is important to note that this project with RCT evaluation is innovative and does not replicate previous experiments. However, it incorporates elements from previous studies that have served as precedents. The project is inspired by Kentaro Toyama's "technology amplification" theory (2011), which suggests that the impact of technology is not additive or transformative itself but depends on the existence or availability of other factors, including institutional capacity. In other words, access to technology alone cannot compensate for the lack of institutional structures or human behavior.

In this context, various studies indicate that when participants receive adequate training, information technologies can reduce unemployment and improve mental health (Audhoee et al., 2010; Briscese et al., 2022). Furthermore, several RCTs have found that digital training has positive impacts. For example, Roessler et al. (2021) conducted a randomized controlled trial in Tanzania, demonstrating that after 13 months, smartphones increased household per capita annual consumption by 20% compared to the control group. On the other hand, the study by Lee et al. (2022) in South Korea

[13]The *Prestación Canaria de Inserción* was replaced by the *Renta Canaria de Ciudadanía* in 2022. In this report, the term PCI will be used to encompass both benefits.

revealed positive impacts of digital literacy training in adults over 65, demonstrating improvements in well-being and cognitive function.

Also noteworthy is the study by Martinez-Alcalá (2018), which shows how digital training systems that include support through activities and multimedia learning materials yield better results than traditional training. In line with this, Tsai et al. (2017) emphasize the importance of social support and direct experimentation in acquiring digital skills. Their results, based on 21 in-depth interviews, suggest that social support is crucial for improving tablet handling and that experimentation with devices is a key pathway to gaining technological experience. Finally, Choudhary and Bansal (2022) conducted a review of digital training programs, demonstrating a diversity of impacts largely dependent on the quality of services and program structure.

2.2 Target population and territorial scope

The target population of this project comprises individuals residing in the Canary Islands who receive the MIS or PCI, aged between 45 and 65 years, and with a low educational level (understood as the absence of secondary education).

The selection criteria for participation in the project are as follows:

- Not having completed any digital training program or employment-related program lasting more than ten hours in the last three months.
- Not needing a prior main social intervention.
- Not experiencing significant mobility limitations or having a sensory disability exceeding 33%.

The project is conducted in all the islands belonging to the two provinces that compose the Autonomous Region of the Canary Islands, Santa Cruz de Tenerife, and Las Palmas. Within these islands, a network of 70 strategically distributed activity nodes will be established. These nodes will act as key reference points for the implementation of interventions and interaction with the target population of the project.

More details on the recruitment process are provided in **Section 3.5** as part of the evaluation design.

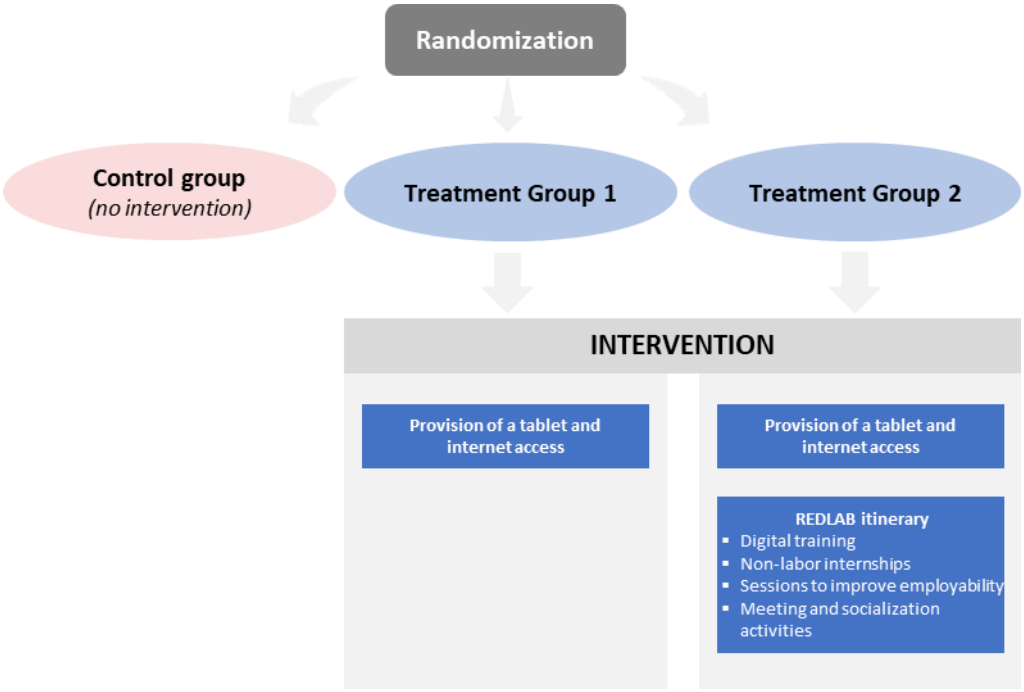
2.3 Description of interventions

The project aims to bridge the digital-skill gap and increase the socio-labor and citizen inclusion of individuals who are currently recipients of the Minimum Income Scheme and/or the Canarian Insertion Benefit. The target population includes individuals aged between 45 and 65 years with a low level of education.

To achieve this goal, participants are distributed equitably into three different groups: Treatment Group 1 (TG1), Treatment Group 2 (TG2), and Control Group (CG). Both participants assigned to Treatment Group 1 and Treatment Group 2 will receive a digital kit, including a tablet, keyboard, case, and headphones. Additionally, the project will provide them with free Internet connection for one year. Participants in Treatment Group 2, besides receiving the digital kit, will also participate in the

REDLAB itinerary, which includes training and counseling measures aimed at improving digital skills and promoting social and labor inclusion. On the other hand, participants assigned to the control group will not receive any intervention and will act as a pure control group. The following figure summarizes the treatments received by each group:

Figure 6: Intervention scheme by experimental group



The REDLAB itineraries are organized into intervention nodes, designated as REDLAB NODES, where the strategic activities designed to meet the objectives established within the framework of the project are executed. Below are the actions that make up the REDLAB itinerary.

Digital training

This is a training action. The Training and Counseling Action for Employability aims to achieve digital inclusion by developing three key principles:

1. ACCESS: Availability and affordability.
2. ADOPTION: Digital literacy.
3. APPLICATION: Labor market, education, healthcare, housing, finance, social interaction, public administration, citizen participation, and with an immersive or "SAMR pool" methodology (substitution, augmentation, modification, and redefinition).

Additionally, the program fully develops the European Digital Competence Framework established by the European Commission.

These actions aim to modify behaviors, habits, and prejudices against ICT, increase employability and inclusion, and ensure access to rights in an increasingly digitalized society. These rights include personal identification, application usage, problem-solving, various dealings with the administration,

access to essential public services (such as social, health, education, housing, telecommunications/digital services, transportation, energy, water, and sanitation), CV management, job search, exercise and protection of consumer rights, expansion of social participation, personal development, creativity, language learning. All these activities take place in secure environments.

Regarding the schedule, the Training Action consists of 100 teaching hours, with 95% of the hours being conducted face-to-face and 5% being conducted virtually. In addition to classes, there are 3 hours allocated to the Exam, the Evaluation, and the Final Survey. To successfully complete the Training Action, a minimum attendance of 80% is required. Justified absences from training sessions of up to a maximum of 10% of the total teaching hours are accepted. Unjustified absences are allowed up to a maximum of 5%.

The monitors delivering the Training Action received specialized training specifically designed for this project. They also created specific audiovisual material to enhance the learning experience. A meticulous planning of the classes was conducted to ensure comprehensive coverage of all the content, following the Montessori method of working in class with adult learners for digital education.

Employability guidance

The guidance process begins with the creation of a life history narrative for each participant in treatment group 2. This narrative is developed through oral conversations, where a researcher asks specific questions to delve into important aspects of their lives. These questions cover a wide range of topics, including social vulnerability factors, personal and household resources available to cope with such situations, the influence of the MIS and PCI in their lives, and their expectations regarding the digitalization process and the anticipated changes brought about by the project.

Once this information is obtained, personalized recommendations are provided for career and personal guidance. These recommendations aim to tailor the planned career guidance and practical sessions to the individual needs of each participant. Subsequently, participants from treatment group 2 who have successfully completed the Training Action phase will engage in individual and group sessions at each node. These sessions aim to capitalize on the knowledge and practical experiences acquired during the training to improve participants´ employability. Employability skills were intensively taught, with specific videos created for the students.

Practical training in work environments

The project provides opportunities for practical training in work environments within companies, institutions, and social organizations for each participant. These opportunities are tailored to individual characteristics to available positions. The agreement specifies a 30-hour internship in organizations such as EAPN, ADEICAN, RED ANAGOS, and other project-associated companies and institutions. The agreements established with these organizations ensure a suitable environment, the assignment of a supervisor, guidance from training staff, attendance monitoring, oversight from the management team, and performance evaluation through a survey for each intern.

Care hours voucher

To support the involvement of individuals with dependent children and other dependents, and to facilitate work-life balance, a system of care hour vouchers is planned. These vouchers will be funded by some of the companies involved in the project and will be available to participants in treatment group 2 who request and provide justification for them. To ensure smooth provision of the service, participants will be required to request the vouchers with sufficient advance notice.

Transport pass or private minibus service

The classrooms for the Training Action will be conveniently located near the participants' place of residence. However, it is anticipated that some participants may need to use public transportation to commute to the Training Action or to non-work-related internships. In such cases, the necessary transportation passes will be provided to them.

Supermarket voucher

Upon completing the first survey, project beneficiaries from all three groups will receive a €30 supermarket voucher to purchase food and products. To encourage continued participation and adherence to the project, a €50 shopping card will be offered to all three groups upon completion of the second survey.

3 Evaluation design

This section outlines the design of the impact evaluation of the project described in the previous section. It describes the theory of change which identifies the mechanisms and aspects to be measured, the hypotheses to test in the evaluation, the sources of information to build the indicators, and the design of the experiment.

3.1 Theory of Change

This report, with the aim of designing an evaluation that enables understanding the causal relationship between the intervention and its final objective, develops a Theory of Change. The Theory of Change makes it possible to schematize the relationship between the needs identified in the target population, the benefits, or services that the intervention provides, and the immediate and medium-long term results sought by the intervention, to understand the relationships between them, the assumptions on which they are based, and to outline measures or outcome indicators.

Theory of Change

A Theory of Change begins with the correct identification of the needs or problems to be addressed and their underlying causes. This situational analysis should guide the design of the intervention, i.e., the activities or products that are provided to alleviate or resolve the needs, as well as the processes necessary to properly implement the treatment. Next, this theory identifies the expected effect(s) based on the initial hypothesis, i.e., what changes – in behavior, expectations, or knowledge – are expected to be obtained in the short term with the actions conducted. Finally, the process concludes with the definition of the medium- to long-term results that the intervention aims to achieve. Sometimes, the effects directly obtained with the actions are identified as intermediate results, and one identifies the indirect effects in the results.

The development of a Theory of Change is a fundamental element of impact evaluation. At the design stage, the Theory of Change helps to formulate hypotheses and identify the indicators needed for the measurement of results. Once the results are achieved, the Theory of Change makes it easier, if results are not as expected, to detect which part of the hypothetical causal chain failed, as well as to identify, in case of positive results, the mechanisms through which the program works. Likewise, the identification of the mechanisms that made the expected change possible allows a greater understanding of the possible generalization or not of the results to different contexts.

The primary objective of this project is to address the digital-skill gap and low employability among recipients of MIS and PCI aged between 45 and 65 years with low levels of education. This demographic group faces challenges due to factors such as limited access to digital resources and lack of skills in the digital realm, which hinder their employment prospects. The project aims to implement targeted measures to improve digital skills and enhance employment opportunities for this population. By doing so, it aims to reduce barriers that restrict their participation in society and the labor market. To achieve this, the project designs two different treatments based on the Theory of Change.

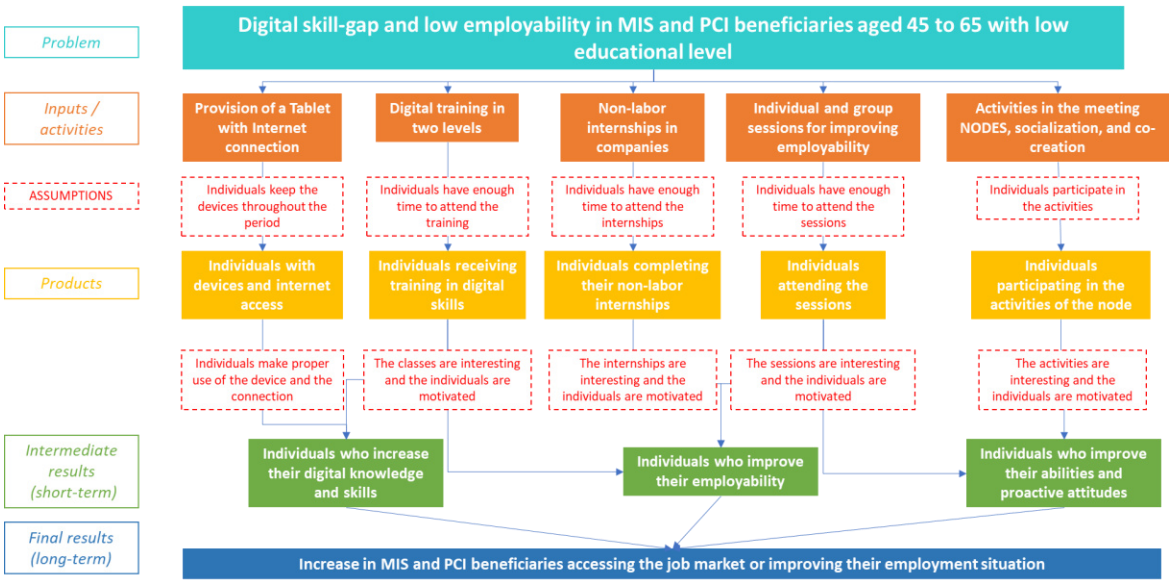
The treatment for Treatment Group 1 focuses solely on addressing the access gap. In this regard, the intervention consists of providing a digital kit (tablet, keyboard, case, and headphones) with internet connection for one year. The treatment for members of Treatment Group 2, on the other hand, aims to address both the access gap and the skills gap. This includes the provision of a digital kit with internet connection for one year, as well as access to a variety of additional training resources. These resources encompass digital training, opportunities for practical training in companies, individual and group sessions to enhance employability, and participation in activities at socialization and co-creation nodes (for more information on the detail of each Node, see **section 3.5**).

All these resources and activities carried out result in a series of outputs. By measuring the outputs obtained, one can identify whether the beneficiaries have received the activities or inputs and to what extent. Receiving the resources and activities properly is essential for the program to achieve the expected intermediate and results. Indeed, if beneficiaries do not adequately receive the program, it is unlikely to observe improvements in indicators of employability, digital skills, or quality of life.

In this project, products are defined as the number of individuals trained in digital competencies, the number of individuals who will have essential tools to access the Internet effectively, those who engage in practical exercises, participate in sessions, and involve themselves in node activities. The delivery of the digital kit and the provision of internet aim to ensure access to the digital environment. Similarly, individual and group sessions aim to foster active job search and the development of digital and employability competencies. Without the receipt of these products or services, improvements in the labor situation and digital skills of the beneficiaries cannot be expected. In Treatment Group 1, the only measurable product is the number of individuals who will have access to essential tools to use the Internet effectively.

If participants find the proposed activities appealing and remain motivated, it is expected that these initiatives will generate positive outcomes in their digital knowledge, employment situation and employability. Specifically, it is expected that the provision of essential internet access tools and digital training will enable individuals to enhance their digital knowledge and skills. Practical exercises and individual and group sessions will enhance participants' employability. Furthermore, participation in node activities is also expected to result in an improvement in job search capabilities and proactive attitudes. These intermediate outcomes would translate into an increase in MIS and PCI beneficiaries accessing the labor market or improving their employment situation in the medium or long term. For Treatment Group 1, it is expected that the availability of essential internet access tools will increase digital knowledge and skills, contributing to the inclusion of participants in the labor market and/or improving their employment situation, although to a lesser extent than for Treatment Group 2.

Figure 7: Theory of Change



3.2 Hypothesis

The primary objective of the intervention is to address the digital-skill gap and low employability among MIS and PCI recipients aged between 45 and 65 years with low educational levels. The project

aims to increase access to the labor market or improve the employment situation of the participants, as outlined in the Theory of Change. To evaluate the model, various hypotheses are formulated in alignment with the intermediate and final outcomes defined in the Theory of Change. This methodological approach aims to provide a detailed and well-founded analysis, offering a solid basis for informed and strategic decisions in the realm of public policies.

Below, the hypotheses to be tested in relation to each block of outcomes are presented. The following sections will describe the information sources for the indicators used in each hypothesis.

Improvement of the employment situation

The central hypothesis for evaluating success in the labor market holds that participation in REDLAB leads to a significant improvement in individuals' employment outcomes. Additionally, the project postulates that participation in the digital skills course increases the likelihood of retaining employment.

Improving digital competencies

Participation in REDLAB implies significant improvements in individuals' digital skills. Additionally, considering the socio-labor dimension of the project, a secondary hypothesis is posited that participants in REDLAB use the internet for job searching and accessing electronic administration.

Improvement of employability

Two hypotheses are proposed: individuals participating in REDLAB experience significant improvements in their ability to obtain employment, and the digital skills course increases the likelihood of pursuing additional training for job searching.

Improvement of emotional well-being

The treatment increases the likelihood of participants experiencing greater life satisfaction. Additionally, the hypothesis includes that the treatments increase the possibility that participants will perceive a higher degree of social inclusion.

3.3 Sources of information

An external company, on behalf of the Government of the Canary Islands and the MISSM, administers the surveys via telephone calls. These surveys are conducted with the participants in the program to collect the necessary information for constructing outcome indicators. The survey is conducted at three different times. First, a **baseline survey** is conducted before the intervention in October-November 2022. Subsequently, two **follow-up surveys** (endline) are conducted: one after the intervention is completed (May-June 2023) and another six months later (October-November 2023), to allow the analysis of the program's medium-term effects.

The survey covers various sections that examine crucial aspects such as sociodemographic data, employment status, digital competencies, equipment and Internet access at home, use of information

and communication technologies (ICT), participation in e-government, online shopping practices, privacy and data protection considerations, employability, living conditions, and aspects related to health and well-being, among others.

For the design and development of the survey, the INE used digital themes from its 2021 questionnaire on Equipment and Use of Information and Communication Technologies as a reference. Using this analysis, a detailed technical document was prepared, and a pilot survey was conducted with 30 participants. After validating the questions and topics covered in the questionnaire, it was submitted to the MISSM for final review.

In addition to the survey, an internal tracking system is used in the distributed tablets to verify the hypothesis regarding the use of the internet for job search and access to e-government. This system enables detailed monitoring of the tool's usage, including recording hours of use, the most frequently used applications, and other relevant aspects. The purpose of this monitoring is to evaluate how the beneficiaries interact with the provided devices. This information was not available at the time of preparing this report and will be included in subsequent versions.

Finally, administrative labor data obtained by the SGI based on the agreement signed for this purpose is used to test the hypothesis on job placement and retention[14].

3.4 Indicators

This section describes the indicators used to evaluate the impact of the itinerary, divided into themes related to the hypotheses described above.

Employment Status

To assess the employment status of the participants, four indicators are utilized, derived from the responses provided by the participants in the surveys.

Employment: This indicator takes a value of 1 if the participant is employed at the end of the final survey (or in subsequent periods as far as can be observed), and 0 if they are not.

Working hours: The weekly hours of paid work the participant performs if employed after completing the intervention (or in subsequent periods).

Months worked: The number of months worked during the six months following the treatment.

Job retention: A binary variable that equals 1 if the participant found a job after starting the intervention and continues in the same job at the end of the project (6 months after completing the

[14] Agreement between the Secretary of State for Social Security and Pensions, the National Institute of Social Security, the Social Institute of the Navy, the General Treasury of the Social Security, the Information Technology Management of the Social Security and the General Secretariat for Inclusion and Social Welfare Objectives and Policies, for the provision of data necessary for the evaluation of inclusion strategies, https://www.boe.es/diario_boe/txt.php?id=BOE-A-2023-25107

intervention). The variable is 0 for those who found a job but lost it at the time of the final survey (6 months after completing the intervention).

Additionally, indicators derived from administrative labor data are used, relating to the reference period of six months after the intervention (between 04/30/2023 and 10/31/2023):

Subsequent employment: An indicator that takes a value of 1 if the participant has worked any day during the reference period, and 0 if not.

Days worked: The number of days worked during the reference period.

Employment intensity: The number of days worked during the reference period divided by the duration of the reference period (185 days).

General Regime: A binary indicator that takes a value of 1 if the last contract the participant had during the reference period was under the General Social Security Regime, and 0 if not.

Special Regime for Domestic Workers: A binary indicator that takes a value of 1 if the last contract the participant had during the reference period was under the Special Regime for Domestic Workers of Social Security, and 0 if not.

Special Regime for Self-Employed Workers: A binary indicator that takes a value of 1 if the last contract the participant had during the reference period was under the Special Regime for Self-Employed Workers of Social Security, and 0 if not.

Permanent contract: A binary indicator that takes a value of 1 if the last contract the participant had during the reference period was a permanent contract and 0 if not.

Fixed-term intermittent contract: A binary indicator that takes a value of 1 if the last contract the participant had during the reference period was a fixed-term intermittent contract and 0 if not.

Temporary contract: A binary indicator that takes a value of 1 if the last contract the participant had during the reference period was a temporary contract and 0 if not.

Full-time contract: A binary indicator that takes a value of 1 if the last contract the participant had during the reference period was a full-time contract and 0 if not.

Part-time contract: A binary indicator that takes a value of 1 if the last contract the participant had during the reference period was a part-time contract and 0 if not.

Digital Competencies

To study the evolution of the digital skills and capacities of the participants in the project, two indicators are used.

Digital skills: This indicator measures the level of confidence respondents feel in their abilities to use the internet and electronic devices.

Job Search: This indicator reflects the frequency with which people use the Internet to search for jobs online or access e-government services.

Both indicators, digital skills, and job search, are constructed using the Anderson method (2008). This method aggregates information from a set of variables defined for a common index. Intuitively, it calculates a weighted average of all the variables, where the weight assigned to each depends on its correlation with the others (the lower the correlation, the higher the weight). The index is also standardized to have a mean of zero and a standard deviation of one.

Employability

Employability: This is a compound indicator that reflects the respondent's perceived ease of finding employment. The indicator integrates the responses to 7 survey questions into an index using the Anderson method (2008), standardizing the indicator to have a mean of zero and a standard deviation of one. The questions address perspectives on employability and specific job search actions, such as the use of the Internet, the variety of CV formats, the search for courses, and the use of employment portals.

Professional Training: This indicator equals 1 if the participant undertook any type of training other than the intervention within the 6 months following the treatment, and 0 if the participant did not undertake any training. This indicator is generated from the responses provided by the participants in the surveys.

Emotional well-being

Life Satisfaction: This is a categorical variable measured on a scale from 1 to 5, where 1 represents "not satisfied with life at all" and 5 corresponds to "very satisfied with life."

Social Inclusion: This is a categorical variable measured on a scale from 1 to 5, where 5 reflects a high degree of inclusion in society and 1 indicates a very low degree of inclusion as perceived by the participant that the participant feels a very low degree of inclusion.

3.5 Design of the experiment

To assess the effect of the treatment on each of the previously mentioned indicators, an experimental evaluation (RCT) is employed, wherein participants are randomly assigned to either the treatment group or the control group. The process of recruitment and selection of intervention participants, as well as the random assignment and the temporal framework of the experiment, are detailed below.

Recruitment of the intervention beneficiaries

The potential target population for REDLAB consists of individuals aged 45 to 65, with education up to secondary level, residing in the Canary Islands, and recipients of either the Minimum Income Scheme or the Canarian Insertion Benefit. To ensure homogeneity in the sample and accessibility to the treatment, two exclusion criteria are established. Firstly, individuals requiring or in need of primary social intervention before participating in the project, such as those with detoxification or physical

and/or mental stabilization needs, are excluded. Additionally, individuals with severely restricted mobility, such as those institutionalized in residences or in a dependent situation, as well as those with difficulties stemming from a disability exceeding 33%, are excluded. These criteria are applied because the training action involves in-person participation and class monitoring without the need for special assistance.

The identification of this population follows a meticulous process. It begins with obtaining data from MIS and PCI records for individuals within the specified age range, provided by the MISSM and the Government of the Canary Islands. These data are used to create a database of the reference population, including names and telephone numbers.

The next step involves initial contact. Firstly, selected individuals receive an SMS notifying them of their selection and providing a link to a webpage with project details and data processing information. Subsequently, an initial telephone contact is made on behalf of the Government of the Canary Islands. During this call, potential participants are informed that, as part of their social inclusion process, they may be selected for a subsidized digital training project or participation in a survey on digital topics, both with rewards. Their interest is queried, and those indicating a lack of interest are removed from the database. The call is recorded, and verbal acceptance during the conversation constitutes informed consent. Those who agree to participate undergo a questionnaire addressing topics such as their educational level, postal code, and aspects related to ICT use, digital skills, employability, and experience in digitally managing their rights, services, and civic participation. This questionnaire is conducted using Computer-Assisted Telephone Interviewing (CATI) methodology.

Valid records are those that meet certain conditions, which are verified with the respective databases and during the administration of the questionnaire. These conditions include agreeing to participate in both the project and the survey, being recipients of MIS or PCI, being aged between 45 and 65 years, and residing in the Canary Islands. Additionally, a null or low educational level is required, a lack of digital training or training for employment exceeding 10 hours in the last three months, no need for primary social intervention, and no significant mobility restrictions or disabilities exceeding 33%.

Informed Consent

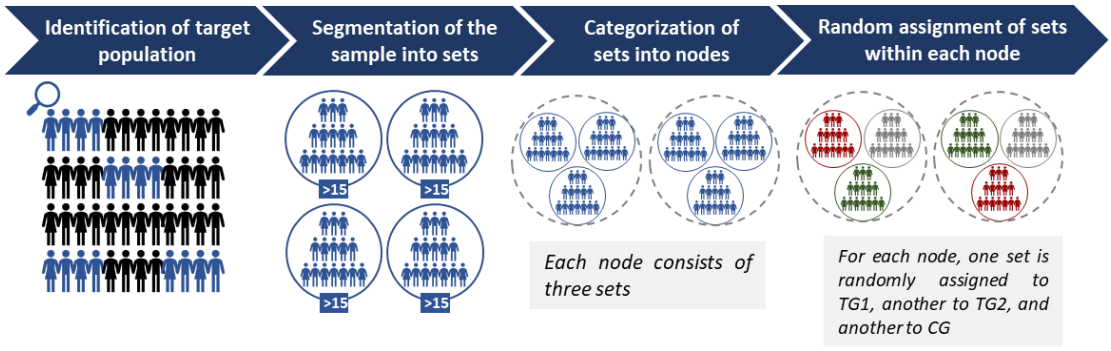
One of the fundamental ethical principles of research involving human beings (respect for people) requires study participants to be informed about the research and consent to be included in the study. Informed consent is usually part of the initial interview and has two essential parts: the explanation of the experiment to the person, and the request and registration of their consent to participate. Consent should begin with a comprehensible presentation of key information that will help the person make an informed decision, i.e., understand the research, what is expected of it, and the potential risks and benefits. Documentation is required as a record that the process has taken place and as proof of informed consent, if so.

Informed consent is required in most research and may be oral or written, depending on different factors such as the literacy of the population or the risks posed by consent. Only under very specific circumstances, such as when the potential risks to participants are minimal and the informed consent is very complex to obtain or would harms the validity of the experiment, informed consent may be avoided, or partial information may be given to participants with the approval of the ethics committee.

Random assignment of participants

Once the recruitment process is completed, the assignment process is undertaken, as summarized in Figure 8. The experimental design involves random allocation with the aim of ensuring that the treatment and control groups are statistically comparable, considering both observable and unobservable variables. This uniformity forms the necessary foundation for accurately assessing the effects of the intervention.

Figure 8: Schematic design of the experiment



Note: TG1 (Treatment Group 1), TG2 (Treatment Group 2), and GC (Control Group).

As an initial step, the sample is stratified by island to account for the diverse characteristics of each. Subsequently, participants on each island are organized into groups comprising a minimum of 15 individuals, corresponding to the size of the care-receiving group. These groups of participants are formed based on geographical criteria, facilitating their commute from their residences to the respective classroom. If assigned to the treatment group, participants are provided with an itinerary. This arrangement also prevents contamination of treatment from an intervention group to a

comparison group. These assembled groups constitute the fundamental unit for the assignment process.

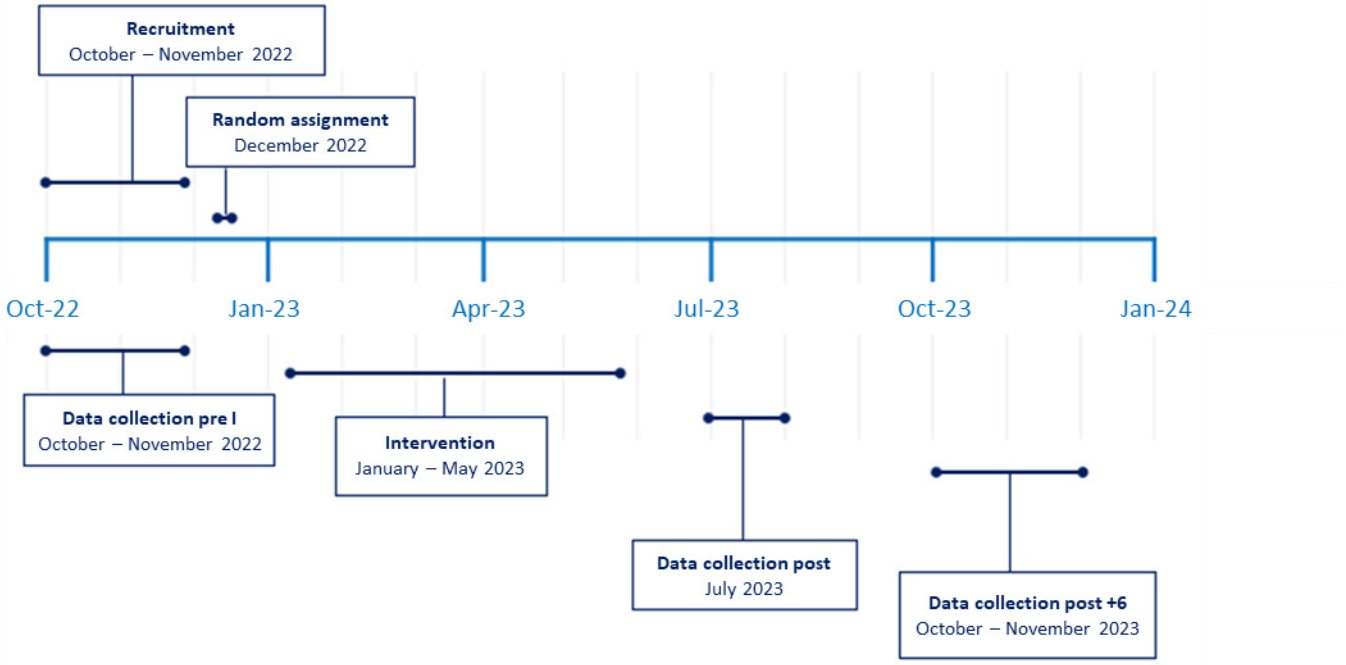
The groups are structured into nodes of 3, with each node consisting of one group assigned to treatment group 1, another to treatment group 2, and one to the control group. The nodes are delineated based on geographical criteria, introducing a second stratification variable to prevent the clustering of all groups in the same area within a single group.

In this procedure, the groups within each node are randomly assigned. Subsequently, individuals within each group are contacted in a random sequence to confirm their interest in participation. Once 15 commitments are secured, the group is considered closed, and any additional individuals within that node are placed on a reserve list. If participants from treatment group 1 or treatment group 2 withdraw, they are replaced by individuals from the reserve list, adhering to the predetermined random sequence.

Project Timeline

The project was implemented in four phases. The design and planning phase involved the collaborative effort of the entire research team to devise questionnaires, key indicators, and anticipated outcomes. Subsequently, the recruitment phase began in October-November 2022 and was conducted by EAPN Canarias. An initial telephone survey was conducted for all potential participants, and those who agreed to participate were randomly assigned to the three experimental groups. By late January 2023, the intervention began, which involved the distribution of tablets with internet connectivity and the delivery of a comprehensive digital skills course to the respective experimental groups. The tablets were not required to be returned at the conclusion of the project. Internet access was provided for 12 months from the delivery of the digital kit. The digital skills training consisted of a total of 100 hours of instruction, with 95 hours conducted in person and 5 hours conducted virtually, over a period of 10 weeks. This was followed by 30 hours of practical training in work environments at a local company or non-profit organization to apply the skills acquired. The first end-line survey was conducted in May-June 2023, and a second end-line survey was performed six months later, in October-November 2023, to facilitate the analysis of the program's medium-term effects.

Figure 9: Timeline of the evaluation



4 Description of the implementation of the intervention

This section describes the practical aspects of how the intervention was implemented as part of the evaluation design. It details the results of the participant recruitment process and other relevant logistical aspects to contextualize the results of the evaluation.

4.1 Sample Description

The recruitment process was extended due to the challenges in finding suitable beneficiaries who met the required criteria and were willing to participate. These challenges included distrust towards phone calls, unawareness of the importance of digital literacy, and various obstacles such as physical, economic, or psychological barriers. Out of the 14,880 individuals contacted, 3,008 met the requirements and agreed to participate. However, one individual later withdrew their consent.

Of the total 3,007 individuals recruited in the initial survey, 24 were excluded from the randomized controlled trial (RCT) because they resided in the two smallest islands, El Hierro and La Gomera and it was not feasible to establish three groups (two treatment and one control) on each island. These 24 individuals were offered the opportunity to participate in training and receive the digital kit. Additionally, an additional group of 15 participants located in Lanzarote was excluded from random

assignment due to their remote location and participated directly in the intervention. This resulted in a total sample of 2,968 participants in the experimental evaluation.

Characteristics of the final evaluation sample

Table 1 presents descriptive statistics for variables related to the intervention, based on information collected from the baseline survey. The initial sample includes 2,968 individual observations. The table consists of six columns: variable name, mean, standard deviation, minimum value, maximum value, and number of observations.

The gender distribution shows a skew towards female participants, who constitute 65.3% of the total sample. This reflects the higher rates of poverty and social exclusion experienced by women in the Canary Islands. Regarding age, 45% of the participants are between 45 and 54 years old, while the remaining 55% are between 55 and 64 years old. Only 13.8% of participants indicate proficiency in English.

Employment status is a critical concern, with an overwhelming 85.4% of participants reporting being unemployed. This underscores the pressing need for interventions aimed at improving employability within this group.

In terms of education, the average participant has completed primary education. This aligns with the target demographic of the intervention, which focuses on individuals with a low level of education.

Perceived health and life satisfaction are recorded on a scale from one to five, with one indicating "not satisfied at all" and five indicating "very satisfied." In both measures, the average score in the baseline survey is close to three, indicating a moderate level of satisfaction among participants.

Table 1: Descriptive statistics of the sample at the starting point

Variable	Mean	Standard deviation	Minimum	Maximum	N
Female	0.653	0.476	0	1	2,968
Age (45-54)	0.450	0.498	0	1	2,968
English speaker	0.138	0.345	0	1	2,968
Employed	0.083	0.276	0	1	2,968
Unemployed	0.854	0.353	0	1	2,968
Care of disabled people	0.112	0.316	0	1	2,968
Childcare	0.064	0.245	0	1	2,968
Disability	0.110	0.313	0	1	2,968
Laboral training	0.035	0.185	0	1	2,968
Health	2.959	1.335	1	5	2,968
Life satisfaction	3.038	1.291	1	5	2,968
Digital skills indicator	0	1	-2.156	5.092	2,968

Variable	Mean	Standard deviation	Minimum	Maximum	N
Job search indicator	0	1	-1.189	5.592	2,968
Employability indicator	0	1	-1.258	4.523	2,968
PCI beneficiary	0.321	0.467	0	1	2,968
MIS beneficiary	0.785	0.411	0	1	2,968
Island					
Lanzarote	0.033	0.180	0	1	2,968
Fuerteventura	0.046	0.210	0	1	2,968
Gran Canaria	0.394	0.489	0	1	2,968
Tenerife	0.494	0.500	0	1	2,968
La Palma	0.033	0.178	0	1	2,968
Nationality					
Spanish	0.859	0.348	0	1	2,968
EU	0.029	0.169	0	1	2,968
Non-EU	0.043	0.203	0	1	2,968
Spanish + other EU	0.008	0.091	0	1	2,968
Spanish + other non-EU	0.060	0.237	0	1	2,968
Education					
Basic literacy	0.028	0.165	0	1	2,968
Incomplete Primary School	0.161	0.368	0	1	2,968
Completed Primary School	0.376	0.484	0	1	2,968
Incomplete Secondary School	0.143	0.35	0	1	2,968
Completed Secondary School	0.230	0.421	0	1	2,968
Incomplete Postsecondary	0.062	0.241	0	1	2,968

All participants are beneficiaries of the MIS and/or the PCI, with 78.5% receiving MIS and 32.1% receiving PCI. These percentages exceed 100% because some individuals receive both forms of economic support. This condition aligns with the eligibility criteria of the intervention and underscores the economic vulnerability of the participants in the sample.

Geographically, participants are primarily located on the two largest islands in the Canary archipelago: Gran Canaria, comprising 39.4% of the sample, and Tenerife, comprising 49.4%. Fuerteventura follows with 4.6%, while Lanzarote and La Palma each represent 3.3% of the participants. This distribution reflects the larger population sizes of the two main islands compared to the others. The intervention

was also implemented on the two smallest islands, El Hierro and La Gomera, but as previously mentioned, these were not included in the random evaluation due to the small sample sizes preventing the creation of sufficiently large experimental groups.

In conclusion, these statistics provide a comprehensive overview of the main sociodemographic characteristics of the target population for the intervention. They highlight the socio-economic challenges faced by this group and underscore the areas where the intervention could have a more significant impact.

4.2 Random Assignment Results

Once the sample was defined, participants were randomly assigned. As mentioned, the design of the allocation process involved grouping sets of around 15 individuals into nodes of three sets each, with geographical proximity as the primary criterion. When the sets on an island were not multiples of three, adjustments were made. In Lanzarote, an additional set was non-randomly assigned to treatment group 2 for logistical reasons, excluding it from the RCT. In Gran Canaria, an extra set remained, and in Tenerife, two extra sets were identified that were not close to other sets. To address this situation, a node was formed to include these three sets. In total, 65 nodes out of 195 sets were established. The results of this random allocation are summarized in the following table:

Table 1: Descriptive statistics of the sample at the starting point

Island	Number of Nodes	Joint numbers	CG	TG1	TG2	Out of RCT
Fuerteventura	3	9	3	3	3	0
Gran Canaria	25+1 shared	76	25	25	26	0
La Palma	2	6	2	2	2	0
Lanzarote	2	6	2	2	2	1 (TG2)
Tenerife	32+1 shared	98	33	33	32	0
Total	65	195	65	65	65	1

Figure 10 presents the balance tests. All data reflected in this figure refer to the survey conducted prior to the intervention. For each observable variable, the differences between the mean of that variable in treatment group 1 and the control group, the mean of treatment group 2 and the control group, and the mean between the treatment groups are represented by points. Centered on these points, the 95% confidence interval for each difference is presented. A confidence interval that includes zero, i.e., the vertical axis, indicates that the difference in means between groups is not statistically significant or, in other words, is not statistically different from zero.

Overall, the figure shows that the control and treatment groups are largely balanced across most variables, suggesting that random assignment was successful in creating comparable groups. However, there are some exceptions where differences are statistically significant.

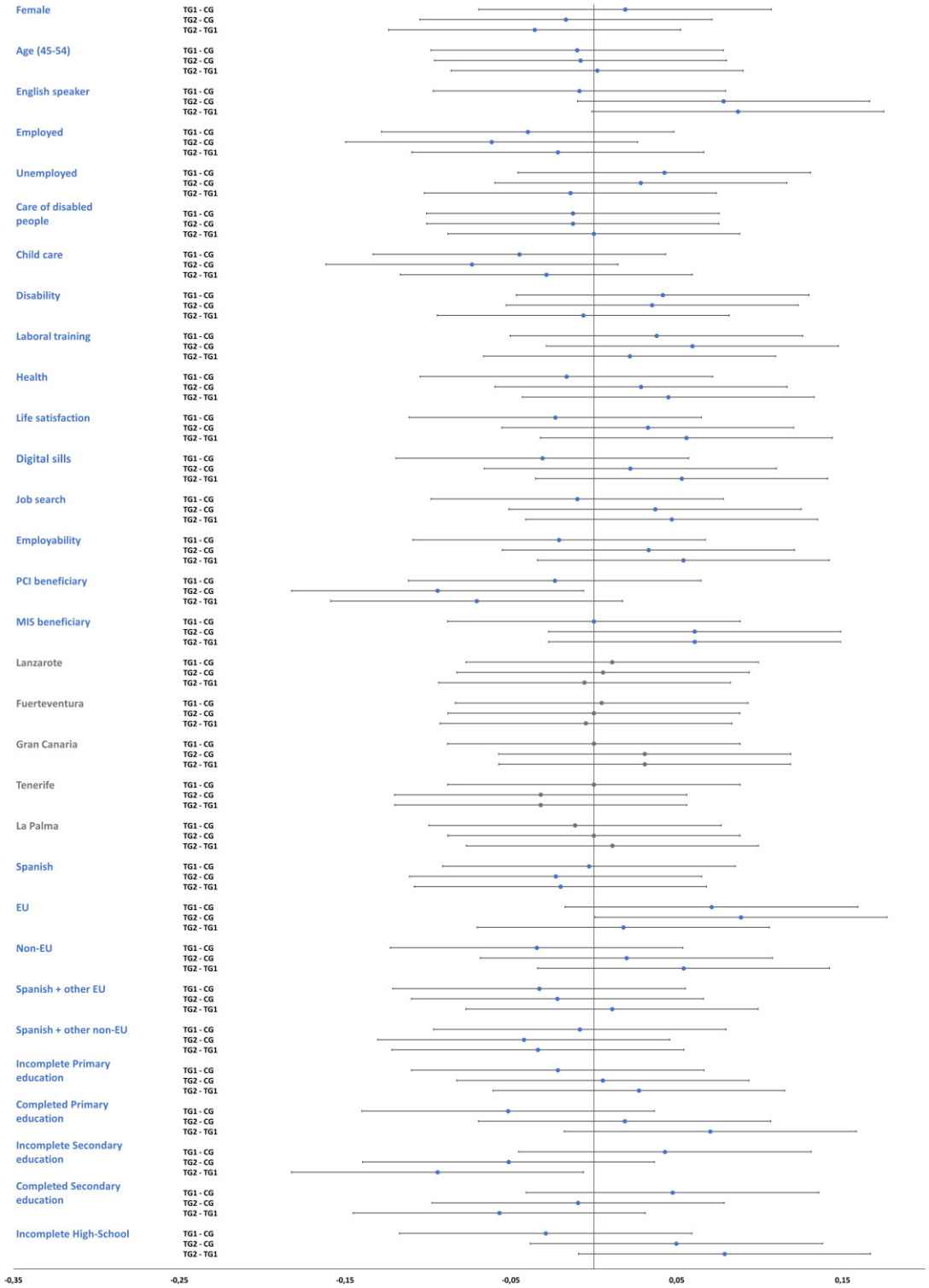
There is a significant difference in the proportion of participants who claim to speak English between the control group and treatment group 2. The mean value for treatment group 2 is 0.027 higher than that of the control group, a significant difference at the 10% level. This suggests that treatment group 2 has a higher proportion of English speakers compared to the control group.

There are also significant differences in the proportion of participants receiving the PCI between the control group and treatment group 2. The average for treatment group 2 is 0.044 lower than that of the control group, a statistically significant disparity at the 5% level. This indicates that the second treatment group has a lower proportion of PCI recipients compared to the control group.

In terms of nationality, there is a significant difference in the proportion of non-Spanish participants with EU nationality between the control group and both treatment groups. The mean values for treatment group 1 and treatment group 2 are higher than that of the control group, with differences of 0.012 and 0.015 that are significant at the 10% and 5% levels, respectively. Therefore, both treatment groups have a higher proportion of EU citizens compared to the control group. Finally, participants in treatment group 2 compared to those in treatment group 1 are 3.3% less likely to have incomplete secondary education, and instead are 2% more likely to have incomplete high school education.

Despite these differences, the figure shows that overall, the control and treatment groups are broadly comparable across most variables. This is important as it suggests that any difference in outcomes between the groups can be attributed to the intervention rather than pre-existing differences between the groups. However, to ensure accurate results, the analysis will include controls for variables showing significant differences.

Figure 10: Balance between experimental groups at the baseline



Note: The variables used for the stratification of the sample are shown in gray and the rest of the sociodemographic variables are shown in blue.

4.3 Degree of participation and attrition by groups

The consenting group constitutes the experimental sample that was randomly assigned to the control and treatment groups. However, both program participation and response to the initial and final surveys are voluntary. On one hand, analyzing the degree of participation in the program is important, as the estimation of results will refer to the average effects of offering the same, given the degree of participation. For instance, if participation in treatment activities is low, the treatment and control groups will closely resemble each other, making it more difficult to discern an effect. On the other hand, this section verifies whether the non-completion of the final survey by some participants reduces the comparability of the treatment and control groups after the intervention, in case that the response rate differs between groups or according to the demographic characteristics of the participants in each group.

Degree of participation

Regarding the delivery of the digital kit (an intervention common to both treatment group 1 and treatment group 2), a total of 1,247 tablets were distributed to participants. A notable difference is observed in the percentage of participants receiving tablets between the treatment groups. Out of the 988 individuals in treatment group 1, 83% (817) received the digital kit, while in treatment group 2, out of 994, only 44% (440) received the kit.

Participation in the exclusive activities of treatment group 2 has been low, as only 42% (423 individuals) completed the digital training. The attendance rate for those who participated in the intervention was approximately 80%. Out of the 10,000 individualized tutoring sessions planned for the digital training, only 4,230 were conducted. Additionally, regarding the group modules for training in job skills, only 5,076 hours of classes were delivered out of the scheduled 12,000.

The results analysis conducted in the following chapter is an Intention to Treat (ITT) estimation, based on the difference in outcomes after the program between those randomly assigned to the treatment and control groups, indicating the effect of offering the program. However, it does not report on the impact of participating in the program activities, due to low participation. In consequence, this impact may be greater among those who participated.

On the other hand, 418 life stories were completed, and 30.8% of the participants indicated that they were unwilling to participate in practical training in work environments, despite being reminded of the commitment made when signing the Informed Consent. The number of participants who ultimately completed practical training in work environments was limited to 102.

Attrition by groups

Table 3 provides an overview of the degree of participation in the intervention and sample attrition by experimental group. The table describes the number of participants assigned to each group, the number that initiated and completed the treatment, and the number that completed the final line surveys.

In the control group, 986 participants responded to the initial survey. Since this is a pure control group without intervention, it is considered that the 986 participants initiated and completed the treatment. However, only 74% (729 participants) completed the first final line survey (immediately after the intervention). In treatment group 1, 83% of the 988 assigned participants initiated and completed the treatment (i.e., received their digital kit), and 80% completed the first final line survey. In treatment group 2, 44% of the 994 assigned participants initiated the treatment[15], and only 42% completed it. However, 74% of the participants assigned to treatment group 2 completed the first final line survey. Finally, the second and final line survey, conducted six months after the first, shows very similar, although slightly higher, participation rates. The data from the first final line survey are used to calculate short-term effects, while the data from the second final line survey are used to calculate medium-term effects.

Since the survey company contacted all participants who completed the initial survey, in treatment group 2 the number of participants who completed both final line surveys is greater than the number of participants who completed the treatment. The subset of participants who completed the treatment does not necessarily coincide with the subset that responded to either of the final line surveys, as both were conducted by phone and all those who responded to the initial survey were contacted again[16]

Table 3: Dropout rate of the experimental group

Group	Assigned treatment	Started treatment	Completed treatment	1st endline survey completed	2nd endline survey completed
CG	986	986	986	729	785
	100%	100%	100%	74%	80%
TG1	988	817	817	786	811
	100%	83%	83%	80%	82%
TG2	994	440	413	734	776
	100%	44%	42%	74%	78%
N	2,968	2,532	2,279	2,249	2,372

To delve deeper into the nature of attrition, defined as the lack of response to the first end-line survey conducted immediately after the intervention, a formal test is conducted as presented in Table 4.

[15] In this case, those who collected the digital kit are considered to have initiated the treatment.

[16] For example, of the 413 people in treatment group 2 who completed treatment, 378 (91.5%) responded to the second endline survey (conducted 6 months after the intervention ended).

Specifically, the table presents the results of regression analysis to assess whether attrition was random or associated with certain variables.

Table 4 collects attrition rates among different treatment groups, using the control group as a reference point. The intercept (control group) has an attrition rate of 26%, indicating that a significant proportion of participants in the control group did not respond to the first end-line survey. In comparison, the attrition rate in treatment group 1 is lower by 5.6 percentage points, suggesting a significantly lower attrition rate. However, the rate for treatment group 2 is almost the same as in the control group, with a coefficient of 0.001 that is not statistically significant.

These figures suggest that while treatment group 1 had relatively high participation and completion rates, treatment group 2 faced significant attrition. This could be explained by considering the different nature of the two treatments. Specifically, participants in treatment group 1 were subject to very limited commitment (collecting a digital kit and responding to a survey), while those assigned to treatment group 2 were required to attend a 10-week course and complete a 30-hour internship at local companies or other organizations.

These results may potentially affect the effectiveness of the intervention in this group and, therefore, should be considered in the analysis of the results. It is important to note that, as a complement to the intervention, caregiver vouchers were offered to cover the cost of childcare or elderly care. However, these vouchers had very low acceptance rates, as many participants did not consider it appropriate to hire these services externally from someone they did not know previously. Nevertheless, the response rate to both end-line surveys show equally low levels of attrition across all treatment arms, supporting the intuition regarding the level of commitment to the digital course (participants receiving treatment 2).

Table 4: Attrition rates by experimental groups

	Final Survey
Intercept (CG)	0.261***
	(0.013)
TG1	-0.056***
	(0.018)
TG2	0.001
	(0.019)
N	1,831

Note: ***p=0.01, **p=0.05, *p=0.1. Robust standard bugs have been used

Table 5 displays attrition based on various socioeconomic and demographic variables. Each row presents the coefficient of interactions between each variable and the corresponding experimental group, resulting from regressions separated by variables. The results suggest that dropout was not significantly associated with most of the variables even though there are some exceptions. For example, there is a significant relationship between English proficiency and dropout in treatment group 1, with English speakers being 10% more likely to drop out of the study in this group compared

to the other two. Similarly, caregiving for individuals with disabilities is significantly associated with a 14-percentage point (p.p.) higher dropout rate in treatment group 1 than in the other two. Additionally, in this group, a positive and significant difference of 12 p.p. in the attrition rate is observed among participants who are responsible for caring for children. On the other hand, both disability and having dependent children exhibit a 10 p.p. higher dropout rate in treatment group 2 compared to the other two groups, although this disparity does not reach statistical significance. Conversely, an inverse pattern is observed for the control group.

Table 2: Selective attrition by treatment groups

Control variable	Attrition	Attrition (TG1*Var.)	Attrition (TG2*Var.)
Female	-0.017	-0.018	-0.03
	(0.025)	(0.035)	(0.037)
Age (45-54)	0.027	0.012	-0.033
	(0.03)	(0.037)	(0.04)
English speaker	-0.021	0.108*	-0.038
	(0.041)	(0.065)	(0.054)
Employed	0.076	-0.067	-0.114
	(0.05)	(0.065)	(0.07)
Unemployed	-0.034	-0.008	0.086
	(0.042)	(0.055)	(0.056)
Care of disabled people	-0.065*	0.141**	0.097
	(0.039)	(0.06)	(0.059)
Childcare	-0.06	0.117*	0.104
	(0.056)	(0.068)	(0.09)
Disability	0.03	-0.052	-0.113*
	(0.049)	(0.063)	(0.067)
Laboral training	0.158*	-0.053	-0.17
	(0.091)	(0.119)	(0.113)
Health	0.009	0	-0.003
	(0.013)	(0.015)	(0.018)
Life satisfaction	0.008	-0.014	0.009
	(0.011)	(0.014)	(0.014)
Digital skills	-0.012	0.013	-0.011
	(0.013)	(0.02)	(0.017)
Job search	0.002	-0.008	-0.025
	(0.014)	(0.019)	(0.018)
Employability	-0.002	0.009	-0.01
	(0.014)	(0.018)	(0.022)
PCI beneficiary	-0.029	0.027	-0.019
	(0.026)	(0.039)	(0.039)

Control variable	Attrition	Attrition (TG1*Var.)	Attrition (TG2*Var.)
MIS beneficiary	-0.01	0.004	0.032
	(0.031)	(0.048)	(0.046)
Island			
Lanzarote	0.054***	-0.113***	-0.105***
	(0.013)	(0.028)	(0.03)
Fuerteventura	0.006	-0.084	0.016
	(0.057)	(0.085)	(0.087)
Gran Canaria	-0.039	0.066*	0.051
	(0.027)	(0.034)	(0.038)
Tenerife	0.019	-0.027	-0.022
	(0.026)	(0.035)	(0.038)
La Palma	0.075***	-0.053	-0.126***
	(0.013)	(0.076)	(0.021)
Nationality			
Spanish	-0.056*	0.064	0.088**
	(0.033)	(0.052)	(0.042)
EU	0.04	-0.122	-0.045
	(0.084)	(0.114)	(0.103)
Non-EU	0.165**	-0.153	-0.155
	(0.065)	(0.102)	(0.095)
Spanish + Other EU	0.04	0.042	-0.177
	(0.154)	(0.246)	(0.204)
Spanish + Other non-EU	-0.024	0.033	-0.037
	(0.049)	(0.068)	(0.07)
Education			
Basic literacy	0.048	-0.034	-0.235**
	(0.091)	(0.112)	(0.108)
Incomplete Primary School	-0.022	-0.019	-0.021
	(0.037)	(0.055)	(0.06)
Completed Primary School	0.004	0.036	0.108***
	(0.027)	(0.039)	(0.041)
Incomplete Secondary School	0	-0.039	-0.098*
	(0.043)	(0.051)	(0.057)
Completed Secondary School	0.03	-0.027	-0.056
	(0.032)	(0.043)	(0.044)
Incomplete postsecondary	-0.079	0.086	0.066
	(0.059)	(0.089)	(0.061)

3*Note: ***p=0.01, **p=0.05, *p=0.1. Robust standard bugs have been used*

In treatment group 2, those who reported a disability were less likely to drop out of the study. Similarly, participants with basic literacy or incomplete secondary school education were less likely to drop out of treatment group 2. However, given the opposite pattern observed for individuals who completed primary education, delving into this result could be a difficult task. Finally, there is a significant association between Spanish nationality and dropout in treatment group 2, although the underlying cause is not evident.

Overall, these findings suggest that while dropout was generally random, certain variables are significantly related to it. This must be controlled in the analysis to ensure accurate results. Additionally, the truncation method proposed by Lee (2009) is implemented to account for this non-random attrition, and the sensitivity of the results to this potential source of bias is discussed.

5 Results of the evaluation

Random assignment of the experimental sample to the control and treatment groups ensures that, a sufficiently large sample given, the groups are statistically comparable. Therefore, any difference observed after the intervention can be causally associated with the treatment. Econometric analysis provides, in essence, this comparison. Nevertheless, this analysis has the advantages of allowing other variables to be included to increase accuracy in the estimates and provide confidence intervals for the estimates. This section presents the econometric analysis conducted, the estimated regressions, and the analysis of the results obtained.

5.1 Description of the econometric analysis: estimated regressions

The regression model specified to estimate the causal effect in a randomized experiment typically simply involves the difference in the variable of interest between the treatment group or groups and the control group, as these groups are statistically comparable due to randomization. However, given the imbalances described earlier in the balance checks, this analysis includes regressions in which the lagged value of the dependent variable is controlled for, i.e., the value before the intervention. This serves to ensure that existing differences between the treatment and control groups prior to the intervention are accounted for in the analysis and enhances the precision of the estimates. Additionally, specifications with additional controls such as gender, nationality, and educational level are also presented.

Specifically, the specification of the regressions presented below is as follows:

(1) $Y_{i,t=1} = \alpha + \beta_0 Y_{i,t=0} + \beta_1 T1_i + \beta_2 T2_i + \sum_{m=1}^{M} \delta_m x_M + \varepsilon_i$

Where $Y_{i,t=1}$ is the dependent variable of interest observed after the intervention for individual *i*. $Y_{i,t=0}$ corresponds to the baseline value of the dependent variable, $T1_i$ and $T2_i$ are dummy variables that take the value of one when individual *i* is assigned to receive the digital kit treatment or the digital

kit and training treatment, respectively, and zero otherwise. X_m is a vector of controls that includes the following variables: gender, age (a dummy variable for being in the 45-54 age range) [17], recipient of PCI and/or MIS, whether the individual speaks English, whether they have caregiving responsibilities for children or disabled people, a dummy variable for having a disability, education level, island of residence, nationality, and perceived health status. Each control is measured at baseline. These control variables are included in some specifications to account for potential differences between the two treatment groups and the control group at baseline. The inclusion of controls enhances the precision of the estimates to the extent that there were baseline imbalances, but it should have a minor effect on the point estimates of interest given the randomization process. ε_i is the error term.

The coefficients of interest are β_1 and β_2, which measure the causal impact of receiving a digital kit and the digital skills training, respectively, on some outcome of interest Y_i compared to the control group. The standard errors are always clustered by randomization strata.

5.2 Analysis of the results

5.2.1 Main and secondary results

This section presents the results of the evaluation on the main and secondary indicators, following the structure of the evaluation scheme.

Short-term effects

Table 6 presents the results of the intervention on three key indicators: perceived digital skills, job search capability, and employability. The table provides three specifications for each outcome variable: the first without controls or baseline indicator, the second with controls but without a baseline indicator, and the third with controls and a baseline indicator. The complete list of control variables is specified in the previous subsection. All composite indicators are standardized to have a mean of zero and a standard deviation of one, allowing the regression coefficients to be interpreted in terms of standard deviations.

Analyzing the results on digital skills, support for the hypothesis is found in both treatment groups. For Treatment Group 1, which only received the digital kit, the data indicate a positive impact on digital skills, with improvements ranging from 0.14 to 0.18 standard deviations. Conversely, for Treatment Group 2, which received both the digital kit and a digital training course, a significant improvement in digital skills is observed across all specifications. The effect is substantial, with improvements ranging from 0.5 to 0.52 standard deviations, and is statistically significant at the 1% level in all specifications. This suggests that both the provision of digital devices and the implementation of a personalized digital training course were effective in changing behaviors, habits, and negative perceptions towards information and communication technologies, leading to improved

[17] Given that all participants fall within the 45 to 64 age range, this dummy variable simply divides the sample into two age groups.

digital skills. These results are consistent with the medium-term analysis, six months after the intervention's conclusion (**Table 8**). However, the effects for Treatment Group 2 diminished over time.

The significant difference between the two treatment groups, Treatment Group 1, and Treatment Group 2, must be emphasized. This difference provides further evidence that the intensive digital training course had a greater impact on improving digital skills compared to merely providing the digital kit.

Turning to job search capability, the results again show a significant positive effect for Treatment Group 2, ranging from 0.2 to 0.27 standard deviations, and a significant difference between the two treatment groups of between 0.17 and 0.21 standard deviations. These results are consistent with the medium-term analysis, six months after the intervention's conclusion (reported in **Table 8**). This suggests that the combination of tablets with digital training was more effective than simply providing the digital kit in enhancing participants' job search skills.

Finally, the results on employability levels show a positive and significant effect for both treatment groups, but again, the effect is greater for Treatment Group 2. For Treatment Group 1, the effect varies only from 0.06 to 0.08 standard deviations, with significance at the 10% level in the final specification. For Treatment Group 2, the effect is greater, ranging from 0.37 to 0.41 standard deviations, and is significant at the 1% level in all specifications. These results are consistent with the medium-term analysis, six months after the intervention's conclusion (**Table 8**). However, the results for Treatment Group 2 appear to diminish over time. This suggests that both access to technology and the personalized digital training course can improve participants' perceived employability, but the training has a greater impact.

Table 6: Effects on perceived digital skills, job search and employability

	Digital skills			Job search			Employability		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
TG1	0.142**	0.148***	0.177***	0.025	0.033	0.030	0.059	0.067	0.079*
	(0.061)	(0.055)	(0.046)	(0.052)	(0.046)	(0.044)	(0.055)	(0.052)	(0.045)
TG2	0.518***	0.509***	0.501***	0.236***	0.229***	0.199***	0.406***	0.388***	0.374***
	(0.067)	(0.067)	(0.064)	(0.053)	(0.053)	(0.050)	(0.065)	(0.064)	(0.055)
N	2,249	2,249	2,249	2,249	2,249	2,249	2,249	2,249	2,249
Dep. var. control mean	0.319	0.319	0.319	0.284	0.284	0.284	0.252	0.252	0.252
p-value TG1 = TG2	0.000***	0.000***	0.000***	0.001***	0.001***	0.002***	0.000***	0.000***	0.000***
Additional controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Dep. var. initial value	No	No	Yes	No	No	Yes	No	No	Yes

Note: Standard errors, grouped by randomization layers, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 7 presents the short-term results of the intervention on two key indicators: self-reported employment and life satisfaction. The table provides three specifications for each outcome variable: the first without controls or baseline indicator, the second with controls but without a baseline indicator, and the third with controls and a baseline indicator. The controls included are the same as those in **Table 6**.

Observing the results on self-reported employment, it is found that neither Treatment Group 1 nor Treatment Group 2 had a significant effect on employment in any of the specifications. The coefficients for both treatment groups are close to zero and not statistically significant, suggesting that neither the provision of a digital kit nor its combination with the intensive digital training course had a significant impact on the employment status of the participants in the short term. Indeed, the negative coefficients for Treatment Group 2 might be explained by the fact that attending the course reduces the time available to seek employment and/or be employed during those 10 weeks. However, the results do not change when analyzing the effects 6 months later, as shown below (**Table 9**).

Table 7: Effects on Perceived Employment and Life Satisfaction

	Employment			Life satisfaction		
	(1)	(2)	(3)	(4)	(5)	(6)
TG1	0.01	0.01	0.012	0.009	0.02	0.019
	(0.019)	(0.018)	(0.017)	(0.06)	(0.058)	(0.062)
TG2	-0.009	-0.015	-0.01	0.12*	0.115*	0.117*
	(0.016)	(0.015)	(0.012)	(0.065)	(0.065)	(0.064)
N	2,249	2,249	2,249	2,249	2,249	2,249
Dep. var. control mean	0.113	0.113	0.113	2.988	2.988	2.988
p-value TG1 = TG2	0.314	0.157	0.197	0.057*	0.09*	0.045**
Additional controls	No	Yes	Yes	No	Yes	Yes
Dep. var. initial value	No	No	Yes	No	No	Yes

Note: Standard errors, grouped by randomization layers, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Regarding life satisfaction, the results demonstrate a significant positive effect for Treatment Group 2, but not for Treatment Group 1. For the latter, the effect on life satisfaction is near zero and not statistically significant across all specifications. However, for Treatment Group 2, the effect indicates an increase of approximately 0.11, which corresponds to a 4% rise compared to an initial mean of 3. This suggests that the intensive digital training course was effective in enhancing the perceived life satisfaction of the participants. This result improves in the medium term for both treatment groups, but especially for Treatment Group 1 (**Table 9**).

In summary, although the intervention did not have a significant effect on self-reported employment for either treatment group, it did have a positive impact on life satisfaction for the group that received the intensive digital training course. This suggests that while access to technology and digital skills training may not directly lead to employment, they can contribute to improved life satisfaction, possibly by enhancing digital literacy, self-confidence, and a sense of control over the participants' lives.

Limitations on estimated effects

In **Table 6** and **Table 7**, the potential bias in the estimates due to the non-random attrition documented in **Table 5** has not been addressed. To assess the potential impact of this non-random attrition on the estimated effects, the bounding method proposed by Lee (2009) is implemented. This method adjusts the observations so that the percentage of observations with observed outcomes is equal across the experimental groups. This adjustment entails excluding observations with extreme values in the groups with higher attrition.

Table 19 in the Appendix presents the estimated bounds for the effects on the five outcomes discussed previously. This analysis highlights substantial uncertainty regarding the magnitude and direction of the potential benefits of Treatment Group 1 on digital skills. In contrast, Treatment Group 2 appears to have more consistently positive effects on the evaluated outcomes. The very low level of trimming (eliminated observations) in Treatment Group 2 (0.12%) compared to Treatment Group 1 (7.06%) may contribute to greater certainty in the results for Treatment Group 2.

Medium-term effects

Table 8 and **Table 9** present the results of the second endline survey, conducted six months after the conclusion of the intervention. The purpose of conducting this second survey is to verify whether the impacts observed immediately after the intervention are sustainable over time or if they diminish. Only the primary specification for each outcome indicator is reported, which includes all control variables and the baseline value of the outcome indicator.

Table 84: Effects on perceived digital skills, job search and employability 5

	Digital skills	Job search	Employability
	(1)	(2)	(3)
TG1	0.177***	0.014	0.056
	(0.043)	(0.051)	(0.046)
TG2	0.388***	0.214***	0.311***
	(0.051)	(0.049)	(0.05)
N	2,372	2,372	2,372
Dep. var. control mean	0.251	0.286	0.287
p-value TG1 = TG2	0***	0***	0***
Additional controls	Yes	Yes	Yes
Dep. var. initial value	Yes	Yes	Yes

Note: Standard errors, grouped by randomization layers, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

As previously mentioned, the estimated effects in this second endline survey are qualitatively similar to those found in the first endline survey (reported in **Table 6** and **Table 7**). The primary difference is that some of the effects for Treatment Group 2 diminish in magnitude over time, particularly in the case of perceived digital skills and employability.

Regarding employment metrics, no significant effects are found six months after the end of the intervention on the proportion of participants who are employed, the number of months worked (in the preceding six months), or job training. For the subset of participants who reported having a job in the first endline survey (231 individuals), the employment retention rate is estimated, and again, no significant impact from either treatment is found. Finally, the positive impact on life satisfaction found in the first endline survey persists in this second endline survey for Treatment Group 2, and in fact, increases and becomes significant for those assigned to Treatment Group 1. Responses provided by the participants themselves may be influenced by factors such as social desirability; consequently, careful interpretation of these results is advised.

Table 9: Medium-term effects on perceived employment and life satisfaction

	Employment	Worked months	Labor retention	Laboral training	Life satisfaction
	(1)	(2)	(3)	(4)	(5)
TG1	0.005	0.094	0.011	0.018	0.104*
	(0.016)	(0.15)	(0.086)	(0.015)	(0.058)
TG2	-0.001	0.108	-0.042	-0.001	0.132**
	(0.014)	(0.098)	(0.078)	(0.016)	(0.066)
N	2,372	2,372	231	2,372	2,372
Dep. var. control mean	0.116	1.353	0.671	0.102	2.961
p-value TG1 = TG2	0.721	0.927	0.466	0.191	0.582
Additional controls	Yes	Yes	Yes	Yes	Yes
Dep. var. initial value	Yes	Yes	Yes	Yes	Yes

Note: Standard errors, grouped by randomization layers, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Administrative data

Table 10 and **Table 11** display the results of the analysis of indicators obtained from administrative data on work histories. No significant effects of the intervention are found on any of the defined indicators, for any of the specifications, and treatment groups. These results are consistent with the findings on labor insertion with self-reported indicators in the survey, analyzed in **Tables 8** and **10**. The only exception is a slight positive impact on the indicator regarding discontinuous fixed-term contracts for Treatment Group 2 (TG2).

The appendix presents **Table 20** and **Table 21**, with an equivalent analysis to the previous one limited to participants who were employed six months after the end of the intervention. Once again, there are no significant effects of the intervention, with the sole exception of an increase in wage employment compared to self-employment, which could suggest an increase in labor stability. It is noteworthy that, in this case, the analysis is conditional on employment status, which may introduce biases due to endogenous sample selection.

Table 10: Medium-term effects on employment, administrative data

	Subsequent employment	Worked days	Employment intensity	General Regime	Households' workers Regime	Autonomous workers Regime
	(1)	(2)	(3)	(4)	(5)	(6)
TG1	0	1.976	0.011	-0.006	0.003	0
	(0.021)	(2.702)	(0.015)	(0.02)	(0.003)	(0.004)
TG2	0.021	0.475	0.003	0.024	0.001	-0.003
	(0.017)	(2.179)	(0.012)	(0.015)	(0.002)	(0.004)
N	2,176	2,176	2,176	2,176	2,176	2,176
Dep. var. control mean	0.184	23.632	0.128	0.161	0.01	0.01
p-value TG1 = TG2	0.571	0.136	0.579	0.192	0.692	0.571
Additional controls	Yes	Yes	Yes	Yes	Yes	Yes
Dep. var. initial value	Yes	Yes	Yes	Yes	Yes	Yes

Note: Standard errors, grouped by randomization layers, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 11: Medium-term effects on employment (continuation), administrative data

	Permanent contract	Discontinued permanent contract	Temporal contract	Full-time contract	Partial time contract
	(1)	(2)	(3)	(4)	(5)
TG1	-0.009	0.001	0.011	-0.004	0.006
	(0.011)	(0.004)	(0.017)	(0.015)	(0.013)
TG2	-0.004	0.009*	0.021	0.013	0.011
	(0.012)	(0.005)	(0.013)	(0.014)	(0.013)
N	2,176	2,176	2,176	2,176	2,176
Dep. var. control mean	0.082	0.012	0.072	0.07	0.096
p-value TG1 = TG2	0.571	0.136	0.579	0.192	0.692
Additional controls	Yes	Yes	Yes	Yes	Yes
Dep. var. initial value	Yes	Yes	Yes	Yes	Yes

Note: Standard errors, grouped by randomization layers, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

5.2.2 Heterogeneity analysis

Table 12 examines whether the impact of the interventions varies by gender. To the specifications of **Table 6** and **Table 7**, which include a complete set of controls and baseline levels of outcomes, a dummy variable for female participants and the interaction of the female dummy variable with each of the treatment dummy variables (treatment group 1, treatment group 2) are added. The relevant coefficients are those of the interactions. In this case, all these coefficients are close to zero and not statistically significant, leading to the conclusion that there are no differential impacts of either treatment by gender. Annex **Table 15** and Annex **Table 16** show a comparable null difference by gender in the medium term, six months after the first endline survey, including for job retention and months worked. The only exception is a stronger effect on job training for women who were part of treatment group 2.

Table 6: Heterogeneity effects by gender

	Employment	Digital skills	Job search	Employability	Life satisfaction
	(1)	(2)	(3)	(4)	(5)
TG1	0.029	0.239***	0.001	0.053	0.082
	(0.025)	(0.07)	(0.083)	(0.07)	(0.101)
Female*TG1	-0.024	-0.11	0.035	0.024	-0.103
	(0.029)	(0.103)	(0.1)	(0.098)	(0.119)
TG2	-0.006	0.462***	0.231***	0.37***	0.21**
	(0.019)	(0.108)	(0.084)	(0.087)	(0.1)
Female*TG2	-0.004	0.041	-0.059	-0.001	-0.131
	(0.026)	(0.124)	(0.103)	(0.116)	(0.115)
Female	-0.04	0.483*	-0.135	0.287	0.689
	(0.142)	(0.281)	(0.435)	(0.314)	(0.501)
N	2,249	2,249	2,249	2,249	2,249
Dep. var. control mean	0.113	0.319	0.284	0.252	2.988
Additional controls	Yes	Yes	Yes	Yes	Yes
Dep. var. initial value	Yes	Yes	Yes	Yes	Yes

Note: Standard errors, grouped by randomization layers, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Similarly, **Table 13** examines whether the impact of the interventions varies by age. To the previous specifications, a dummy variable for participants aged 45 to 54 years and the interaction of the age dummy variable with each of the treatment dummy variables (Treatment 1, Treatment 2) are added. The relevant coefficients are those in the interactions. Observing the coefficients of the interactions, usually, the interactions between the treatment status and the age dummy variable (for those aged 45 to 54 years) are of small magnitude and not statistically significant. These findings are also consistent in the medium term (**Table 17** and **Table 18**).

In summary, while the impacts were generally comparable across age groups, adding digital training to the provision of a tablet did lead to a greater gain in digital skills, but also to a smaller increase in

life satisfaction for participants aged 45 to 54 years compared to those aged 55 to 64 years. Overall, heterogeneity by age was limited.

Table 13: Heterogeneity effects by age

	Employment	Digital skills	Job search	Employability	Life satisfaction
	(1)	(2)	(3)	(4)	(5)
TG1	0.014	0.189***	0.06	0.071	-0.004
	(0.018)	(0.054)	(0.061)	(0.056)	(0.078)
(Age 45-54)*TG1	-0.008	-0.04	-0.079	0.02	0.046
	(0.028)	(0.093)	(0.103)	(0.092)	(0.11)
TG2	0.01	0.44***	0.249***	0.407***	0.188**
	(0.014)	(0.076)	(0.061)	(0.073)	(0.078)
(Age 45-54)*TG2	-0.048	0.129	-0.11	-0.064	-0.161
	(0.03)	(0.088)	(0.111)	(0.093)	(0.111)
Age 45-54	-0.211***	0.276	0.323	0.378	-0.307
	(0.074)	(0.406)	(0.378)	(0.326)	(0.327)
N	2,249	2,249	2,249	2,249	2,249
Dep. var. control mean	0.113	0.319	0.284	0.252	2.988
Additional controls	Yes	Yes	Yes	Yes	Yes
Dep. var. initial value	Yes	Yes	Yes	Yes	Yes

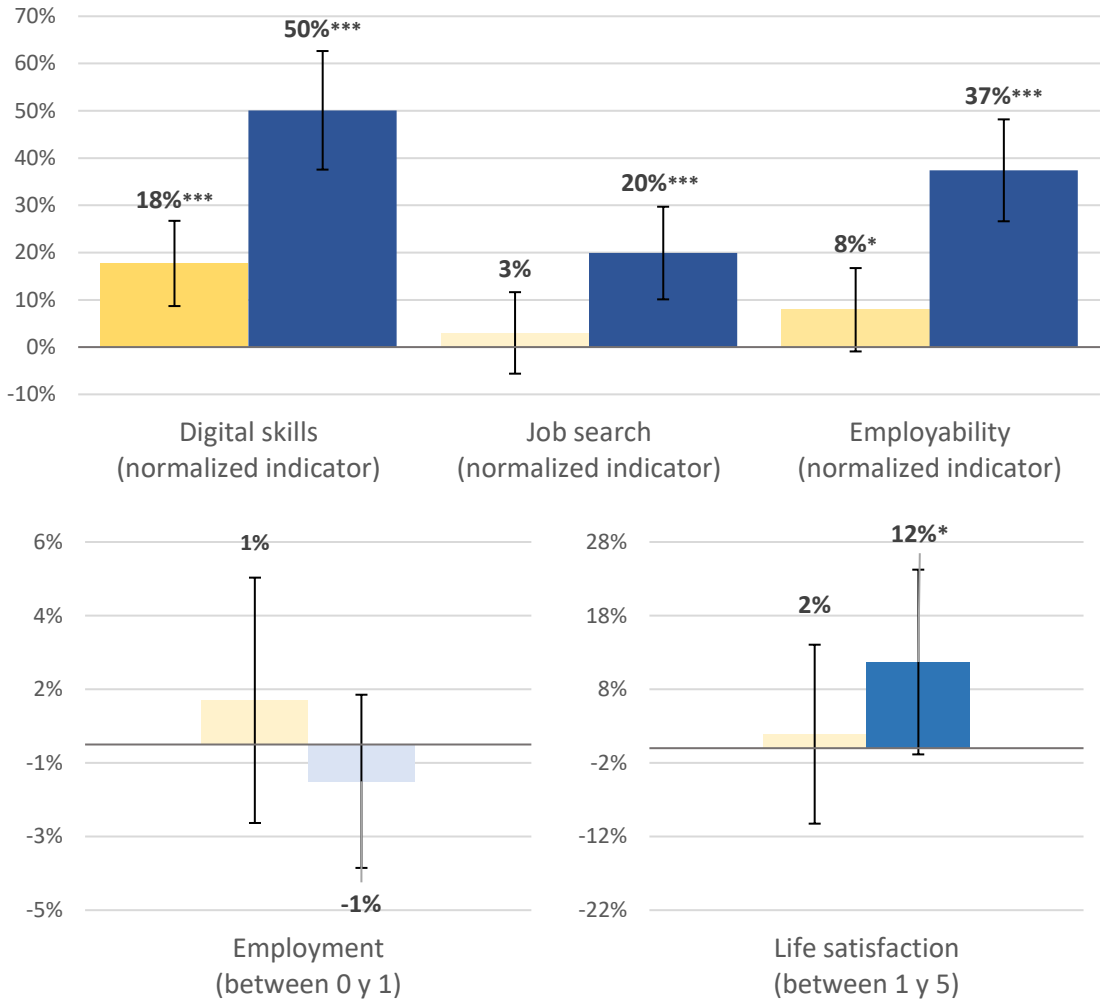
Note: Standard errors, grouped by randomization layers, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

6 Conclusions of the evaluation

This report has provided a thorough evaluation of the Randomized Controlled Trial (RCT) the digital-skill gap and improving digital skills among disadvantaged individuals in the Canary Islands. EAPN Canarias, in collaboration with the General Secretariat for Inclusion (SGI), implemented this intervention, which was aimed at people aged 45 to 64 with a low level of education, focusing specifically on those who receive the Minimum Income Scheme (MIS) or the Canary Islands Insertion Benefit (PCI).

The intervention included two main elements: the distribution of a digital kit (tablet, keyboard, case, and headphones) with internet access and a digital skills itinerary developed by EAPN Canarias. Participants were randomly assigned to three different experimental groups: treatment group 1, which received a digital kit with internet access; treatment group 2, which, in addition to receiving the digital kit, participated in a digital skills course; and a control group that received no intervention and acted as a pure control group.

Figure 11: Effect of the intervention on key indicators



Note: Results for participants in treatment group 1 are presented in yellow. Indicators with a significant treatment effect at 1% are shown in dark yellow, significant effects at 10% are shown in yellow, and indicators that are not significant at 10% are shown in light yellow. The results of the participants in treatment group 2 are presented in blue. Indicators with a significant treatment effect at 1% are presented in dark blue, significant effects at 10% are presented in blue, and indicators that are not significant at 10% are presented in light blue. The effects included in the graphs refer to regressions with controls.

The findings suggest that the intervention effectively enhanced digital skills, job search capabilities, and employability, particularly for participants who underwent the intensive digital training course. However, it did not yield significant impacts on employment, whether self-reported or measured through administrative data on work histories, across any of the treatment groups. Nonetheless, it positively influenced life satisfaction for Treatment Group 2. Medium-term effects, assessed in a second endline survey six months post-intervention, mirrored short-term effects, although slightly diminishing in magnitude.

The analysis of heterogeneity revealed no differential impacts of treatments by gender or age. However, attrition analysis identified some significant associations between non-response in the final survey and certain variables, such as English proficiency, having a disability, caring for children or

people with disabilities, and digital skills at baseline. While attrition was mostly random, these specific variables were found to have a significant correlation with the lack of response to the final survey. To address this, the robustness of the findings was tested using the limitation method proposed by Lee (2009), as shown in the annex (**Table 19**).

These results underscore the importance of personalized digital training in improving digital skills and employability among disadvantaged individuals. This is consistent with other reports studying the effectiveness of digital training among disadvantaged individuals (Martínez-Alcalá et al., 2018; Tsai et al., 2017).

Based on these findings, expanding the intervention in the future may be beneficial. The positive effects observed on digital skills, job search outcomes, and overall life satisfaction, there is a compelling argument for extending the program's reach to a larger population in the Canary Islands and potentially beyond. EAPN-Canarias has developed a self-learning platform based on project experience, offering approximately 23 hours of training divided into 10 blocks and 24 sessions. This platform, available in Spanish and English, serves as a valuable resource for potential program expansion. Additionally, manuals created by the project are accessible on the program's website within the platform. However, future efforts should focus on meticulously designing and implementing interventions, particularly in providing personalized digital training and addressing potential dropout factors. While the program offered grants for caregiver participants, uptake was minimal, suggesting the need for alternative forms of support. In conclusion, further research is needed to validate these findings using objective skill measures and assess the intervention's long-term effects.

Bibliography

Arvelo Hermida, J. (2020). Brecha Digital y Exclusión Social. Red Europea de Lucha contra la Pobreza y la Exclusión Social en Canarias (EAPN-Canarias). Recuperado de https://eapncanarias.org/wp-content/uploads/Estudio-BRECHA-DIGITAL-Y-EXCLUSION-SOCIAL-CANARIAS.pdf

Audhoe, S. S., Hoving, J. L., Sluiter, J. K., & Frings-Dresen, M. H. (2010). "Vocational interventions for unemployed: effects on work participation and mental distress. A systematic review." Journal of occupational rehabilitation, 20(1), 1-13. Recuperado de https://www.researchgate.net/publication/40806051_Vocational_Interventions_for_Unemployed_Effects_on_Work_Participation_and_Mental_Distress_A_Systematic_Review

Botas, L., Llano, J. C., Sanz, A. & Quiroga, D. (2023). XIII Informe: El Estado de la pobreza en España. Seguimiento de los indicadores de la Agenda UE: 2030. 2015-2022. Red Europea de Lucha contra la Pobreza y la Exclusión Social en el Estado Español (EAPN-ES). Recuperado de https://www.eapn.es/estadodepobreza/ARCHIVO/documentos/informe-AROPE-2023-el-estado-de-la-pobreza.pdf

Briscese, G., Zanella, G., & Quinn, V. (2022). "Providing Government Assistance Online: A Field Experiment with the Unemployed." Journal of Policy Analysis and Management, 41(2), 579-602. Recuperado de https://onlinelibrary.wiley.com/doi/abs/10.1002/pam.22368

Choudhary, H., & Bansal, N. (2022). Barriers Affecting the Effectiveness of Digital Literacy Training Programs (DLTPs) for Marginalised Populations: A Systematic Literature Review. Journal of Technical Education and Training, 14(1), 110-127. Recuperado de https://www.researchgate.net/publication/361468098_Barriers_Affecting_the_Effectiveness_of_Digital_Literacy_Training_Programs_DLTPs_for_Marginalised_Populations_A_Systematic_Literature_Review

European Commission. (2020). Digital Education Action Plan (2021-2027). European Education Area. Retrieved from https://education.ec.europa.eu/es/focus-topics/digital-education/action-plan

European Commission. (2021). *Europe's Digital Decade*. Retrieved from https://digital-strategy.ec.europa.eu/es/policies/europes-digital-decade

National Institute of Statistics. (2023). Survey on Equipment and Use of Information and Communication Technologies in Households. Retrieved from https://www.ine.es/dyngs/INEbase/es/operacion.htm?c=estadistica_C&cid=1254736176741&menu=ultiDatos&idp=1254735976608

Lee, H., Lim, J. A., & Nam, H. K. (2022). Effect of a digital literacy program on older adults' digital social behavior: A quasi-experimental study. International Journal of Environmental Research and Public Health, 19(19), 12404. Recuperado de https://www.researchgate.net/publication/364039163_Effect_of_a_Digital_Literacy_Program_on_Older_Adults'_Digital_Social_Behavior_A_Quasi-Experimental_Study

Martínez-Alcalá, C.I., Rosales-Lagarde, A., Alonso-Lavernia, M.D., Ramírez-Salvador, J.A., Jiménez-Rodríguez, B., Cepeda-Rebollar, R.M., López-Noguerola, J.S., Bautista-Díaz, M.L., & Agis-Juárez, R.A. (2018). Digital Inclusion in Older Adults: A Comparison Between Face-to-Face and Blended Digital Literacy Workshops. Frontiers ICT, 5, 21. Recuperado de https://www.frontiersin.org/articles/10.3389/fict.2018.00021/full

Roessler, P., Carroll, P., Myamba, F., Jahari, C., Kilama, B., & Nielson, D. (2021). "The economic impact of mobile phone ownership: Results from a randomized controlled trial in Tanzania." CSAE Working Paper Series 2021-05. Recuperado de https://ideas.repec.org/p/csa/wpaper/2021-05.html

Toyama, K. (2011). Technology as amplifier in international development. In Proceedings of the 2011 iConference (pp. 75-82). Recuperado de https://dl.acm.org/doi/abs/10.1145/1940761.1940772

Tsai, H. Y. S., Shillair, R., & Cotten, S. R. (2017). Social support and "playing around" an examination of how older adults acquire digital literacy with tablet computers. Journal of Applied Gerontology, 36(1), 29-55. Recuperado de https://journals.sagepub.com/doi/abs/10.1177/0733464815609440

Zhao, Houlin. (2011). *La Cumbre Mundial sobre la Sociedad de la Información y la brecha de la banda ancha: obstáculos y soluciones*. Crónica ONU. Recuperado de https://www.un.org/es/chronicle/article/la-cumbre-mundial-sobre-la-sociedad-de-la-informacion-yla-brecha-de-la-banda-ancha-obstaculos-y

Appendix

Economic and regulatory management

1. Introduction

Within the framework of the Recovery, Transformation, and Resilience Plan, the General Secretariat of Inclusion (SGI) of the Ministry of Inclusion, Social Security, and Migrations is significantly involved in Component 23 "New public policies for a dynamic, resilient, and inclusive labor market," framed within Policy Area VIII "New care economy and employment policies."

Investment 7 "Promotion of Inclusive Growth by linking socio-labor inclusion policies to the Minimum Income Scheme" " is one of the reforms and investments proposed in this Component 23. Investment 7 promotes the implementation of a new inclusion model based on the Minimum Income Scheme (MIS), aimed at reducing income inequality and poverty rates. To achieve this goal, the development of pilot projects has been proposed, among others, for the implementation of social inclusion pathways with autonomous communities and cities, local entities, and Third Sector of Social Action entities, as well as with the different social agents.

Royal Decree 938/2021, dated October 26, which regulates the direct granting of subsidies from the Ministry of Inclusion, Social Security, and Migrations in the field of social inclusion, for an amount of 109,787,404 euros, within the framework of the Recovery, Transformation, and Resilience Plan[18], contributed to achieving critical milestone (as stated in the Council's Implementation Decision) number 350 for the first quarter of 2022 "Improving the access rate of the Minimum Income Scheme, and increasing the effectiveness of the MIS through inclusion policies," which, according to its description, will translate into supporting the socio-economic inclusion of MIS beneficiaries through itineraries: eight collaboration agreements signed with subnational public administrations, social partners, and Third Sector organizations of Social Action to execute the itineraries. These partnership agreements aim to i) improve the access rate of the MIS; ii) increase the effectiveness of the MIS through inclusion policies. Likewise, along with Royal Decree 378/2022, dated May 17[19],"at least 10 additional collaboration agreements signed with subnational public administrations, social partners, and Third Sector organizations of Social Action to implement pilot projects supporting the socio-economic inclusion of the beneficiaries of MIS through itineraries," contributed to compliance with

[18]Royal Decree 938/2021, dated October 26, regulating the direct granting of subsidies from the Ministry of Inclusion, Social Security, and Migrations in the field of social inclusion, for an amount of 109,787,404 euros, within the framework of the Recovery, Transformation, and Resilience Plan (BOE-A-2021-17464). It can be consulted at the following link: https://www.boe.es/diario_boe/txt.php?id=BOE-A-2021-17464.

[19] Royal Decree 378/2022, dated May 17, regulating the direct granting of subsidies from the Ministry of Inclusion, Social Security, and Migrations in the field of social inclusion, for an amount of 102,036,066 euros, within the framework of the Recovery, Transformation, and Resilience Plan (BOE-A-2022-8124). It can be consulted at the following link: [link](https://www.boe.es/diario_boe/txt.php?id=BOE-A-2022-8124).: https://www.boe.es/diario_boe/txt.php?id=BOE-A-2021-17464.

monitoring indicator number 351.1 in the first quarter of 2023, linked to the Operational Arrangements[20] document.

Furthermore, after the implementation and evaluation of each of the subsidized pilot projects, an assessment will be conducted to evaluate the coverage, effectiveness, and success of the minimum income schemes. The publication of this evaluation, which will include specific recommendations to improve the access rate to the benefit and enhance the effectiveness of social inclusion policies, contributes to the achievement of milestone 351 of the Recovery, Transformation, and Resilience Plan scheduled for the first quarter of 2024.

In accordance with Article 3 of Royal Decree 378/2022, dated May 17, 2022, subsidies will be granted through a resolution accompanied by an agreement of the head of the Ministry of Inclusion, Social Security, and Migration as the competent authority for granting them, without prejudice to the existing delegations of competences in the matter, upon request of the beneficiary organizations.

On **August 24, 2022**, the organization European Network for the Fight against Poverty and Social Exclusion of the Canary Islands, "EAPN-CAN" (onwards, "EAPN-CAN"), was notified of the Resolution of the General Secretariat for Inclusion and Social Welfare Objectives and Policies granting a subsidy in the amount of 8,030,388.15 euros to "EAPN-CAN". On **August 26, 2022**, the General State Administration, through the General Secretariat for Inclusion and Social Welfare Objectives and Policies and the European Network for the Fight Against Poverty and Social Exclusion of the Canary Islands, "EAPN-CAN" signed an agreement for the implementation of a social inclusion project within the framework of the Recovery, Transformation and Resilience Plan, which was published in the "*Boletín Oficial del Estado*" on **September 15, 2022** (BOE no. 222). [21]

2. Timeline of the intervention

Article 17(1) of Royal Decree 378/2022 dated May 17, 2022, stipulates that the deadline for the implementation of social inclusion itinerary pilot covered by the subsidies provided in this text shall not exceed the deadline of November 30, 2023, while the evaluation, shall not extend beyond March 31, 2024, to meet the milestones, set by the Recovery, Transformation and Resilience Plan with regard to social inclusion policies.

Within this general timeframe, the implementation begins on **January 7, 2023**, with the start of the intervention itinerary, continuing the execution tasks until **November 30, 2023**, and subsequently developing only dissemination and evaluation tasks of the project until **March 31, 2024**.

[20] Decision of the European Commission approving the Operational Arrangements document of the Recovery, Transformation, and Resilience Plan, which can be consulted at the following link:

https://www.lamoncloa.gob.es/serviciosdeprensa/notasprensa/hacienda/Documents/2021/101121-CountersignedESFirstCopy.pdf

[21] https://www.boe.es/diario_boe/txt.php?id=BOE-A-2022-15114

3. Relevant agents

Among the relevant agents for the implementation of the project are:

- **"EAPN-CAN",** as the beneficiary, executor, and coordinator of the project.
- EAPN Canarias organizations, **ADEICAN and RED ANAGOS** have participated in the non-work internships.
- The **Ministry of Inclusion, Social Security and Migration (MISSM)** as the sponsor of the project, and as the main responsible for the RCT evaluation process. The General Secretariat for Inclusion and Social Welfare Objectives and Policies (SGOPIPS) assumes the following commitments:
    a) Assist the beneficiary organization in the design of the activities to be carried out for the implementation and monitoring of the object of the grant, as well as for the profiling of the potential participants of the pilot project.
    b) Design the randomized controlled trial (RCT) methodology of the pilot project in coordination with the beneficiary entity.
    c) Evaluate the pilot project in coordination with the beneficiary organization.
- **CEMFI and J-PAL Europe,** as scientific and academic institutions that support MISSM in the design and evaluation of RCT of the project.

Sample Balance

TableTable 7 presents the balance tests between the control group and each of the treatment groups. All data in this table refers to the survey conducted prior to the intervention. The table shows the mean value of each variable for the three groups, along with the differences in means between groups and the p-value resulting from a mean difference test made from the student's t-statistic. The lower the p-value, the more certain the hypothesis that the mean of the variable in both groups is equal can be rejected. For instance, if the p-value is less than 0.05, the hypothesis of equality of means can be rejected with a confidence level of 5%. If the p-value is greater than 0.10, then the hypothesis of equal means in both groups cannot be rejected with a confidence level of 10%.

Table 7: Balance between experimental groups at the baseline

	Mean			Differences		
Variable	**CG**	**TG1**	**TG2**	**TG1 – CG**	**TG2 – CG**	**TG2 – TG1**
Female	0.653	0.662	0.645	0.009	-0.008	-0.017
				(0.021)	(0.021)	(0.021)
Age (45-54)	0.453	0.448	0.449	-0.005	-0.005	0
				(0.022)	(0.022)	(0.022)
English speaker	0.130	0.127	0.157	-0.003	0.027*	0.03*
				(0.015)	(0.016)	(0.016)
Employed	0.092	0.081	0.075	-0.011	-0.017	-0.006
				(0.013)	(0.012)	(0.012)
Unemployed	0.846	0.861	0.856	0.015	0.01	-0.005
				(0.016)	(0.016)	(0.016)
Care of disabled people	0.115	0.111	0.111	-0.003	-0.004	-0.001
				(0.014)	(0.014)	(0.014)
Childcare	0.074	0.063	0.056	-0.011	-0.018	-0.006
				(0.011)	(0.011)	(0.011)
Disability	0.102	0.115	0.113	0.013	0.01	-0.003
				(0.014)	(0.014)	(0.014)
Laboral training	0.029	0.036	0.040	0.007	0.011	0.004
Health	2.953	2.931	2.991	-0.022	0.038	0.06
				(0.06)	(0.06)	(0.06)
Life satisfaction	3.034	3.004	3.076	-0.030	0.042	0.072
				(0.058)	(0.058)	(0.058)
Digital skills indicator	0.003	-0.028	0.025	-0.030	0.022	0.052
				(0.045)	(0.045)	(0.045)
Job search indicator	-0.009	-0.019	0.028	-0.010	0.037	0.046
Employability indicator	-0.004	-0.025	0.029	-0.021	0.033	0.055

	Mean			Differences		
Variable	**CG**	**TG1**	**TG2**	**TG1 – CG**	**TG2 – CG**	**TG2 – TG1**
				(0.045)	(0.045)	(0.045)
PCI beneficiary	0.340	0.329	0.296	-0.011	-0.044**	-0.033
				(0.021)	(0.021)	(0.021)
MIS beneficiary	0.777	0.777	0.802	0	0.025	0.024
				(0.019)	(0.018)	(0.018)
Island						
Lanzarote	0.032	0.034	0.033	0.002	0.001	-0.001
				(0.008)	(0.008)	(0.008)
Fuerteventura	0.046	0.047	0.046	0.001	0.001	0
				(0.009)	(0.009)	(0.009)
Gran Canaria	0.389	0.389	0.404	-0.001	0.015	0.016
				(0.022)	(0.022)	(0.022)
Tenerife	0.499	0.499	0.483	0	-0.016	-0.016
				(0.023)	(0.022)	(0.022)
La Palma	0.033	0.031	0.033	-0.002	0	0.002
				(0.008)	(0.008)	(0.008)
Nationality						
Spanish	0.862	0.861	0.854	-0.001	-0.008	-0.007
				(0.016)	(0.016)	(0.016)
EU	0.020	0.032	0.035	0.012*	0.015**	0.003
				(0.007)	(0.007)	(0.008)
Non-EU	0.044	0.037	0.048	-0.006	0.005	0.011
				(0.009)	(0.009)	(0.009)
Spanish + other EU	0.01	0.007	0.008	-0.003	-0.002	0.001
				(0.004)	(0.004)	(0.004)
Spanish + other non-EU	0.064	0.062	0.054	-0.002	-0.01	-0.007
				(0.011)	(0.011)	(0.011)
Education						
Basic literacy	0.026	0.032	0.025	0.006	-0.001	-0.007
				(0.008)	(0.007)	(0.008)
Incomplete Primary School	0.163	0.155	0.165	-0.008	0.002	0.01
				(0.016)	(0.017)	(0.016)
Completed Primary School	0.381	0.356	0.39	-0.025	0.009	0.034
				(0.022)	(0.022)	(0.022)
Incomplete Secondary School	0.144	0.159	0.126	0.015	-0.018	-0.033**
				(0.016)	(0.015)	(0.016)
Completed Secondary	0.225	0.245	0.221	0.02	-0.004	-0.024

	Mean			Differences		
Variable	**CG**	**TG1**	**TG2**	**TG1 – CG**	**TG2 – CG**	**TG2 – TG1**
School				(0.019)	(0.019)	(0.019)
Incomplete	0.060	0.053	0.072	-0.007	0.013	0.02*
Postsecondary				(0.01)	(0.011)	(0.011)
N	986	988	994			

Additional Results Tables

Table 158: Medium-term heterogeneity effects by gender on perceived digital skills, job search and employability

	Digital skills	Job search	Employability
	(1)	(2)	(3)
TG1	0.153*	-0.033	0.098
	(0.079)	(0.082)	(0.082)
Female*TG1	0.027	0.07	-0.064
	(0.102)	(0.107)	(0.096)
TG2	0.373***	0.204*	0.37***
	(0.078)	(0.107)	(0.093)
Female*TG2	0.011	0.009	-0.096
	(0.093)	(0.127)	(0.121)
Female	-0.073	-0.122	-0.019
	(0.32)	(0.38)	(0.382)
N	2372	2372	2372
Control mean Dep. Var.	0.251	0.286	0.287
Additional controls	Yes	Yes	Yes
Initial value Dep. Var.	Yes	Yes	Yes

Note: Standard errors, grouped by randomization layers, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 9: Medium-term heterogeneity effects by gender on perceived employment and life satisfaction

	Employment	Months worked	Job retention	Professional training	Life satisfaction
	(1)	(2)	(3)	(4)	(5)
TG1	0.002	0.021	-0.148	-0.007	0.206**
	(0.028)	(0.239)	(0.225)	(0.028)	(0.09)
Female*TG1	0.007	0.117	0.231	0.035	-0.173
	(0.032)	(0.257)	(0.233)	(0.031)	(0.123)
TG2	-0.022	0.043	-0.261	-0.043	0.236**
	(0.024)	(0.175)	(0.254)	(0.029)	(0.095)
Female*TG2	0.033	0.11	0.305	0.063*	-0.166
	(0.025)	(0.227)	(0.268)	(0.036)	(0.125)
Female	-0.166	-0.291	-1.592***	-0.218**	0.753*
	(0.143)	(1.535)	(0.455)	(0.095)	(0.441)
N	2372	2372	231	2372	2372
Control mean Dep. Var.	0.116	1.353	0.671	0.102	2.961
Additional controls	Yes	Yes	Yes	Yes	Yes
Initial value Dep. Var.	Yes	Yes	Yes	Yes	Yes

Note: Standard errors, grouped by randomization layers, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 10: Medium-term heterogeneity effects by age on perceived digital skills, job search and employability

	Digital skills	Job search	Employability
	(1)	(2)	(3)
TG1	0.18***	0.033	0.056
	(0.056)	(0.057)	(0.063)
Age (45-54)*TG1	-0.025	-0.06	-0.011
	(0.083)	(0.095)	(0.091)
TG2	0.344***	0.239***	0.316***
	(0.061)	(0.061)	(0.066)
Age (45-54)*TG2	0.079	-0.057	-0.018
	(0.077)	(0.111)	(0.107)
Age (45-54)	0.398	0.643*	0.777
	(0.422)	(0.365)	(0.489)
N	2372	2372	2372
Control mean Dep. Var.	0.251	0.286	0.287
Additional controls	Yes	Yes	Yes
Initial value Dep. Var.	Yes	Yes	Yes

Note: Standard errors, grouped by randomization layers, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 11: Medium-term heterogeneity effects by age in perceived employment and life satisfaction

	Employment	Months worked	Job retention	Professional training	Life satisfaction
	(1)	(2)	(3)	(4)	(5)
TG1	0.004	0.113	-0.174	0.032*	0.132*
	(0.017)	(0.159)	(0.15)	(0.017)	(0.071)
Age (45-54)*TG1	0.002	-0.072	0.255	-0.029	-0.088
	(0.029)	(0.247)	(0.177)	(0.029)	(0.111)
TG2	-0.005	0.226*	-0.252	-0.002	0.183**
	(0.017)	(0.118)	(0.173)	(0.015)	(0.083)
Age (45-54)*TG2	0.009	-0.318	0.277	0.006	-0.128
	(0.03)	(0.248)	(0.201)	(0.033)	(0.105)
Age (45-54)	-0.189**	-1.809	-0.676	-0.059	-1.205***
	(0.087)	(1.127)	(0.818)	(0.123)	(0.396)
N	2372	2372	231	2372	2372
Control mean Dep. Var.	0.116	1.353	0.671	0.102	2.961
Additional controls	Yes	Yes	Yes	Yes	Yes
Initial value Dep. Var.	Yes	Yes	Yes	Yes	Yes

Note: Standard errors, grouped by randomization layers, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 12: Lee's (2009) Bounding Method for Effects on Key Results

	Treatment Group 1 - Control			Treatment Group 2 - Control		
	Simple mean	Lower bound	Upper bound	Simple mean	Lower bound	Upper bound
Digital skills	0.142	-0.064	0.284	0.518	0.515	0.525
Job search	0.025	-0.174	0.115	0.236	0.234	0.236
Employability	0.059	-0.134	0.166	0.406	0.406	0.412
Employment	0.01	-0.056	0.019	-0.009	-0.009	-0.009
Life satisfaction	0.009	-0.145	0.156	0.12	0.12	0.12

Note: Standard errors, grouped by randomization layers, reported in parentheses. Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 13: Medium-term effects on employment (for employed participants), administrative data

	Days worked	Employment intensity	General Regime	Special Regime for domestic workers	Special Regime for self-employed workers
	(1)	(2)	(3)	(4)	(5)
TG1	10.521	0.057	-0.013	0.016	-0.011
	(7.132)	(0.039)	(0.048)	(0.016)	(0.02)
TG2	-3.354	-0.018	0.101***	-0.004	-0.028
	(7.776)	(0.042)	(0.038)	(0.009)	(0.017)
N	401	401	401	401	401
Control mean Dep. Var.	128.237	0.693	0.873	0.052	0.055
p-value TG1 = TG2	0.06*	0.06*	0.001***	0.143	0.113
Additional controls	Yes	Yes	Yes	Yes	Yes
Initial value Dep. Var.	Yes	Yes	Yes	Yes	Yes

Note: Standard errors, grouped by randomization layers, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 14: Medium-term effects on employment (for employed participants, continued), administrative data

	Permanent contract	Fixed-term intermittent contract	Temporary contract	Full-time contract	Part-time contract
	(1)	(2)	(3)	(4)	(5)
TG1	-0.015	0.015	0.051	-0.019	0.063
	(0.051)	(0.025)	(0.069)	(0.062)	(0.058)
TG2	-0.003	0.04	0.069	0.053	0.038
	(0.046)	(0.029)	(0.055)	(0.061)	(0.067)
N	401	401	401	401	401

	Permanent contract	Fixed-term intermittent contract	Temporary contract	Full-time contract	Part-time contract
	(1)	(2)	(3)	(4)	(5)
Control mean Dep. Var.	0.446	0.065	0.389	0.382	0.519
p-value TG1 = TG2	0.808	0.313	0.796	0.162	0.633
Additional controls	Yes	Yes	Yes	Yes	Yes
Initial value Dep. Var.	Yes	Yes	Yes	Yes	Yes

Note: Standard errors, grouped by randomization layers, reported in parentheses.
Levels of significance: * p < 0.10, ** p < 0.05, *** p < 0.01.