Smart Prison:
Digital Environment for Rehabilitation

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Digital Rights: Imprisonment & Remand Imprisonment Act 2015

- Prisoners may be given permission to send and **receive e-mail messages** and **use the internet** for an important reason related to the maintenance of outside contacts, subsistence, or attendance to work-related, educational, judicial, social or housing matters or for another corresponding important reason

- Prisoners may be given permission to communicate with their **close relatives or other close persons via video connection** or other suitable technical means of communication where the participants have an audio and visual connection with each other. In order to maintain outside contacts or for another important reason, prisoners may be allowed to communicate **with some other important person** in this manner.

Strategy Map of the Criminal Sanctions Agency for 2020-2023

Vision 2025

United, uniform, and competent

Prepares for a life without crime

Safely towards more open enforcement

Social objectives (clients and citizens)

We prepare clients for a life without crime

We ensure safety during the enforcement of sentences and promote the safety of society

Legal protection and equal treatment are realised in our operation

Operative performance (processes and organisation)

We form networks and integrate into the normal services of society

Our operational and client processes are smooth and information systems promote performance

Our network of facilities and organisational structure help us reach our goals

Staff

We reform our management system and support the development of our staff's competence

We improve the staff's well-being at work and our employer brand

We carry out goal-oriented interactive work

Resources

We allocate resources to activities promoting the strategy

Our operation is economic and productive

Digital Services Support Strategical Targets

- **Reduce recidivism and reintegrate into society**
  - Principle of normality: availability of public services
    - More services with personal and easy access
  - Continuum to digital society
    - Prevent marginalisation: digital skills are needed in modern society
    - Modern job market requirements

- **Smooth operational and management processes**
  - Independent use of services
  - Less paper work: more time for face-to-face contact
  - More productive use of staff resources

Targets of the Smart Prison Project

- **Hämeenlinna Smart Prison**
  - Personal cell device in every cell for 100 women inmates
  - Smart system (including inmate e-mail in 2022)
  - Pilot environment for new digital services
  - Digital services as part of everyday management, rehabilitation and interaction between staff and prisoners

- **General digital development**
  - Digital services portal for joint use workstations enabling new digital services
  - Digital guidance training to staff
  - Meeting the challenges of covid-19!

Targets of the Prison Concept

Prison concept

- Cut costs and uses space more efficiently

- Enable more open prison environment

- Increase prisoners' rehabilitative independence

- Leave more time for interaction and coaching

- Require a new type of a work and management culture

… supported by digital services

- Digital services are cost-effective

- Cell device is a secure access to outside

- Online independent rehabilitation services and studies

- Routine tasks can be managed independently with the cell device

- Change in prison culture enables positive change in prisoners

GOAL
To improve the prisoners' ability to live without crime > To decrease the risk of repeated offending

FOR WHOM?
The concepts' beneficiaries include the society, the personnel of the prison as well as the prisoners.

HOW?
Effecting the probability of repeated offending is the foundation of everything. Effects are produced through...

CULTURE

Active support and motivation

Humane and respectful interactions

Coaching for change

LEADERSHIP

A prison is a
LEARNING ENVIRONMENT FOR A LIFE WITHOUT CRIME
– safe, encouraging and supporting of participation in society –

WHY?
The prison concept is based on Finnish Imprisonment act, which states that the goal of the enforcement of imprisonment is to increase the readiness of the prisoner to live a life without crime, by promoting the prisoner's ability to manage his or her life and by promoting his or her adjustment to society as well as to prevent the commission of offences during the term of sentence.

The concept is also informed by the four core values of Criminal Sanctions Agency:

Respect for humanity

Justice

Belief in the ability of a person to change and grow

Security

Supporting convicts' independence and initiative

Matching services to convicts' needs

Building partnerships outside the prison

SERVICE PROVISION

FOR THE PRISONERS
Improved chances of participation in the society and of living without crime during and after the sentence.

FOR THE PERSONNEL
Sense of meaningfulness in work and opportunities for professional growth.

FOR THE SOCIETY
Safety and resource-effectivity that is measurable.

In a Digital Learning Environment Prisoners...

- **Manage** their daily affairs via the cell device
- **Study** also independently and subjects not available in prison
- **Contact** their relatives online
- **Consult** professionals and take responsibility for their rehabilitation
- **Learn** digital skills
- **Learn** to search for information online
- **Improve** their free time with meaningful activities when in their cells
- **Stay on track** what happens inside and outside the prison
- **Learn** VR-assisted self-regulation

In a Digital Learning Environment Staff…

- **Benefit** from more flexible work flows

- **Contact** prisoners more proactively face-to-face

- **Interact** with prisoners in new ways - online

- **Supervice** digitally

- **Learn** digital skills

- **Guide** prisoners to use digital services

- **Adopt** values and attitudes supporting
  - New prison concept
  - New prison officer concept including both security and rehabilitative work

Project Trajectory 2018 - 2022

- Workshops and service design 10/2018 – 04/2019

- Proof of concept (POC) 04/2019 – 06/2019

- Defining requirements and procurement documents 06/2019 – 03/2020

- Public tender 03/2020 – 06/2020

- Implementing obligatory requirements (R1) 07/2020 – 10/2020

- Auditing including data security and data protection 10/2020 – 02/2021

- Roll-out in Hämeenlinna 03/2021

- Implementing additional requirements (R2) 03/2021 – 08/2021

- Field study of Smart Prison experienced by Laurea University 06/2021 – 08/2021

- Surveys and feedback from staff and prisoners 10/2021 – 01/2022

- Inmate e-mail system pilot 03/2022 –

- Implementation of new processess and management of cultural change in prison continues...

Ensuring adequate information security and data protection in the Smart prison deployment project
- Regulatory framework
- Lessons learnt and tackled risks

Data processing regulatory framework is controlling the digitalization (of the public sector in Finland and EU)

Public documents (1)

Discretionary documents (1)

Secret official documents (1)

Security classified documents (2,3)

TL I   TL II   TL III   TL IV

Personal data (4,5)

Special categories of personal data (4, 5)

Personal data relating to criminal convictions and offences (6. 7)

Special legislation (national acts and decrees, ePrivacy)

1. Act on the Openness of Government Activities 621/1999
2. Act on Information Management in Public Administration 906/2019
3. Government Decree on Security Classification of Documents in Central Government 1101/2019
4. GDPR 679/2016
5. Data Protection Act 1050/2050
6. Act on the Processing of Personal Data in Criminal Matters and in Connection with Maintaining National Security 1054/2018
7. Act on the Processing of Personal Data in Criminal Sanctions Agency 1301/2021

Data protection

Information security

Challenges: How to manage (apparent and potential) conflicts between data protection and information security?

User experience and strategic goals: 1) Integrating inmates back to the society and 2) reducing manual work in prisons

Confidentiality of electronic communications and privacy

Data minimization and purpose limitation of personal data

Technical surveillance, analysis and monitoring

Audit log collection, analysis, processing and sharing

Threat information collection and sharing

RISE

Areas to be taken into account

Workstation
- Laptops
- Disabled usb-ports

Operating system for workstations
- Linux Mint
- Applications
- Information security updates

Operating environment
- Firewalls
- Servers

Application
- Information security updates
- Whitelist websites

Concrete steps to ensure adequate information security and data protection

- **Challenge: The target group has tendency to test the security resilience of the system in all possible ways.**
- Procurement process
- Adequate resources and key roles in the project team
- Data protection and information security by design and default
- Authentication, controlling, monitoring
- Information security audits
  - Web application
  - Workstation
  - Inmate email system
  - Critical question: What happens after the deployment? How to ensure continuous monitoring?
- DPIA (Data Protection Impact Assessment)
- Training staff and inmates

Devices

- PriSec: Lenovo laptops (hardened)
  - LAN + WLAN
- Separate laptops for high-school examination
- Separate cell TV & phone
- Virtual Reality (VR) devices
- Devices for AI training

- Security technique + new OMS 05/2022

PriSec Features

- Noticeboard

- Calendar

- Requests and Chats
  - Requests and surveys

- Material bank
  - Guidelines, forms and self-help material for rehabilitation

- Video Visit
  - Video calls with prison staff, relatives and public service providers

- Canteen
  - Online shopping

- E-learning
  - Moodle
  - Open Office tools

- E-books and audiobooks

- Restricted internet
  - Whitelisted websites
  - Portti - opening page

- Inmate e-mail (pilot 03/2022)

Criminal Sanctions Agency

R/SE

Contact information   🌐 In English ⌄   🔍

Home	Topical	Sentences	Enforcement	Criminal Sanctions Agency	Units
	News, publications	Regulations	Prison term, release	Organisation, jobs	Contact information

Home » Portti

Portti

Alcohol, Drugs and Addictions

Values and Behavior

Everyday skills

Studying and Work

Health and Well-Being ⌄

Family

Society

PORTTI

Attention! The Criminal Sanctions Agency is not responsible for providing the services on the Gate website. Some websites may offer paid services or services that require signing in or registration, such as giving own contact information. You decide whether or not to use such services.

Information About Coronavirus

TA 1 Alcohol, Drugs and Addictions

You can find help to stop or reduce alcohol or drug use, and treatment of other addictions, here.

TA 2 Values and Behavior

Services related to mental health, controlling own behavior, and spirituality, can be found here.

TA 3 Skills in Everyday Life

NGOs

- **Digital Leap**
  - Basic skills & coding / image processing

- **Visible Women**
  - Online consultation for rehabilitation

Kalliola Settlement Activities

Krits – Finnish Foundation for Supporting Ex-offenders

Rehabilitation and Public Services

- **Kela Channel**
  - Video calls with Social Insurance Institution

- **Aggredi**
  - Video consultation for aggressive behaviour rehabilitation

Prisoners Learning Artificial Intelligence (AI)

Photo: Matti Ahlgren / Aalto University

- 3 free online courses (© Helsinki University & Reaktor
  - Elements of AI
  - Building AI
  - Ethics of AI
- Defining AI, problem solving, probabilities, machine learning, neural networks, basics of Python, future implications and ethics

- https://www.elementsofai.com/fi/

Virtual Reality (VR) Assisted Rehabilitation

- Sessions assisted by psychologists

- In collaboration with Tampere Univeristy

  - Relaxation, mood, skills training

  - Substance rehabilitation?

- New VR-programs for social anxiety and aggressiveness in 2022

Training AI

- Training AI algorithms as prison work in four prisons including Smart Prison Hämeenlinna (women inmates)

- In collaboration with a software company

- Training material includes text material on real estates

- Prisoners learn digital and cognitive skills

- Alternative work form to prisoners unable to participate in more physical or group work

Survey to Prisoners

- 74 % uses daily, 100 % every week

- 95 % easy to use

- 84 % fast enough answer to requests and messages

- 95 % got enough help to use the system

- Most used: Requests, video calls, open office tools, material bank, e- and audiobooks, online canteen, online bank etc.

- Wishes: more possibilities for studying and streamed material (news, music etc.)

- Positive: fast and flexible contact to staff, video calls to relatives

- Negative: connection problems especially during video calls

- Grade point average (4-10): **8.1**

Survey to Staff

- 42 % uses daily, 42 % weekly, 10 % not at all

- 89 % easy to use

- 86 % easy to answer to prisoners' messages and requests

- 87 % got enough help to use the system

- Positive: fast and realtime communication, video calls are easy to supervise remotely, management of ward's schedules, all important material is reachable in material bank, possibility to contact prisoners when working home, sentence planning interviews and contact to NGO's via video calls

- Negative: more digital work = less face-to-face work?, connectivity problems and "slowness" of the system from time to time, not all prisoners follow messages etc. in the system

- Grade point average (4-10): **7.4**

Extending Digitalisation 2022 -

Towards socially inclusive digital society

Finnish Institute for Health and Welfare &
Laurea University of Applied Sciences

- **DigiIn** research project: effects of smart prison

- 2022: new Smart Prison (Pyhäselkä) and extending the inmate e-mail system to all closed prisons

- Future
  - Extending the smart system to all closed prisons
  - Integrations: OMS, Prisoner health care management system, Prisoner payment card etc.?

Our story continues

- **Business Insider**: At prisons in Finland, inmates are learning AI and taking online tech courses as a bridge to life on the outside

- https://www-businessinsider-com.cdn.ampproject.org/c/s/www.businessinsider.com/finland-prisons-technology-ai-online-classes-2020-8?amp

Linna

Tervetuloa naisvankilaan! Dokumenttisarja uudesta Hämeenlinnan vankilasta

▶ Katso   ↪ Jaa ohjelma   ♥ Lisää suosikiksi

KAUSI 1

Katsottavissa   Tulossa   Kaikki

Jakso 1: Saako uudesta sellistä skypettää?

1/8. Edessä on muutto uutuuttaan kiiltävään naisvankilaan. Elinkautisvanki Lilja saa kuulla kuittailua tavaroidensa määrästä. Vartija Seija urakoi pitkän päivän vankien muuttokuormia tarkastaessaan.

ma 7.2.2022

Jakso 2: Sama paska eri paketissa

2/8. Uusi vankila on vihdoin valmis ottamaan asukkaat vastaan - vai onko? Keskeneräisyys koettelee kaikkien hermoja muuttohässäkän keskellä.

ma 7.2.2022

Jakso 3: Jos tekee jekkuu, pitää kestää kakkuu

3/8. Vangit ovat huolissaan ompelimon tulevaisuudesta. Jane saa huonoja uutisia kotimaastaan ja Mirella laskee kiivaasti jäljellä olevia päiviä.

ma 7.2.2022

Jakso 4: Kuka muistaa vankia jouluna?

4/8. Vasta-avioitunut Tiina saapuu suorittamaan tuomiotaan ja Lilja valmistautuu neljänteen jouluunsa vankilassa.

ma 7.2.2022

Jakso 5: I'm not a criminal

5/8. Kotiäiti Linda on ensimmäistä kertaa

Jakso 6: Perhetapaamiset peruttu, hyvää äitienpäivää!

Jakso 7: Mitä ei voi estää, se täytyy kestää

Jakso 8: Toiset lähtee, toiset jää

8/8. Tuomionsa aikana Lilja näkee vankien

References

- Allen, D. T., & Abadi, M. (2020, August 11). At prisons in Finland, inmates are learning AI and taking online tech courses as a bridge to life on the outside. *Business Insider.* https://www.businessinsider.com/finland-prisons-technology-ai-online-classes-2020-8?r=US&IR=T

- Lindström, B., & Puolakka, P. (2020). *Smart Prison: the preliminary development process of digital self-services in Finnish prisons.* https://icpa.org/smart-prison-the-preliminary-development-process-of-digital-self-services-in-finnish-prisons/

- Puolakka, P. (2021). *Towards digitalisation of prisons: Finland's Smart Prison Project*. Penal Reform International. https://www.penalreform.org/blog/towards-digitalisation-of-prisons-finlands-smart-prison-project/

- Puolakka, P. (2021). Smart Prison Facility Spurs Rehabilitation in Finland. Correctional News, November 3. https://correctionalnews.com/2021/11/03/smart-prison-facility-spurs-rehabilitation-in-finland/

- Puolakka, P. (2021). Smart Prison: A historical digital leap in Finnish prisons. *Justice Trends,* June 25. https://justice-trends.press/smart-prison-a-historical-digital-leap-in-finnish-prisons/

References

- Puolakka, P. (2022). Smart Prison: From Prison Digitalisation to Prison Using, Learning and Training Artificial Intelligence. *Justice Trends*, Issue 8. https://justice-trends.press/smart-prison-from-prison-digitalisation-to-prison-using-learning-and-training-artificial-intelligence/

- Varghese, S. (2019, October 23). In Finland, prisoners are being taught crucial AI skills. The Nordic state plans to prepare prisoners for the digital job market. *Wired UK*. https://www.wired.co.uk/article/finland-ai-prisons

- **Academic research:**

  - Järveläinen, E., & Rantanen, T. (2020). Incarcerated people's challenges for digital inclusion in Finnish prisons. *Nordic Journal of Criminology*. DOI: https://doi.org/10.1080/2578983X.2020.1819092

  - Rantanen, T., Järveläinen, E., & Leppälahti, T. (2021): Prisoners as Users of Digital Health Care and Social Welfare Services: A Finnish Attitude Survey. *International Journal of Environmental Research and Public Health*, 18(11), 5528.

Thank you!

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