



Co-funded by the  
Erasmus+ Programme  
of the European Union



# FREE TO CODE

*Intellectual Output 1*

## Best Practices Report on Coding for Detained Learners | Synthetic Report

Project number: 2018-1-RO01-KA204-049298



Asturia vzw



avaca  
TECHNOLOGIES



Administrația Națională a Pregătirii Profesionale







Co-funded by the  
Erasmus+ Programme  
of the European Union

*By supporting this publication, the European Commission does not necessarily approve the content of it. The content reflects only the opinion of the authors and the Commission cannot be held responsible for the use of this information.*



Project number: 2018-1-RO01-KA204-049298

## **\_Intellectual Output 1**

BEST PRACTICES REPORT ON CODING FOR DETAINED  
LEARNERS

## **\_Free to Code Partners**

BeCode (Belgium)

European Digital Learning Network (Italy)

Asturia vzw (Belgium)

Aproximar, Cooperativa de Solidariedade Social (Portugal)

Avaca Technologies Consulting, Informatics AE (Grece)

Penitenciarul Bucuresti-Jilava (Romania)

European Strategies Consulting (Romania)

## **\_Design**

Aproximar, CRL



Asturia vzw



avaca  
TECHNOLOGIES



# \_Index

<b>Introduction</b> .....	<b>5</b>
<b>1. The context</b> .....	<b>7</b>
<i>1.1 Overall situation of criminal activities and trends</i> .....	<i>10</i>
<i>1.2 Education in prisons</i> .....	<i>12</i>
<i>1.3 Vocational training in prisons</i> .....	<i>13</i>
<i>1.4 Existing training for digital literacy</i> .....	<i>15</i>
<b>2. Free to Code Survey</b> .....	<b>18</b>
<i>2.1 Level of digital literacy</i> .....	<i>19</i>
<i>2.2 Plans for the future</i> .....	<i>20</i>
<i>2.3 How should the training be provided?</i> .....	<i>21</i>
<b>References</b> .....	<b>22</b>
<b>Annex 1 – Learning outcomes corresponding to different levels of competence</b> .....	<b>25</b>

# \_Introduction

At the end of 2020, prisons across Europe were holding over one and a half a million inmates, including both sentenced and suspected persons<sup>1</sup>. It is, therefore, a considerable number of people.

Most of them will return to their community one day. To facilitate this process, the educative and rehabilitation services across the prisons systems in Europe have still to work hard in order to come in line with the new trends of the adult education in Europe that are gravitating around digital skills and social innovation.

According to the European Commission, DG EAC<sup>2</sup> (The Survey of Adult Skills EC-PIAAC) the function of adult education should be to support economic growth and competitiveness, assure inclusive and equitable development, provide socio-economic benefit, but also individual benefits, in terms of personal and professional development, empowerment, adaptability, employability and active participation in society.

This is what the present project intends to do. By **PROMOTING CODING EDUCATION AMONG EUROPEAN ADULT INCARCERATED LEARNERS** the project hopes to facilitate access to equal opportunities and digital inclusion for vulnerable people such as inmates about to be released.

In order to achieve this aim, the project starts with an in-depth analysis of the context and prisoner's aspirations in the countries involved. Following activities were envisaged to achieve this understanding:

<sup>1</sup>SPACE I data, available at: [https://wp.unil.ch/space/files/2021/04/210329\\_Key\\_Findings\\_SPACE\\_I\\_2020.pdf](https://wp.unil.ch/space/files/2021/04/210329_Key_Findings_SPACE_I_2020.pdf)

<sup>2</sup>Available at: <https://www.oecd.org/skills/piaac/>

- 1. METHODOLOGICAL FRAMEWORK (these guidelines):** to set up a common framework of understanding for all partners.
- 2. SELF ASSESSMENT:** to involve at least 20 inmates, representatives of the target groups p/country (prisoners 18-60) and work with them in order to find out their needs, their plans and their aspirations around education and digitalization.
- 3. PRELIMINARY FINDINGS REPORT:** analysis of results and development of country reports were we incorporate these findings within the country economic and social context.
- 4. COMPARATIVE ANALYSIS AND DEVELOPMENT OF FINAL REPORT:** main results collected in a overall document on Detained Adults Attitudes to coding
- 5. THE VALIDATION OF NON-FORMAL AND INFORMAL LEARNING:** to set up a common agreement among partners about the recognition of learning outcomes, following the 2015 European Guidelines for the validation of non-formal and informal learning for the course that will be developed.



# 1. The context

According to EURES<sup>3</sup>, the Belgian employment situation may be typically described as resembling the shape of a lemon, with employment being heavily concentrated in the middle age category (25-54), while few young people (who usually continue in education for a long time) and older people (who frequently take early retirement) are in work. Studying longer is a positive development, because it increases the chances of finding employment, but early retirement has become unaffordable for the State and it is currently taking steps to discourage it by raising the ages at which people may retire.

Despite the fact that young people are studying longer, unemployment among young people is also very high in Belgium: 20.1%, which is slightly higher than the EU average (18.7%). Young people in Belgium (8.8%) leave education with no qualifications (without a secondary school leavers' certificate). They therefore have much less chance of finding work than young people with secondary or higher qualifications.

In **Italy**, unemployment rate has been growing since the outburst of the global financial crisis. A slight recovery started in 2018, but youth unemployment remains quite high at 37.1%<sup>4</sup>. Regional inequalities between the highly industrialised and dynamic North and the poorer, rural southern areas are still high, exacerbated by a sizeable underground economy, which by some estimates accounts for as much as 17% of GDP. According to data recorded by ISTAT, Italy's National Statistics Institute, the employment rate in March 2019 was 58.9%, while on the other hand unemployed people accounted for 10.2% of the population<sup>5</sup>.

In **Greece**, during the economic crisis the layoffs and job cuts affect the whole country, the unemployment rate has been increased dramatically all over the country and has almost more than tripled since 2008. More specifically, the unemployment rate in Greece has an average of 16.22% from the period 1998

<sup>3</sup> Data available at: <https://ec.europa.eu/eures/main.jsp?catId=2595&countryId=BE&acro=Imi&lang=en&regionId=BE0&nuts2Code=%20&nuts3Code=&regionName=National%20Level>

<sup>4</sup> Data available at World Economic Outlook Database, available at: <https://www.imf.org/en/Publications/WEO/weo-database/2021/April>

<sup>5</sup> Data available at: <https://www.istat.it/it/dati-analisi-e-prodotti/visualizzazioni>

until 2018, reaching an all time high of 27.90% in July of 2013 and a record low of 7.30% in May of 2008<sup>6</sup>. During the last year period in 2018 the Unemployment Rate edged down to 18% in December 2018 from a downwardly revised 18.3% in the previous months. It remains at the lowest level since July 2011, as the number of unemployed went down by 1.9% to 852 thousand and the number of employed persons rose by 0.1 per cent to 3.87 million. The unemployment is particularly high among young people (48% in February 2017) and most of the unemployed have been without a job for one year or longer (73% in Q4 2016)<sup>7</sup>.

In **Romania**, although at the beginning of the 90s the number of active population in Romania was about 11 million people, due to massive immigration and low birth rate, the number of active population is in 2017 around 9.120.000 people, out of which only 8.671.000 were employed. However, the number of unemployed people is decreasing from approx. 629.000 in 2014 to approx. 449.000 people in 2017. In 2017, most of the people in Romania were employed – 73.7%, while only 1% were entrepreneurs or 17,1% were free lancers<sup>8</sup>.

Regarding the **Portuguese**<sup>9</sup> job market in 2018 were around 5.2 million people in active population with an activity rate of 59.0%. Focusing in employment, in 2017 the unemployment rate was 8.9% (462.8 thousand people), falling by 7.3 percentage points compared to 2013 (marked the highest value since 1998). The year of 2018 extended the sequence of descent (that began in 2014) of the unemployment rate, only lower in 2008 before the crisis (7.6%). Of the 4.8 million people employed in 2018, if divided by sectors of economic demand, on that year around were 285 thousand people working on the primary sector, around 1.2 million working on the secondary sector and the remaining 3.4 million on the tertiary sector.

Most employment in **Belgium**<sup>10</sup> is in services sector. The principal sector with the highest number of workers is the tertiary sector, which accounts for 43% of paid employment, followed by the quaternary services sector with 38% and the secondary sector (industry and construction) with 18.5%. Within the quaternary sector, health and welfare are by far the most important areas (15.2% of total employees), followed by teaching, with 10.3%. Workers in this sector predominantly are highly qualified, with a university education behind them. With 5.3%, construction is the largest secondary sector employer, the food and beverages industry following far behind at 2.3%.

<sup>6</sup>Data available at: <https://tradingeconomics.com/greece/indicators>

<sup>7</sup>Idem 5

<sup>8</sup> Report available at: National Institute of Statistics: [http://www.insse.ro/cms/sites/default/files/field/publicatii/romania\\_in\\_cifre\\_breviar\\_statistic\\_1.pdf](http://www.insse.ro/cms/sites/default/files/field/publicatii/romania_in_cifre_breviar_statistic_1.pdf)

<sup>9</sup>Data retrieved from Anuário Estatístico de Portugal, INE 2017. Available at: [https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine\\_indicadores&indOcorrCod=0005558&contexto=bd&selTab=tab2](https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_indicadores&indOcorrCod=0005558&contexto=bd&selTab=tab2)

<sup>10</sup> Idem 2

**Italy**<sup>11</sup> is primarily an industrial country, with the secondary sector accounting for 21.4% of GDP and employing 26.1% of the active population. The country's industrial activity is concentrated in the northern part of the country, including cities such as Turin, Milan and Venice. Much of Italian industry is comprised of small and medium-sized family businesses, with the majority of Italian industrial companies having less than 50 employees. Italy is the largest global exporter of luxury goods (clothing, cars, etc.). Other major Italian industries include precision machinery, motor vehicles, chemical products, pharmaceuticals, electrical items, fashion and clothing.

The service sector constitutes 66.3% of Italian GDP and employs 70% of the country's workforce. Tourism is one of the fastest growing and most profitable industries in Italy, since Italy is the fifth most visited country internationally and the third most visited in Europe. It is estimated that more than half of Italy's 5 million companies are active in the tertiary sector.

In **Romania**<sup>12</sup>, exports and imports of goods and services represent 85% of GDP, while agriculture, forestry and fishing represent 4% of GDP. Industry, including construction covers for 30% GDP (some of which is reflected also in the export/import). Most of the sectors of economy are expanding in terms of the number of employees. IT and Communication was in 2017 the sector of economy with the largest increase – 11.1% compared to 2016. At the same time, the vacancy rate for IT and Communication sector has increased from 0.73% in 2014 to 1.26% in 2017, which implies that there is a need for new populations to be attracted to this sector.

Regarding the labor market in the ICT sector in **Portugal**<sup>13</sup>, a recruitment consulting company developed a data analysis study based on 4000 interviews applied in the end of 2017 and first months of 2018. They concluded that **ICT professionals are increasingly sought after which translates to a greater demand for a lower supply of professionals**: this is due not only to the digital era phenomenon but to a "leak of talent" that Portugal is facing – professionals are aware of their value and are not only looking for better salaries, but for project with quality, competitiveness of companies and career progression opportunities (aspects they find easily in other countries).

Some of the most important industries for **Greece**<sup>14</sup> are the maritime and shipping industries, as well as the tourism sector. The export of goods has

<sup>11</sup> *Idem 4*

<sup>12</sup> *Idem 7*

<sup>13</sup> *Data available in the World Bank Report, 2017 – Portugal. Available at: <https://data.worldbank.org/country/PT>*

<sup>14</sup> *Idem 5*

been on the rise, while imports have been decreasing, causing the trade deficit to improve slowly but steadily.



## 1.1. Overall situation of criminal activities and trends

**Crime rate in Romania**<sup>15</sup> has had a sinuous evolution in the last few years. It follows a downwards trend from 2014 to 2017, from 1.799 to 1.510 crimes/per 100.000 inhabitants. However, this trend is not constant as it is reversing in 2018, when the crime rate increased to 1.555 crimes per 100.000 inhabitants. The reasons behind this reality might be complex and they could be related to a new law on the compensatory remedy that accelerates the prison exits.

As far as prison population is concerned, on 31.12.2018, in the Romanian penitentiary system there were 20.792 inmates, out of which 19.844 men and 948 women<sup>16</sup>. Of the total of 20.792, 813 were accommodated in special accommodation (e.g. hospital), 1.936 in preventive arrest, 7.313 in semi-open regime, 3.480 in open regime, 5.262 in closed regime, 1.352 in maximum security, 395 in detention centers and 241 in educational centers. In terms of life imprisonment, there were 157 cases. 883 with a penalty of over 20 years, 1.200 with a penalty of 15 to 20 years, 2.043 for a 10-15 year sentence, 5.200 for a 5-10 years, 6.749 for 2-5 years, 1.531 for 1-2 years, and 433 for a less than one year punishment. The downwards trend in the prison population can be observed also in the flow numbers: from 40.008 inmates in 2017 to 34.902 inmates in 2018<sup>17</sup>.

**Prisons in Italy** are classified as either Casa Circondariale (CC) or Casa di Reclusione (CR). CC prisons host pre-trial, remand and short sentence prisoners, while CR prisons host sentenced prisoners. The distinction gets blurred by the fact that some CC prisons have sections for sentenced detainees, and vice versa. Prisoners who have completed prison terms but remain under secure supervision are held in either a Casa di Lavoro (CL) or Colonia Penale (CP).

Italian prisons are generally very old and not in good shape, with poor conditions due to lack of funding. These old prisons do not guarantee adequate living standards for detainees, despite recent decreases in overcrowding.

The number of crimes reported in Italy has been declining over the last years. After

<sup>15</sup> Available at: <http://statistici.insse.ro/shop/?page=tempo2&lang=ro&context=66>

<sup>16</sup> Data available at: <http://anp.gov.ro/wp-content/uploads/2019/03/Raport-activitate-ANP-2018-1.pdf>

<sup>17</sup> Idem 15

a peak in 2012-2013 with almost 2.9 million crimes, the number of criminal acts dropped to 2.2 million in 2017/2018<sup>18</sup>.

The number of crimes reported in Italy has been declining over the last years. After a peak in 2012-2013 with almost 2.9 million crimes, the number of criminal acts dropped to 2.2 million in 2017/2018<sup>19</sup>.

The current prison population is 59,655 inmates, out of which 2,107 females, 442 minors and 17,825 prisoners in pre-trial detention. A number of 32,807 were convicted for property crimes .

Official capacity of prison system in **Greece** 9,935 inmates. Currently, the prison population in total (including pre-trial detainees / remand prisoners) is 10,580 at 1/3/2019: Pre-trial detainees / remand prisoners (percentage of prison population) are 31.1%, Female prisoners (percentage of prison population) 5.2%, Young prisoners (percentage of prison population) 1.5%, Foreign prisoners (percentage of prison population) 52.9% <sup>20</sup>.

**Portugal** currently has 49 prison establishments throughout the country with a maximum capacity of 12,934 inmates. At 15 December 2018 the prison population was of 11,963 inmates, 1,000 people below the maximum capacity. 94% were masculine and 6% were feminine, 84.7% were Portuguese and the remaining 15.3% were foreigners<sup>21</sup>. It should be noted that 2018 was the first year, since 2012, that did not experience overcrowding in Portuguese prisons. In 2012 the incarceration rate was of 130 inmates per 100,000 inhabitants, in 2014 was 135 (the highest recorded rate), and in 2016 was 134<sup>22</sup>.

Reflecting the situation throughout Europe, **Belgian** crime groups often engage in multiple criminal activities rather than specialising in a single activity. These include – amongst other crimes – the trafficking of drugs, firearms, people, and the laundering of money.

Drug trafficking is the main activity for crime groups in **Belgium**<sup>23</sup>. The country is one of the most important producers and distributors of synthetic drugs (such as MDMA and amphetamines) and cannabis in Europe, as well as new psychoactive substances (NPS). Cannabis plantations and synthetic drugs laboratories are mainly concentrated at the border with the Netherlands, occasionally with common production chains. Belgium is also one of the three main entry points for cocaine into Europe – alongside Spain and the Netherlands – and it appears to be the most smuggled drug in the country.

<sup>18</sup> Data available at: <https://www.statista.com/statistics/614282/total-number-of-criminal-acts-italy/>

<sup>19</sup> Data retrieved from <https://www.istat.it/it/files/2019/12/Asi-2019.pdf>

<sup>20</sup> Data available at: <https://ministryofjustice.gr/English/>

<sup>21</sup> Data available at: <https://www.prison-insider.com/en/countryprofile/portugal-2019>

<sup>22</sup> Data available at: <https://www.prisonstudies.org/country/portugal>

<sup>23</sup> Data available at: [https://www.emcdda.europa.eu/system/files/publications/2374/TDO416161ENN\\_1.PDF](https://www.emcdda.europa.eu/system/files/publications/2374/TDO416161ENN_1.PDF)



## 1.2. Education in prisons

Among the central aspects of adult education in prison is that of professional reintegration after the detention period, based on the assumption that time spent in prison should be useful to develop human capital in inmates. Teachers and trainers who work in prison find themselves facing an educational and training context that is sometimes considered to be challenging and disconnected from the mainstream educational system.

**In Italy, all prisons offer schooling and professional training,** and 17,096 detainees (including 8,507 foreigners<sup>24</sup>) attended some sort of schooling or training in 2015. There is a 41.5% success rate for courses undertaken. There are also 1,930 prisoners completing one of 170 professional training courses<sup>25</sup>, including cooking, gardening, information technology, electrical engineering and beauty.

Education in prison was first introduced for the purpose of enhancing literacy levels among detainees. Today it seem to be the same. If in 1958, at the time of the establishment of the Prison Schools, it was almost exclusively the Italians who had to learn to read and write as indicated by a 1981 ministerial circular, today the literacy courses are mostly aimed at non-Italian prisoners. The school is also an instrument of social education and emancipation. The Constitution establishes important principles in the field of education and, in particular, it is Article 34 that recognizes education as a fundamental right.

**In Greece,** The Second Chance Schools<sup>26</sup> provide education equivalent to Secondary School formal education. The Second Chance Schools (SCS) in Greek prisons were established in 2004, aiming at combating social exclusion of inmates. The SCS help inmates get another chance at education with classes taught to them behind the prison walls. The Second Chance School is a free innovative public adult education school with total study duration of approximately 2 years i.e. two academic years. Prisoners of 18 years old of age

<sup>24</sup> Data available at: [https://www.giustizia.it/giustizia/it/mg\\_1\\_14\\_1.page?facetNode\\_1=0\\_2&facetNode\\_2=0\\_2\\_6\\_5&contentId=SST1198166&previousPage=mg\\_1\\_14](https://www.giustizia.it/giustizia/it/mg_1_14_1.page?facetNode_1=0_2&facetNode_2=0_2_6_5&contentId=SST1198166&previousPage=mg_1_14)

<sup>25</sup> Data retrieved from [https://www.giustizia.it/giustizia/it/mg\\_1\\_14\\_1.page?facetNode\\_1=0\\_2&facetNode\\_2=0\\_2\\_6\\_5&contentId=SST1183657&previousPage=mg\\_1\\_14](https://www.giustizia.it/giustizia/it/mg_1_14_1.page?facetNode_1=0_2&facetNode_2=0_2_6_5&contentId=SST1183657&previousPage=mg_1_14)

<sup>26</sup> Data available at: <https://www.inedivim.gr/en/programmes-actions/second-chance-schools>

and older who have not completed the 9 – year compulsory education have a second chance to complete it. Upon successful completion of the study program, a qualification equivalent to the high school degree will be provided. The aims of SCS is to focus on combating social exclusion, improving the employability and active participation of inmates in the economic, social and political process as well as increasing development, employment and social cohesion.

The weekly programme consists of 25 teaching hours and the courses take place during the morning, from Monday to Friday. It is very important to mention that Digital literacy is a part of the educational course of SCS<sup>27</sup>. The courses being taught are: Greek Language, Mathematics, English Language, **Information Technology**, Social Education, Environmental Education, Physical Sciences, Cultural Education and Orientation (Guidance and Consultation on employment and career development issues).

A particular emphasis is placed upon the acquisition and development of basic skills, competences and general knowledge, **the use of new technologies**<sup>28</sup>, learning a foreign language, counselling and vocational guidance, in order to significantly improve inmate's access to the labour market.

There are 63 Second Chance Schools (SCS) all over Greece's 13 regions.



## 1.3. Vocational training in prisons

Vocational training courses for persons deprived of liberty are targeted to all categories of detainees who need support for integration into the labour market. Vocational courses on textile worker, trade worker, manual carpenter, commercial worker, cook, waiter, introductory course in the operator, validation and data processing are just a few of the courses organized in the penitentiary systems in Europe.

A significant percentage of the penitentiary population is made up of people deprived of liberty whose knowledge falls within the lower limits, which have a low

<sup>27</sup> Idem 25

<sup>28</sup> Data available at: <https://eaea.org/our-work/projects3/lse-database-good-practice-public-second-chance-schools-public-adult-education-school/>

degree of comprehension and show little interest in school activities. In line with these considerations, it is of utmost importance to take measures that facilitate prisoner's integration on the labour market in spite their personal difficulties.

In the penitentiaries of **Belgium**<sup>29</sup>, prisoners are allowed a minimum of one hour, and sometimes more, of yard time. Yards are comprised of a court surrounded by high walls (and sometimes with an added escape prevention net). Participate in an activity (classes, training, work) replaces access to the yard.

Activities are organised by external associations that depend on each correctional facility's permission. Offerings are limited. The activities offered by the correctional facilities can be grouped in different categories:

- Culture and sports (arts, cinema, writing, reading, music, gardening, individual and group sport, theatre).
- Training and learning (professional and general training, information and orientation, IT, languages, driver's licence, first aid).
- Post-prison (assistance with a professional project, information session, reintegration platform).
- Psychosocial (activities for both children and parents, parole group, hotlines, volunteer visitors, psychological support, social follow-up).
- Health (group activities, addiction treatment, information sessions, prevention).

There is no clear number of prisoners that participate in these activities. In practice, the number should be random and dependent upon a multitude of factors (number of agents present, visits, the yard, prison movements, etc.)<sup>30</sup>. Prisoners with disciplinary sanctions are often prohibited from activities.

In **Portugal**, the Protocol Center for Vocational Training for the Justice Sector<sup>31</sup> is a state institution that promotes training activities for young people and adults with a view to their integration into society. It has 3 axes of training courses and one of them, called "Training for inclusion" is intended for specific target groups: long-term unemployed, immigrants, disabled people, prisoners and ex-prisoners. Students receive certification in the modules (which they successfully complete)

<sup>29</sup> Data available at: [https://www.academia.edu/2184789/EXCHANGE\\_OF\\_METHODOLOGIES\\_IN\\_EDUCATION\\_OF\\_DETAINÉES\\_STUDY\\_ON\\_CORRECTIONAL\\_COMPUTER\\_EDUCATION\\_COURSES\\_IN\\_BELGIUM\\_THE\\_PAST\\_THE\\_PRESENT\\_AND\\_THE\\_FUTURE](https://www.academia.edu/2184789/EXCHANGE_OF_METHODOLOGIES_IN_EDUCATION_OF_DETAINÉES_STUDY_ON_CORRECTIONAL_COMPUTER_EDUCATION_COURSES_IN_BELGIUM_THE_PAST_THE_PRESENT_AND_THE_FUTURE)

<sup>30</sup> Idem 27

<sup>31</sup> For more information, visit <https://www.corrections.direct/how-it-works>

provided in their training plan. According to the 2018 Prison Insider Portugal<sup>32</sup>, there were 24 educational/vocational activities where 4 828 inmates concluded educational or vocational training in 2017 (3 782 and 1 046, respectively) and 5 623 inmates (3 870 in educational and 1 753 in vocational training) were enrolled in training courses in 31.12.2017.



## 1.4. Existing training for digital literacy

In **Romania** the training programs for digital literacy aim to bring together the descriptive-informative dimension with the normative, interrogative-reflective and valorising, as well as the practical one targeting the formation of general competences, specific competences and, last but not least, the formation/development of some attitudes and values that support the adaptation and integration of the person deprived of liberty during detention and post-detention, with a focus on facilitating social inclusion. These courses are intended for persons deprived of liberty who have high school education, have no previous courses, have a good command of Romanian language and at least 3 months until the release. The main activities are aimed at acquiring and developing digital skills in using Microsoft's software package, enriching the information level to facilitate the insertion of prisoners into the labour market by acquiring new skills. As this course is done with prison staff, there is no possibility to certify these digital competences through a document certified by the Ministry of Education.

However, up until 2017 the prison system benefited from an IT training program where both – prisoners and staff – undertook classes on IT. „TIC training in the Romanian prison system on European standards”<sup>33</sup> was a program about promotion of social inclusion with specific objectives:

- To provide professional training in TIC (ECDL START/ Equal Skills) for 2000 inmates of age between 16 and 45 years from the national penitentiaries in order to improve their market access after the release.

<sup>32</sup> Available at: [https://www.prison-insider.com/files/2e5c708f/fp\\_en\\_portugal\\_04.pdf](https://www.prison-insider.com/files/2e5c708f/fp_en_portugal_04.pdf)

<sup>33</sup> Available at: <http://anp.gov.ro/wp-content/uploads/2018/04/Proiect-Preg%C4%83tire-TIC-la-standarde-europene-%C3%AEn-sistemul-penitenciar-rom%C3%A2nesc.pdf>

- To provide professional training in TIC for 1600 employees from the penitentiaries, with age between 25-54 years, in order to improve their competences within their duties and professional activities with the inmates.
- Development of a dynamic system with 16 mobile classrooms, active on national scale in a period of 30 months in order to train the target group.
- Development of a national web of 100 professional trainers in the TIC field, to improve the instruction process within the national penitentiaries units.

**Trainings for digital literacy in Belgium – Formal learning Flemish Communicaty.** Institutional arrangements play a role in financing adult learning. Under the new legislation of the Flemish Parliament, 2018, the institutional financing of the centers for adult education (CAEs) and the centers for adult basic education (CABEs) is being reformed. Previously, adult education centres had little incentive to target vulnerable groups like prisoners. However, under the new decree, additional resources are allocated to centres based on participation of vulnerable target groups, including those without a secondary education certificate, non-working jobseekers, and prisoners. The centres will also receive a “qualification bonus” when participants successfully complete the programme and obtain their certificate. The qualification bonus is intended to incentivise centres to provide tailored guidance to students to help them complete their certificate, as well as to grant students exemptions on the basis of previously acquired competences. The government expects these reforms to improve the targeting of adult learning resources at more vulnerable groups<sup>34</sup>.

Training on digital literacy in **Greek** prisons is taking place through the lessons given in Second Chance Schools. A case study that is focus on IT literacy is helpful in our analysis to better understand the educational issues in the Second Chance Schools<sup>35</sup>.

The objective of the study was to investigate the attitudes of inmates attending the Second Chance School towards the use of computers. The research took place in February 2014. Thirty-eight inmate students, from different countries, aged 21 to 45 who were enrolled in the 1st and 2nd year of the Second Chance School were the subjects of the study. The research showed that respondents were very enthusiastic about learning about computers but most of them were anxious that large

<sup>34</sup> *Idem 28*

<sup>35</sup> Data available at: [https://www.researchgate.net/publication/220374667\\_Exploring\\_Adult\\_Digital\\_Literacy\\_Using\\_Learners'\\_and\\_Educators'\\_Perceptions\\_and\\_Experience\\_s\\_The\\_Case\\_of\\_the\\_Second\\_Chance\\_Schools\\_in\\_Greece](https://www.researchgate.net/publication/220374667_Exploring_Adult_Digital_Literacy_Using_Learners'_and_Educators'_Perceptions_and_Experience_s_The_Case_of_the_Second_Chance_Schools_in_Greece)

amounts of data could accidentally be erased. The study show that the learners believe that computers are essential in education and the workplace and also believe that they are able to acquire relevant skills. Also, they acknowledge that the use of technology in the educational process is a very important factor in successful learning because it allows students to learn more in less time. Moreover, they believe that technology allows students to monitor their own learning process and also gives them access with one touch to a large amount of information.

The final result of the research revealed increased anxiety about computers probably because inmate students have limited access to them. This could be an obstacle in the learning process as a reluctance to use a computer.

According to other surveys that took place on inmates using the same questionnaire, the results were similar. A comparative survey among non-inmates students showed low stress about computers<sup>36</sup>.

In conclusion, the researchers believe that the possible increased anxiety about computers is due to the fact that students who are imprisoned and have limited access to computer use the only during the operation of the school for a few hours per day and they may not have mastered the use of computers and technology generally because of the strict framework of the operation of the prison.

In 2014, in **Portugal**, as a result of the encouragement of the Ministry of Justice for innovative projects, DGRSP together with a third sector and private sector entity developed a pilot project (between 2015 and 2016) called EPRIS<sup>37</sup> with the aim of study the possibility of e-learning as a pedagogical tool to promote digital inclusion. The main target group was the inmates of a Portuguese female prison and considers not only the gender equality issues of women in detention, but also their future social reintegration, in anticipation of future difficulties associated with this process. This project developed a training course which lasted 216 hours, in a period of 12 months, the trainees were chosen by the social solidarity institution technicians who developed their work directly with the inmates, and the inmates had some pre-conditions: availability and interest in participating; minimum computer skills (from the user's perspective); sixth year (minimum schooling); higher detention time than the necessary for the implementation of the first phase of the project. Two questionnaires

<sup>36</sup> *Idem* 33

<sup>37</sup> Data available at: [https://www.researchgate.net/publication/263522432\\_Teachers'\\_role\\_in\\_curriculum\\_design\\_in\\_Portuguese\\_schools](https://www.researchgate.net/publication/263522432_Teachers'_role_in_curriculum_design_in_Portuguese_schools)

were used to assess the competences, one in the initial phase and the other in the final phase of the training. The analysis of the data showed that the inmate trainees considered the training experience in e-learning has given them the confidence that they still have the capacity to undertake new learning, with an impact on perspectives related to a future insertion in the labour market.

## 2. Free to Code Survey

Taking into account the institutional background described above, the aim of the Free to Code questionnaire was to identify prisoner's IT skills, find out the status of their ICT educational level, understand how familiar they are with coding, and also investigate their interests to attend a coding learning programme. The survey gave the participants the opportunity to learn about the goals of the project and stimulate their curiosity for future engagement.

This report is based on the surveys sent by the Greece, Belgium, Romanian and Italian partners.

The survey was carried out during April 2019 in six prisons: one in Greece - a detention prison for drug addicted prisoners called KATK, one in Romania- Jilava Penitentiary and 3 in Belgium Merksplas, Turnhout and Wortel. A total of 120 surveys were completed by 98 male **inmates** and 25 **former inmates**- 36 surveys in Belgium, 39 in Romania, 20 in Greece and 25 in Italy.

The correctional authorities in each of the 5 prisons granted permission for the Free to Code questionnaire to be applied. It was very important to make sure that our research would respect prisoner's anonymous right and exclude the possibility that our questionnaire would collect any personal or private information

from the respondents. Also, it was agreed that the research was complied with ethical requirements and the prisoners would take part in the research at their own will and none of them will be forced to participate.

It should be noted also that the original questions in English of the questionnaire were translated in Romanian, Greek, Italian and French.

The ages of the prisoners that took part on the survey was mostly between 35 - 44 (43) and 25-34 (38) years old. Six participants were between 18-24, 21 between 45-54 and 6 between 55-64 years old.

Their educational status was High School graduates (48), Elementary School graduates (36), Secondary School (13), 11 participants left school early, 8 participants have Bachelor's degree from University, one participant with a master degree and one with a PhD degree.



## 2.1. Level of digital literacy

Most of the participants stated that their level of digital literacy is – basic user - 55 (accessing online information, email and sharing files). 29 of the respondents evaluated their skills as complete beginners. 33 of them estimated their skills as independent or proficient user.

As it can be noted most of the participants are placed at the bottom of the skill competencies as far as digital literacy is concerned. However, there is also a significant number of people with a more advanced level of skills.

Most of the participants had no previous knowledge or experience in coding – 65. Those few who have some previous experience with coding mention – JAVA, Magic Rip, Versa, Dual work, ECDL, C++, COBOL, MS-DOS and IOSI- installation and operation of computer systems.



## 2.2. Plans for the future

When it comes to the field they would like to work in after release, most of the participants mentioned constructions as their favourite field (22) as well as sales (9). The others mentioned software development and IT (7), office and administrative support (8), tourism (5), public sector (5) finances (7), art and entertainment (6), transport (3), education (2) and civil organisation (1). Other fields were mentioned only once.

When asked if they would like training in coding, the vast majority of them (91) stated that they would like to benefit of this kind training. Most of them would like to improve basic digital skills (62), the code behind the computer programme we use in everyday life (46), to learn basic computer programming (45) or how to write simple programme (35). Thirty-two of them mentioned the computational and related transversal skills as their objective.

The main reasons for developing these skills are: to learn about what technology can do (32), to develop creativity, maintain cognitive abilities and widen their interests (22) and also to help them 'make a difference in the world' (18)

Forty-eight of them would picture themselves as using digital skills after release. However, an important number of them mentioned that they do not know if they will use these skills after release (26).

Those who see themselves as using these skills consider the following fields of economy: IT technician, programmer, operator, car and real estate sales, financial specialist and construction.



## 2.3. How should the training be provided?

All participants from Romania and Greece stated the intention to undertake a classic training in the digital literacy. In Belgium case, half of them stated that are not interested in attending a classic training course. Most of them prefer self-assessment tools (22), quizzes (27) or games and simulation (30).

Most of the participants would like to learn with a mentor (38), a combination of methods and places (25), pair work (19) or learning on their own using tutorials (14).

It seems that the interactive one to one or small group training are preferred by most of the participants.

To conclude, we could infer that ideally two types of digital training should be prepared: one for the basic level and one for the more advanced level. However, training for both levels should be very practical, interactive and linked to the labour plans of the participants (e.g. sales, basic programming, operator etc.).

Based on these findings the learning outcomes that seem to be relevant for the economical context and the prisoner's expectations can be divided into four main levels:

- **Level 0 – basic – will be a pre-requisite to enter the program**
- **Level 1 – will be developed by the project (HTML and CSS)**
- **Level 2 and 3 – will work as a recommendation for future development, either inside or outside prison.**

These learning outcomes are defined according to the 2015 European Guidelines in terms of knowledge, skills and competencies.

Annex 1 of this Report presents these learning outcomes in details.

# \_References

Anuário Estatístico de Portugal, INE (2017), Available at: [https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine\\_indicadores&indOcorrCod=0005558&contexto=bd&selTab=tab2](https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_indicadores&indOcorrCod=0005558&contexto=bd&selTab=tab2)

EURES, Labor market information Belgium, Available at: <https://ec.europa.eu/eures/main.jsp?catId=2595&countryId=BE&acro=lmi&lang=en&regionId=BE0&nuts2Code=%20&nuts3Code=&regionName=National%20Level>

European Association for the Education of Adults, Good practice: Public Second chance schools (Public Adult Education School), Available at: <https://eaea.org/our-work/projects3/lse-database-good-practice-public-second-chance-schools-public-adult-education-school/>

European Monitoring Centre for Drugs and Drug Addiction and Europol (2016), EU Drug Markets Report: Strategic Overview, EMCDDA–Europol Joint publications, Publications Office of the European Union, Luxembourg, Available at: [https://www.emcdda.europa.eu/system/files/publications/2374/TD0416161ENN\\_1.PDF](https://www.emcdda.europa.eu/system/files/publications/2374/TD0416161ENN_1.PDF)

Hurkmans, G. (2012). Exchange Of Methodologies In Education Of Detainees – Study On Correctional Computer Education Courses - In Belgium - The Past, The Present And The Future. ICERI2012 Proceedings, Available at: [https://www.academia.edu/2184789/EXCHANGE\\_OF\\_METHODOLOGIES\\_IN\\_EDUCATION\\_OF\\_DETAINES\\_STUDY\\_ON\\_CORRECTIONAL\\_COMPUTER\\_EDUCATION\\_COURSES\\_IN\\_BELGIUM\\_THE\\_PAST\\_THE\\_PRESENT\\_AND\\_THE\\_FUTURE](https://www.academia.edu/2184789/EXCHANGE_OF_METHODOLOGIES_IN_EDUCATION_OF_DETAINES_STUDY_ON_CORRECTIONAL_COMPUTER_EDUCATION_COURSES_IN_BELGIUM_THE_PAST_THE_PRESENT_AND_THE_FUTURE)

Instituto Nazionale de Statistica, Dati analisi e prodotti, Available at: <https://www.istat.it/it/dati-analisi-e-prodotti/visualizzazioni>

Instituto Nazionale di Statistica (2019) Annuario Statistico Italiano, Available at: <https://www.istat.it/it/files/2019/12/Asi-2019.pdf>

International Monetary Fund, World Economic Outlook Database, Available at: <https://www.imf.org/en/Publications/WEO/weo-database/2021/April>

Jimoyiannis, A., Gravani, M. (2011). Exploring Adult Digital Literacy Using Learners' and Educators' Perceptions and Experiences: The Case of the Second Chance Schools in Greece. *Educational Technology & Society*, 14:217-227. Available at: [https://www.researchgate.net/publication/220374667\\_Exploring\\_Adult\\_Digital\\_Literacy\\_Using\\_Learners'\\_and\\_Educators'\\_Perceptions\\_and\\_Experiences\\_The\\_Case\\_of\\_the\\_Second\\_Chance\\_Schools\\_in\\_Greece/citation/download](https://www.researchgate.net/publication/220374667_Exploring_Adult_Digital_Literacy_Using_Learners'_and_Educators'_Perceptions_and_Experiences_The_Case_of_the_Second_Chance_Schools_in_Greece/citation/download)

Ministry of Justice, Greece <https://ministryofjustice.gr/English/>

Ministry of Justice, Italy [https://www.giustizia.it/giustizia/it/mg\\_1\\_14\\_1.page?facetNode\\_1=0\\_2&facetNode\\_2=0\\_2\\_6\\_5&contentId=SST1198166&previousPage=mg\\_1\\_14](https://www.giustizia.it/giustizia/it/mg_1_14_1.page?facetNode_1=0_2&facetNode_2=0_2_6_5&contentId=SST1198166&previousPage=mg_1_14)

Ministry of Justice, Italy [https://www.giustizia.it/giustizia/it/mg\\_1\\_14\\_1.page?facetNode\\_1=0\\_2&facetNode\\_2=0\\_2\\_6\\_5&contentId=SST1198166&previousPage=mg\\_1\\_14](https://www.giustizia.it/giustizia/it/mg_1_14_1.page?facetNode_1=0_2&facetNode_2=0_2_6_5&contentId=SST1198166&previousPage=mg_1_14)

Mouraz, A., Leite, C., Fernandes, P., (2013), Teachers' role in curriculum design in Portuguese schools. *Teachers and Teaching: Theory and Practice*, Available at: [https://www.researchgate.net/publication/263522432\\_Teachers'\\_role\\_in\\_curriculum\\_design\\_in\\_Portuguese\\_schools/citation/download](https://www.researchgate.net/publication/263522432_Teachers'_role_in_curriculum_design_in_Portuguese_schools/citation/download)

National Administration of Penitentiaries Romania, (2018) Activity Report, Available at: <http://anp.gov.ro/wp-content/uploads/2019/03/Raport-activitate-ANP-2018-1.pdf>

National Institute of Statistics (2018) România în cifre, Available at: [https://insse.ro/cms/sites/default/files/field/publicatii/romania\\_in\\_cifre\\_breviar\\_statistic\\_1.pdf](https://insse.ro/cms/sites/default/files/field/publicatii/romania_in_cifre_breviar_statistic_1.pdf)

National Institute of Statistics, Romania Crime Report, Available at: <http://statistici.insse.ro/shop/?page=tempo2&lang=ro&context=66>

OECD Skills Survey, Available at: <https://www.oecd.org/skills/piaac/>

Prison Insider, Portugal, 2018 Available at: [https://www.prison-insider.com/files/2e5c708f/fp\\_en\\_portugal\\_04.pdf](https://www.prison-insider.com/files/2e5c708f/fp_en_portugal_04.pdf)

Prison Insider, Portugal, 2019 Available at: <https://www.prison-insider.com/en/countryprofile/portugal-2019>

Project FSE/POSDRU/96/6.2/S/60031, Pregătire TIC la standarde europene în sistemul penitenciar românesc, Available at: <http://anp.gov.ro/wp-content/uploads/2018/04/Proiect-Preg%C4%83tire-TIC-la-standarde-europene-%C3%AEn-sistemul-penitenciar-rom%C3%A2nesc.pdf>

SPACE I Statistics. Available at : [https://wp.unil.ch/space/files/2021/04/210329\\_Key\\_Findings\\_SPACE\\_I\\_2020.pdf](https://wp.unil.ch/space/files/2021/04/210329_Key_Findings_SPACE_I_2020.pdf)

Statista (2020), Italy, Available at: <https://www.statista.com/statistics/614282/total-number-of-criminal-acts-italy/>

The Global Prison and Probation Directory, Corrections Direct, Available at: <https://www.corrections.direct/how-it-works>

Trading Economics, Economic Indicators Greece, Available at: <https://tradingeconomics.com/greece/indicators>

World Bank Report (2017) Portugal, Available at: <https://data.worldbank.org/country/PT>

Youth and Lifelong Learning Foundation, Second Chance Schools, Available at: <https://www.inedivim.gr/en/programmes-actions/second-chance-schools>





Co-funded by the  
Erasmus+ Programme  
of the European Union



# FREE TO CODE

Improving Digital and Coding Skills for Inmates



Asturia vzw



**avaca**  
TECHNOLOGIES

