Access to justice and the new technologies applied during the implementation of prison sentences

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Abstract: The aim of this paper is to analyse the current developments of prison tech, verify its progress in promoting the access to justice in the prison context, examine the digital transformation in the Portuguese context and raise the ethical, practical and human rights issues that the use of technologies in prisons raises. This essay is oriented by the following question: Are technological advances serving as a tool to support or further to discriminate against persons deprived of their liberty in their access to justice?

Keywords: prison, imprisonment, technology, access to justice, smart prison.

Summary: 1. INTRODUCTION. 2. ACCESS TO JUSTICE. 3. THE PRISON TECH. 4. DIGITAL TRANSFORMATION OF PRISONS IN PORTUGAL. 5. ETHICAL, PRACTICAL

AND HUMAN RIGHTS ISSUES ON THE APPLICATION OF NEW TECHNOLOGIES IN PRISON CONTEXT. 6. CONCLUSIONS. 7. REFERENCES.

1. INTRODUCTION

Within the scope of the II International Congress "Justicia para todos: las Reglas de Brasilia y el ODS 16.3" (*Justice to all: Brasilia Rules and the SDG 16.3*), that took place at the University of Cádiz, in Spain, on October 2022, in which a brief of the present work was presented, the theme of this analysis is the access to justice and the new technologies applied during the implementation of prison sentences.[1] The aim of this paper is to analyse the current developments of prison tech, verify its progress in promoting inmates' access to justice, examine the digital transformation in the Portuguese context and raise the ethical, practical and human rights issues that the use of technologies in prisons raises. This essay is oriented by the following question: Are technological advances serving as a tool to support or further to discriminate against persons deprived of their liberty in their access to justice?

The execution of prison sentences determine itself a situation of greater vulnerability for individuals to fully exercise their fundamental rights before the justice system, which is expressly recognised by article 22 of the 100 Brasilia Rules Regarding the Access to Justice for Vulnerable People, approved at the 14th Ibero-American Judicial Summit, that took place in March 2008, that states: «Confinement, ordered by a competent public authority, can generate difficulties to exercise fully before the justice system the rest of rights pertaining to the person in confinement, especially if any of the other causes of vulnerability listed in the previous sections concur».

This situation of greater vulnerability to fully exercise fundamental rights before the justice system arises, on the one hand, from the increased risks of persons deprived of their liberty to suffer abuses and violations of rights. In the prison context, the individuals are kept apart from society under total control and surveillance, which is conducive to staff-prisoner and inter-prisoner violence, especially in overcrowded prisons. The reports from the European Committee for the Prevention of torture and Inhuman Degrading Treatment or Punishment (CPT) describes that overcrowding and informal prison hierarchy can contribute to the increased risk of staff prisoner and inter-prisoner violence, intimidation and extortion.[2]

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[1] The present work was presented as a communication, on October 27, 2022, at the 2nd International Congress "Justicia para todos: las Reglas de Brasilia y el ODS 16.3", that took place at the University of Cádiz, in Spain. This analysis is part of an exploratory project developed at the University of Coimbra Institute for Legal Research with the aim of addressing the topic of fundamental rights affected by the execution of prison sentences.

[2] European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment, 31st General Report of the CPT, 1 January - 31 December 2021, Council of Europe, 2022.

On the other hand, imprisonment inevitably involves a number of restrictions on communication with the outside world and on access to information, and the penitentiary rules are often oriented toward security and order, rather than social inclusion, deepening isolation and, consequently, imposing obstacles to access to justice. Even the European Court on Human Rights recognizes that the European Convention of Human Rights cannot be interpreted as imposing a general obligation to provide access to the Internet, or to specific Internet sites, for inmates to access legal information (Case *Kalda v. Estonia*). By its decision, the ECHR understands that granting access to legal information over the internet is a discretionary decision of each country's domestic legislation.

Moreover, the individuals in prison are a typical example of a population that simultaneously presents multiple conditions of vulnerability, since the majority of inmates worldwide are poor, with low levels of education, have higher rates of mental and contagious diseases, lack digital literacy, many belonging to ethnic and racial minorities. All these conditions, added to the situation of deprivation of liberty, make inmates particularly vulnerable with special difficulties in exercising their rights recognized by the legal system before the justice system.

Therefore, to achieve the target 16.3 of the Sustainable Development Goal 16 of the United Nations 2030 Agenda for Sustainable Development, which is "Promote the rule of law at the national and international levels and ensure equal access to justice for all", the States must also promote access to justice in prisons to ensure that no one is left behind, not even people deprived of their liberty. In this sense, it will be our goal to analyse the technological tools in prison and verify whether or not the development of prison technologies is contributing to promote access to justice for inmates.

2. ACCESS TO JUSTICE

Access to justice is an essential component of the principle of rule of law. According to the international and European human rights law, access to justice is a core fundamental right which obliges States to guarantee each individual's right to go to court to obtain a remedy if it is found that the individual's rights have been violated. While access to justice technically means having a case heard in a Court, part of the legal doctrine also understands that it can be more broadly achieved or supported through other mechanisms such as mediation, national human rights institutions, or equality bodies and ombudsman institutions. The European Court of Human Rights has stated that a non-judicial body under domestic law may be considered to be a court if it quite clearly performs judicial functions and offers the procedural guarantees required by Article 6 of the ECHR, such as impartiality and independence (ECHR, *Case Oleksandr Volkov v. Ukraine*).

The notion of access to justice is enshrined in international instruments, such as Articles 2 (3) and 14 of the United Nations International Covenant on Civil and Political Rights, and Article 8 and 10 of the United Nations Declaration of Human Rights. In the European level, the right to access to justice is provided for in Articles 6 and 13 of the European Convention on Human Rights, and Article 47 of the European Union Charter of Fundamental Rights. The right of access to justice include effective access to a dispute

resolution body, including legal aid to those who lack sufficient resources, the right to fair proceedings and the timely resolution of disputes, the right to adequate redress, as well as the general application of the principles of efficiency and effectiveness to the delivery of justice.[3]

In Portugal, Article 20, n. 1, of the Constitution, states that everyone is assured access to justice to safeguard their legally protected rights and interests, and justice cannot be denied for insufficient economic means. The right of access to justice comprises the rights to legal information and consultation, to legal aid, and to be accompanied by a lawyer before any authority. It also includes the right to fair proceedings and the timely resolution of disputes.

Regarding the access to justice by inmates, Article 7, of the Portuguese Code governing the implementation of prison sentences (*herein* CEP) provides for the following rights: to be personally informed, upon entry into the prison establishment and whenever necessary, of their rights and duties and the rules in force (Article 7, *j*), CEP); have access to their personal file and be informed of their procedural situation and the progress and evaluation of the execution of the sentence or measure depriving them of their liberty (Article 7, *l*), CEP); to be heard, to submit requests, complaints, claims and appeals and to challenge the legality of decisions made by the prison services before the enforcement court (Article 7, *m*), CEP); and to have legal information, consultation and advice from a lawyer (Article 7, *n*), CEP).[4] The Portuguese law also provides for the right to be assisted by a lawyer in disciplinary proceedings (Article 110, CEP) and in proceedings before the enforcement courts (Article 147, CEP).

It is worth noting that the *permission* granted to inmates to be assisted by a lawyer before the enforcement courts, provided in Article 147, n. 1, CEP, cannot be interpreted as a *right* to be assisted by a lawyer in *any* proceedings - or, in other words, as imposing a general obligation to provide legal aid in every proceeding. According to the Portuguese Code governing the implementation of prison sentences, the assistance of a lawyer is only *mandatory* in cases specifically provided for by law or when legal issues are in dispute (Article 147, n. 2, CEP). In practice, this means that if the person is not being assisted by a lawyer, the court does not have a duty to appoint a lawyer in every proceeding, and the absence of legal aid will not entail procedural nullities if the assistance by a lawyer is not mandatory.

According to PINTO, there are numerous deficiencies in the current judicial protection of the rights of persons deprived of their liberties, including difficulties in challenging acts that are potentially harmful to legally protected rights and interests; obstacles on the access to justice due to uncertainty about the delimitation of jurisdiction between the courts of the execution of sentences and the administrative courts; difficulties in obtaining

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[3] European Union Agency for Fundamental Rights and Council of Europe, Handbook on European law relating to access to justice, Luxembourg, Publications Office, 2016.

[4] The Portuguese Code governing the implementation of prison sentence is available at:

https://data.dre.pt/eli/lei/115/2009/p/cons/20190328/pt/html

protection against structural problems, namely inadequate detention conditions, among others.[5] However, these issues will not be addressed in the present paper, which will especially focus on the impacts of new prison technologies on access to justice, especially on the rights to legal information and consultation, and the right to legal aid.

3. THE PRISON TECH

Today's society is characterised by the transition from the analogue to the digital age, as the combination of the improvement of abilities, the human curiosity and industry needs are fostering the development of an increasing number of new technologies.[6] The digital transformation of society and the development of new technologies powered by artificial intelligence, machine learning and big data are changing many aspects of everyday life, introducing new ways of social interaction, offering great opportunities for more collaborative and participatory relationships and reshaping to its very core the way governments and companies are delivering their goods and services.[7]

Just as several areas of our daily lives are being affected by the digital transformation and the development of new technologies, so is the judiciary system being slowly driven to a notion of digital justice, with several different technologies being incrementally integrated to law enforcement and investigations[8], and fostering the shift towards e-trials and virtual courts with the usage of a network of audiovisual link technologies that connect disparate justice spaces.[9] Despite the concerns and cautions about embracing the digital transformation due to procedural issues and human rights, the criminal justice system is yet another branch facing this digital transformation, with an increasing usage of new technologies raging from remote hearings to smart prisons.

The concept of Smart Prisons (sometimes referred as "technocorrections" or "carceral automation") has emerged recently and, as outlined by MCKAY, "is frequently used to describe contemporary prisons in which ICT [information and communication technologies] and AI technologies are integrated into the infrastructure".[10] The main idea behind the development of smart prisons is to apply a vast variety of technological devices in order to streamline the work of prison officers and administrators, providing safer, hands-free and cheaper modes of offender management and administration; and to assist

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[5] PINTO, I. H., *Repartição de funções entre administração e juiz e tutela jurisdicional efectiva na execução da pena de prisão*, Almedina, Coimbra, 2022, p. 535.

[6] HALLEVY, G., *When Robots Kill. Artificial Intelligence Under Criminal Law*, Northeastern University Press, New England, 2013, p. 04.

[7] RAMOS, J. R. M., "Digital Forensics Tools: Development and Concerns in The Context of Law Enforcement", *Boletim IBCCRIM*, n. 361, 30, December, 2022, p. 09.

[8] For a detailed overview of digital forensic tools, see RAMOS, J. R. M., "Digital Forensics Tools", *op. cit.*, p. 08.

[9] MCKAY, C., "The carceral automation: Digital prisons and technologies of detention", *International Journal for Crime, Justice and Social Democracy*, 11, 1, 2022, p. 101.

[10] Idem, p. 104.

individuals with their re-entry into society, providing them with a humane environment.[11] Among the types of technologies currently applied in prisons, it is possible to identify five main categories of technologies: (i) control and surveillance, (ii) prison management, (iii) educational and training, (iv) access to health, and (v) information and communication (in which are included the technologies used to promote the access to justice). [12]

The first type of prison technologies, the ones used for control and surveillance, are certainly the most numerous and varied ones, and also the oldest considering the long history of technologies developed for the control of the prison population. The very origin of the prison institutions and the provision of imprisonment as a penalty in the 18th century and as the core element of the punitive system are related to the fact that prison emerged as a technology of power and surveillance, and it was because of this potential for control and surveillance (embedded in a context of resistance to corporal punishment) that the prison sentence has become the penalty par excellence in criminal law.[13]

Among the technological solutions aiming at control and surveillance, there is a wide variety of digital devices developed to track, sense and record the movements and identity of the prisoners, as well as to monitor and predict their behaviour, capture relevant information and regulate internal systems and environmental conditions[14]. From the usage of prison-guard robots, which are unlikely to be bribed[15], to smart and complex surveillance systems based on closed-circuit television cameras, three-dimensional cameras, sensors, video analytics, facial recognition technology and pattern recognition algorithms used to identify irregular or inappropriate behaviours, prison administrators are applying several smart systems of hyper security and optimal orderly functionality in order to keep order and enhance security[16].

New technologies are also being used to detect drugs in prison sewers and to stop contraband of prohibited items, such as mobile phones, illicit drugs and injecting equipment, weapons, tools, money and tobacco, using mail screening tools, drone

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[11] Ibidem.

[12] It is relevant to mention that KAUN e STIERNSTEDT classify prison technologies into three categories: (a) surveillance technologies (which include counterfeit detectors and video surveillance CCTV system), (b) communication technologies (which include tablets, email and phones), and (c) e-learning technology (which includes apps, platforms and online bookstores) (KAUN, A.; STIERNSTEDT, F., "Prison Tech: Imagining the prison as lagging behind and as a test bed for technology advancement", *Communication, Culture and Critique*, Oxford University Press, 15, 2022, p. 74). McKAY, on the other hand, argues that prison technologies can be classified in two types: security and surveillance technologies, which "can track, sense, record and analyse prisoners' movements and identities, monitor and predict their behaviour, capture data (including biometrics and health) and regulate reward systems and environmental conditions", and "technologies that promise to benefit people in prison by providing safer and more rehabilitative environments and connecting them to the outside world" (McKAY, C. "The carceral automation", op. cit., p. 101).

[13] FOUCAULT, M., *Vigiar e Punir: História da violência nas prisões*, Editora Vozes, Petrópolis, 2005.

[14] McKAY, C., "The carceral automation", op. cit., p. 101.

[15] HALLEVY, G., *When Robots Kill*, op. cit., p. 13.

[16] McKAY, C., "The carceral automation", op. cit., p. 104-105.

detection and deflector/blocking technologies and advanced devices as SafeView scanners, which are typically used by airports, to scan individuals entering the prison[17]. If these new technologies have shown to have a positive impact by abolishing degrading physical strip-searching through the usage of a full-body imaging scanner system or by generating more efficiency and freeing prison officers to be more involved in high-level rehabilitation work, they also bring new challenges and concerns related to data privacy, as these smart prisons generate vast quantities of data about their inhabitants[18], and ethical dilemmas such as the use of force by robot guards[19].

The second category of prison tech, the prison management technologies, on the other hand, are those developed to support the administrative and organizational activities in prison institutions. The digital transformation on management was first focused on "going paperless", which meant that the digital tools were used and developed to enhance and support the traditional management methods already in practice, using tools like the software Offender 360 by DXC technology, which is used for jail administration, record and assessment management, records reports, filter function and others[20].

In another application of new technologies and artificial intelligence to improve prison management, S. Wu, J. Wang, and Q. Jiang describe the use of algorithms to guide prison cell allocation problems.[21] As the authors describe, using the naive Bayesian algorithm, one of the most effective and efficient classification algorithms, and an algorithm that calculates the optimal distance between inmates by measuring the performance based on the average distance between each two persons in the same cell, to assess and evaluate their characteristics such as age, family condition, strong point, native place, crime, term of penalty, performance, scholarships and prizes and psychological state, some prisons in China were able to address the issue of cell allocation of new inmates, creating better living conditions and avoiding negative behaviours steaming from cohabitation.[22]

In regard to technology use by imprisoned people themselves, some research has shown that computer use for education and legal planning (as well as personal selfservice (PSS) kiosks which allow inmates to submit requests themselves) have helped to advance rehabilitation goals and reduce recidivism.[23] Many prison systems across the world, including those in Canada, the U.K., the U.S., the Netherlands, and Australia, allow

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[17] Idem, p. 105.

[18] Idem, p. 104-105.

[19] As HALLEVY describes "This technology may also face dilemmas of the type humans encounter in everyday life. If a prison guard apprehends an escaping prisoner and the only way to stop him is by causing injury, is it right for the robot to injure a human for that purpose?" (HALLEVY, G., *When Robots Kill*, op. cit., p. 120).

[20] KAUN, A.; STIERNSTEDT, F., "Prison Tech", op. cit., p. 75.

[21] WU, S.; WANG, J.; JIANG, Q., "The Application of Artificial Intelligence in Prison.", *Advances in FCCS*, Vol. 1, AISC 159, p. 331–335.

[22] Idem.

[23] McDOUGALL, C. et al, The effect of digital technology on prisoner behavior and reoffending: a natural stepped-wedge design, *Journal of Experimental Criminology*, December 2017.

imprisoned people to access educational and legal materials on shared computers, but many of these prison systems do not allow (or they heavily restrict) internet access. Another example of educational and training technologies applied to prison is the Real Life project developed in the Netherlands. Considering the importance of getting a job after leaving jail to avoid recidivism, the RealLife project created a digital tool to increase employability and to link companies with imprisoned people, allowing them to work while in prison.[24]

Information and communication technologies are also used within prisons to enable access to healthcare, though telemedicine appointments, and rehabilitation programs. As outlined by Morris and Bans, one example was the use of technology/digital solutions to apply the Timewise program, a "ten-session cognitive behavioural therapy (CBT)-based offending behaviour programme (OBP) aimed to assist self-management amongst people engaged in custodial violence" which "was piloted in six custody sites and delivered by existing OBP facilitators on a one-to-one and group basis".[25]

Finally, the prison information and communication technologies can be divided between those of internal use, which allow the access to internal services and virtual communication between inmate and staff; and those of external use, among which are the technologies used to promote access to justice. Examples of prison ICT can be found in the Smart Prisons Project's in Finland, in which the cells are equipped with a laptop and system that can be used to contact prison staff, healthcare services and partner NGOs; to make videocalls; and to access the internet for the limited purposes of study, online shopping and managing daily affairs. According to the Global Prison Trend 2022 report, similar projects are underway in Turkey, where a pilot scheme to integrate smart tech aims to enable prisons with touch screens linked with biomectrics that will connect the individuals with services they need without relying on staff. Kazakhstan has also introduced a range of digital measures including an online store to be accessed by people in prisons and their families and has established electronic terminals in prisons which can be used to submit requests, complaints and appeals to the various internal monitoring bodies.[26]

As can be seen, the prison technologies that are used to ensure access to justice represent only a small part of prison technologies and are definitely among the least developed and least used ones. Apart from the innovative example of Kazakhstan, which has electronic

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[24] DANIËLLE, D. et al, "RealME: A Digital Tool for Prisoners to Develop Employability Skills", *ACM University of Amsterdam*, 2017 (available at: https://www.researchgate.net/publication/322207954_RealME_A_Digital_Tool_for_Prisoners_to_Develop_Employability_Skills).

[25] MORRIS, J.; BANS, M. K., "Developing digitally enabled interventions for prison and probation settings: A review", *Journal of Forensic Practice,* v. 20, n. 2, 2017, p. 134-140. As the authors highlight, the use of technological solutions showed a "potential for large-scale engagement of service users regardless of their access to OBPs". However, the study also points out that the lack of human contact led some treatments to have "significantly less impact on depression and anxiety if service users did not receive regular contact with a support worker (compared to those who did)".

[26] PENAL REFORM INTERNATIONAL, *Global Prison Trends 2022* (available at: https://cdn.penalreform.org/wp-content/uploads/2022/05/GPT2022.pdf).

terminals in prisons enabling the submission of complaints, and some facilities that allow access to the internet for the purposes of access to justice (access to legal information, jurisprudence, etc.), there are not many other examples of technologies developed specifically to enable access to justice. The use of videoconferencing in prison, for example, is not new and even though it has been used for more than a decade to facilitate criminal proceedings and the practice of judicial acts[27], its use has not yet been regulated in many countries for contact with the lawyer (as will be discussed below). It seems that even technologies directed towards the access to justice serve the purpose of Justice rather than that of the individuals in prison.

4. DIGITAL TRANSFORMATION OF PRISONS IN PORTUGAL

In Portugal, the prison technologies are embedded in a context where digital transformation has become a key part of the governance strategy, both within the European Union[28] and at the national level[29], to strengthen the European Union, reinforce the shared foundations and values on which the European construction is based, but also to provide better services, ensure access to justice for all and meet the interests of citizens and businesses. According to the EU Strategy on e-justice, the electronic justice should be user-focused, designed with ease of use and empowerment for their users in mind.[30]

In the Portuguese prison environment and management, a few digitalisation projects have been implemented and others are underway, including e-learning, videoconferencing system, digital access to the prison population, statistical information, telemedicine. According to the Portuguese national report on the digital transformation of Justice, these projects include the following[31]:

- Project "Cidad@o Recluso+" aims at developing digital access for the prison population, making available a defined set of websites with information and fundamental services that facilitate the process of reintegration.
- Project "SIGAE-EP" aims at design and implement an integrated system for the management of economic activities within prisons establishments (e.g. canteens), in order to standardize the tax system of all prisons institutions.
- Project "e-Utente" aims at administrative modernization through dematerialization of individual files of workers and users of DGRSP in order to obtain greater security, data reliability, efficiency gains and the provision of activity indicators.

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[27] GARCÍA MOLINA, P., "Las comunicaciones por videoconferencia de los internos con el abogado defensor o con el abogado expresamente llamado en relación con asuntos penales", *Revista Brasileira de Direito Processual Penal*, Porto Alegre, vol. 5, n. 3, p. 1219-1254, set.-dez. 2019.

[28] EU Council, 2019-2023 Strategy on e-justice (2019/C 96/04).

[29] MINISTÉRIO DA JUSTIÇA, *Transformação digital da justiça 2015-2022*, Lisboa, 2021 (available at: <https://justica.gov.pt/Portals/0/Ficheiros/Organismos/JUSTICA/DOCTransformacaoDigitalDaJustica_individuais_9_2_22.pdf>)

[30] EU Council, 2019-2023 Strategy on e-justice (2019/C 96/04)

[31] MINISTÉRIO DA JUSTIÇA, *Transformação digital da justiça 2015-2022*, op. cit.

- Project "Saúde + Próxima" aims at strengthening the telemedicine system between prisons and community health units, enabling a faster response to follow-up and medical assistance issues, rationalizing travel, in order to improve inmates' access to community health care.

- Platform for Justice Indicators and Statistics and processing of data on Justice activities to provide statistics, operational indicators, interactive dashboards, with forecasting and scenario simulation capabilities, active bias detection, integrating them into open data platforms to promote interoperability with initiatives from civil society and the business sector.

- Development and use of educational content for the training of prisoners, via e-learning, with a view to promoting their employability, also exploring synergies with educational institutions.

- Installing videoconferencing systems in prisons to enable individuals in prison to keep in touch with their families and attending teleconsultations and court proceedings.

Although there is clear evidence of efforts towards the modernisation and digitalisation of prison services, it is still not possible to verify concrete changes towards a wide adoption of technological tools in the prison environment. Most of these projects are still underway and the ones already implemented are not available for all, considering that prisons still face a lack of basic equipment. During the pandemic, for example, most of the prisons did not have the resources to ensure live online classes - only about 15% of prisons managed to provide live online classes, with some irregularity.[32] Moreover, at the current stage of technological development, the types of technology that are being implemented in prisons, such as digital access, videoconferencing and e-learning, are not exactly innovative. Rather than representing a technological advance, it is an attempt to reduce the backwardness of prisons.

Regarding the technologies related to promoting and ensuring access to justice within prison institutions, a few measures have been taken. Recently, the General Regulation of Prison Establishments was amended by Decree-Law no. 58/2022, of 8 September, to provide for the installation and use of telephone equipment in the cells, adjust the duration of communications and regulate the use of video call systems. In fact, strengthening the possibilities of contact with the outside plays a key role in the reintegration process. In addition, the Decree-Lay also allowed contact with lawyers through the telephones installed in the cells, which facilitated contact in more appropriate conditions, with more privacy and extended time. However, communications by video calls were only regulated for contacts with relatives or people with whom they have a significant personal relationship, when they cannot visit regularly - but not for contact with lawyers, which could have been an important step in promoting access to justice.

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[32] RODRIGUES, A. et al., *The impact of the COVID-19 pandemic in the implementation of alternatives to prison and preparation of individuals for release in Portugal*, Penal Reform International, 2021 (available at: http://www.prialteur.pt/application/files/5116/4664/6574/ippf_report_-_portugal_-_en.pdf)

If it is true that these measures represented a strengthening in the maintenance of family and affective relationships, on the other hand, it draws attention to the fact that the innovation are telephones.

At last, in relation to technological tools for access to justice, it is noteworthy that the Superior Court of Justice is developing an artificial intelligence-based programme that will automatically summarise sentences in common language so that the general population can understand its content - even though it is not a prison technology, it is a good example of technology in favour of access to justice.

5. ETHICAL, PRACTICAL AND HUMAN RIGHTS ISSUES ON THE APPLICATION OF NEW TECHNOLOGIES IN PRISON CONTEXT

As the widespread development of prison technology demonstrates, there is a growing (and possibly exaggerated) enthusiasm for the potential of technologies to transform prisons into more efficient, safer and more suitable establishments for serving prison sentences. Especially in the United States of America, where the phenomenon of prison privatisation has accelerated the application of new technologies in prisons, but also in Europe and Asia, a large prison technology industry (so-called prison tech) is under development with the aim of transforming prisons into smart prisons.

Indeed, the development of new technologies and the digital transformation in prison can increase management efficiency but most importantly they can contribute to normalising life in prison and to minimizing the impact of incarceration.[33] The technologies of information and communication has potential to promote closer contact between inmates and their families, to empower and to give the opportunity for the individuals to take responsibility for their own lives. They can also improve access to health, education and justice, if developed and applied with respect for fundamental rights. The training on digital tools can also improve digital literacy among inmates considering the current importance of digital skills for all aspects of life.

As a consequence of the Covid-19 pandemic, the measures of confinement and social distance have contributed to further accelerate the use of new technologies within the criminal justice and penitentiary systems. The pandemic has shown that the use of technology by prison and probation services has the potential to play an important role in the implementation of criminal sentences and will certainly be more commonplace after the COVID-19 pandemic. As studies has shown, the positive results of the use of online tools on a daily basis during the pandemic opened possibilities for considering their application in the development of new projects, activities and rehabilitation programmes during the execution of sentences.[34]

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[33] VAN DE STEENE, S.; KNIGHT, V., "Digital transformation for prisons: Developing a needs-based strategy", *Probation Journal*, vol. 64, 3, 2017, p. 258.

[34] RODRIGUES, A. et al., *Non-custodial sanctions and measures in the Member States of the European Union: Comparative Report*, Instituto Jurídico da Faculdade de Direito da Universidade de Coimbra, Coimbra, 2022, p. 67

The concept of *smart prisons* however is still very restricted to a couple of pilot projects underway in some countries, and the technological advances are not always aimed at promoting and protecting the fundamental rights of people deprived of their liberty. But the technological revolution and digital transformation that is upon our society and justice systems will inevitably and increasingly affect the penitentiary realm worldwide. Given the inevitability of the use of technologies during the execution of prison sentences and the potential benefits it could provide for promoting the normalisation of prison and the access to legal information in prison settings, it becomes increasingly necessary to establish the limits of the use of technologies in prisons.

This perspective brings a necessary and growing awareness of the need to think about the implications of the technologies in prisons, the process of development of these technologies, the limits and purposes of their use, posing the questions: for whom, in what way and for what purposes are developed the prison tech?[35]

Within the limits of this brief analysis of the subject, we will highlight the main challenges and the ethical, practical and human rights issues that the implementation of prison tech raises.

First and most important, the development and use of prison technologies has to be human-centered, which means that it has to be grounded and sensitive to the needs of all the people that will be using and administering it - inmates, staff, family members, service providers, civil society, etc.[36] The imprisoned individuals has to be regarded as users, customers and active participants, and not as subjects of technological developments. After identifying the different social groups involved in the prison technology industry, KAUN and STIERNSTEDT pointed out the problem of the absence of participation of the people deprived of their liberty themselves in the construction of the technologies developed for prisons.[37]

Throughout its history, the prison not only has emerged as a control and surveillance technology, but has served as an environment for developing and testing security technologies, which later were transferred to border control and other institutions and social spheres. Currently, there are growing risks of prison being used as a testing environment for artificial intelligence systems: prisons are valuable commodities for biometrics companies and data collection, providing the industry with a test population to evaluate the effectiveness of these new identification technologies. While any other industry may be cautious about introducing a biometric technology to its customers, prisons will not always have the same restrictions, which makes the prison environment a potential ground for testing technological solutions.[38]

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[35] KAUN, A.; STIERNSTEDT, F., "Prison Tech", op. cit., p. 70.

[36] VAN DE STEENE, S.; KNIGHT, V., "Digital transformation for prisons", op. cit., p. 260.

[37] KAUN, A.; STIERNSTEDT, F., "Prison Tech", op. cit., p. 76.

[38] Idem.

In order to overcome this approach of the imprisoned individuals as an object at the disposal of justice, and not a citizen with rights, the development of prison technology should be oriented towards achieving the preventive purposes of imprisonment rather than only towards prison order and security. The innovative approaches in prison tech need to consider how technology could facilitate the social reintegration, minimise the impact of confinement, protect the rights of the most vulnerable, and guarantee the protection and effectiveness of human rights.

The great capacity that the information and communication technologies have to collect, share, exchange and process operational data in a structured, fully automated and interoperable way, brings the issue of consent and privacy. Especially considering that the very situation of confinement increases the opportunities to continuously monitor individual behaviour. As most of the technologies to which persons deprived of their liberty are subjected do not require the granting of consent - due to the characteristics of imprisonment itself - even greater care is needed regarding the type of data that is allowed to be collected, stored and shared.

As technologies continue to advance, there is a growing duty of the State to respect the right to privacy within prisons and to provide legal information on the rights and duties of persons deprived of their liberty in relation to the implementation and use of technological tools in prisons, allowing for an adequate exercise of their rights. It is particularly relevant in the prison context the respect for the right to privacy in communications with lawyers.

There is growing evidence that use of technology by individuals in prison can enhance reintegration. According to McDOUGALL, for example, digital technology was found to decrease prison disciplinary offenses over a two-year period and reduce reoffending in the first year after release.[39] However, the negative effects of technology must also be taken into consideration. The misuse of the devices may aggravate the social isolation cells and increase the length of confinement in cells - according to KNIGHT, after the introduction of television into the cells, inmates seemed more appeased about spending time in their cells and less willing to leave their cells.[40] The communication by digital means can affect the spontaneity of dialogue with human rights institutions that oversee prisons and hinder communication.[41] When the use of digital devices is associated with payments for service use, it can result in significant costs to access information and communication tools. In addition, the lack of equipment and training can deepen inequalities within prison.

To conclude, the inherent risks that technological development brings in the prison context are not a problem themselves. The practical results that technologies will bring to prisons and imprisoned individuals will depend on how the technology is developed,

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[39] McDOUGALL, C. et al, op. cit.

[40] VAN DE STEENE, S.; KNIGHT, V., "Digital transformation for prisons", op. cit., p. 264.

[41] PROVEDORIA DE JUSTIÇA, *Relatório à Assembleia da República de 2020*, Lisboa: Provedoria da Justiça, 2021.

implemented and used. Therefore, it is the lack of regulation of the ethical boundaries of prison technology development which may be the main obstacle to enforcing human rights limits.

6. CONCLUSIONS

The study sought to analyse the current developments and types of technology existing in prison, with the aim of investigating whether technological advances are serving as a tool to support or further to discriminate against persons deprived of their liberty in their access to justice.

Among the five main categories of prison tech (control and surveillance, prison management, educational and training, access to health, and information and communication) the control and surveillance technologies are certainly the most developed ones. The fact that prison technologies have been developed mainly to prioritise order and security rather than personal development and social reintegration, raises ethical, practical and human rights issues that must be taken into consideration in the development, implementation and use of new technologies.

Thus, considering that the technological development is a reality and as technology becomes cheaper it will inevitably become more and more common in prisons, it is essential that the regulation of new technologies, especially artificial intelligence, considers the specificities of the prison context, and imposes legal and ethical limits on the development of prison tech. Especially taking into consideration the risks of prisons being used as a testing environment for artificial intelligence systems.

Technology itself does not pose a threat to human rights. It is the unregulated development of prison technology that has the potential to become a threat to human rights, as it enables the development and use of technologies that are not human-centred and that focus on efficiency, control and surveillance, regardless of the interests and rights of the human being who is being subjected to them. In reality, technology is not only an inevitable reality in the prisons of the near future, but a necessity, a tool for the normalisation of prisons and for the digital inclusion of the people deprived of their liberty (if not a fundamental right).

The Council of Europe's recommendation on Prison Rules states that: 'During the serving of a sentence, life inside will resemble life outside as much as possible'. In the current digital era in which the society is increasingly developing in a digital environment, information and communication technologies are important instruments for normalising life in prison and for preventing digital exclusion and illiteracy. The rise of a technological society reinforces social inequalities for those who are unable to access technology.

Moreover, with the digital transformation of justice and judicial processes, the lack of equipment, training in digital tools and access to the internet constrain access to justice. Currently, depending on the stage of the digital transformation of justice in a given jurisdiction, the right of access to justice may not be fully exercised without the appropriate tools and digital knowledge. In most prisons around the world, inmates have

little opportunity to use computers and are typically banned from online legal sources. In the current context where legal resources are increasingly digital, it is being questioned whether restricting access to technologies is justified.

The execution of prison sentences determine itself a situation of greater vulnerability for individuals to fully exercise their fundamental rights before the justice system, which impose an increased duty of the State to promote access to justice within prisons. Recently, the ECtHR decided that although the authorities may restrict internet access in prisons, refusal to access the websites of the ECtHR, the Constitutional Court and the official journal in order to prepare one's own legal defence and to access legal information may constitute a violation of the ECHR (Case *Ramazan Demir v. Turkey*). Although the decision is grounded on the right of access to information (art. 10, ECHR), in view of the omnipresence of technologies in society and advances in the process of digitalisation of justice, the question arises: does the right of access to justice unfold into a right of access to technology during the execution of the prison sentence?

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