FH CAMPUS WIEN
UNIVERSITY OF APPLIED SCIENCES

Efficient, Secure and Structural Detention Design in Prisons in Austria

Research Project – Short Report

BUILDING AND DESIGN

ADMINISTRATION, ECONOMICS, SECURITY, POLITICS

ESBH

Bundesministerium Finanzen

FFG Forschung wirkt.

KIRAS Sicherheitsforschung

ACKNOWLEDGMENT

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IMPRESS

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The texts and data have been carefully prepared; however, we cannot assume any liability for the accuracy of the information provided.

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Editorial Note: This publication also includes recent images from Austrian correctional facilities provided by the Federal Ministry of Justice. These images are used for illustrative purposes and are not related to the recommendations.

The project ESDDP is funded within the Austrain security research programm KIRAS of the Austrian Federal Ministry of Finance and managed by the Austrian Research Promotion Agency. (www.kiras.at)

Research and Development with Social Responsibility

With over 8,000 students, nearly 70-degree programs, and ten specialized research centers, FH Campus Wien is Austria's largest university of applied sciences. The numbers speak for themselves: In the 2022/23 fiscal year, we conducted 97 externally funded research projects, generating a total contract volume of 12 million euros and a revenue of 4.2 million euros. We expect to surpass these figures in the 2023/24 fiscal year.

These impressive numbers make me proud as Vice Rector for Research and Development since they represent the demanding work of people without whom this success would not be possible. Our researchers, staff, graduates who carry this spirit out into the world, and our project partners all contribute to these achievements. In our research projects, we collaborate with other universities, the public sector, and numerous companies, both nationally and internationally.

The project "ESBH – Efficient, Secure Structural Detention Design in Austrian Prisons" is a prime example of how FH Campus Wien implements cooperative, interdisciplinary, and application-oriented research with direct practical benefits. The starting point of this research project was Austria's 24 correctional facilities (formerly 23), which exhibit highly diverse structural and technical conditions. These varying conditions pose challenges to the primary goal of correctional facilities: the rehabilitation and reintegration of individuals. To address the unique needs of each target group and provide equal opportunities, uniform guidelines are needed across Austria.

In this project, the Departments of Building and Design, Administration, Economics, Security, and Politics at FH Campus Wien collaborated with the Federal Ministry of Justice, the Institute for Applied Law and Criminology at the University of Innsbruck, the app informatics zt GmbH engineering firm, and Linienreich General Planning & Project Management GmbH to develop recommendations for the required standards. The Federal Real Estate Agency and the Federal Ministry of the Interior supported the project.

The experts' recommendations, will drive the efficiency of the Austrian correctional system rendering it truly needs-based and humane. ESBH is a project that looks beyond conventional boundaries, advances society, and puts people—not merely numbers—at the center. This is exactly what FH Campus Wien stands for.

FH Campus Wien/Schedl

Elisabeth Haslinger-Baumann, DGKP
Vice Rector for Research and Development at FH Campus Wien

CONTENT

STATEMENTS


Antonio Nedić

Mag. Friedrich Alexander Koenig
Director General for Corrections

The Austrian correctional system, with all its institutions and associated external facilities, faces multiple challenges caused by the diverse structural conditions of new buildings, constructions, and numerous existing, often historically protected, buildings owned either by the Ministry of Justice itself or the Federal Real Estate Agency. The limitations posed by heritage protection, the stark structural differences, and shared ownership have restricted the development of consistent standards for structural and technical conditions in detention facilities. These disparities, along with dual ownership, have further complicated the implementation of essential, unified modernization measures that would meet the needs of all users (facility management, staff, and inmates).

The Federal Ministry of Justice, Directorate General for Corrections and Detention of Deprivation Measures, is continuously committed to advancing professionalization by adopting further science-backed measures. This research project makes a substantial and crucial contribution toward these goals. As key stakeholders, the correctional administration, particularly its users, have contributed relevant aspects—including necessary security dimensions—and will benefit significantly from the project's recommendations on structural and technical standards.


Neustart/Helmut Mitter

Spiros Papadopoulos
Head of NEUSTART Vienna

The heterogeneous nature of the current correctional facilities requires a nuanced approach to meet the varied needs of facility management, staff, and inmates. NEUSTART Vienna supports the project's objectives, which aim to bring about essential improvements to conditions within the correctional system. We are convinced that humane and contemporary prison conditions not only benefit those in detention but also strengthen society. Moreover, developing sustainable structural and technical standards can significantly enhance detention conditions.
These standards should be based not only on ecological and economic sustainability but also on social aspects, such as the promotion of communal and retreat spaces for inmates, the creation of employment and educational opportunities, and the integration of therapeutic and support services, alongside a clear age-related spatial separation in daily prison life. Such a holistic approach would improve detention conditions in Austria, promote rehabilitation, and contribute to public safety.


Hammerschick

Dr. iur. Walter Hammerschick
Institute for the Sociology of Law and Criminology (IRKS)


Färber

Rebecca Walter, MA
Researcher

Significant disparities in the structural design and amenities of Austrian correctional facilities, along with the lack of appropriate standards, present an issue not only when doubts arise as to whether detention conditions meet human rights and international minimum standards. Detention conditions must always be designed to ensure that the correctional system fulfills its role effectively. The punishment is the deprivation of freedom; any further mistreatment undermines quality work in corrections. Research shows a clear connection between a positive prison climate—which is influenced by structural and design conditions—and the success of treatment and reintegration efforts.
Uniform standards that acknowledge this would foster a more consistent and improved correctional landscape in the medium to long term.


privat

Dr. Peter Kastner
Deputy Division Manager,
Austrian Ombudsman Board

In line with the recommendations of the Ombudsman Board and international organizations, correctional facilities and forensic therapeutic centers should be spacious, filled with natural light, and accessible. All cells should have separate sanitary areas and refrigeration options. Each department should have communal spaces and residential kitchens. Staff providing treatment and support should have access to offices that meet their needs. There should be ample therapy rooms, a family-friendly visitor area, long-term visitation rooms, sports facilities (both indoor and outdoor), and multipurpose rooms that can also be used for religious gatherings. The expansion of facilities should not come at the expense of open spaces, and a separate area should be allocated for inmates on work release. Modern accommodations relieve pressure in daily prison life, prevent violence, make living conditions more bearable behind bars, and significantly contribute to job satisfaction and a positive workplace atmosphere. The judicial administration should have the necessary financial resources to ensure contemporary infrastructure.


zVG

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ZT- Consulting Engineer for Computer Science and CEO of app informatics zt gmbh, Professor at the Computer Vision Lab, TU Vienna


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**Costin
Bernhart, BSc**
Researcher at
app informatics

The digital transformation presents various challenges for correctional authorities. From a technological perspective, a “Smart Prison” should integrate systems and components that allow inmates more autonomy while enhancing staff efficiency and safety. As a leading engineering firm in digitalization, app informatics zt gmbh could provide an innovative approach to technology design and implementation in corrections, further advancing digitalization in corrections under a KIRAS project.

In recent years, it has become clear that structural and technical conditions in Austrian correctional facilities play a crucial role in the safety, efficiency, and daily life of inmates and correctional officers. This project addresses the complex task of creating humane living conditions, promoting rehabilitation, ensuring the safety of both staff and inmates, and complying with architectural and security requirements relevant to correctional facilities. The project provides approaches to enable enhancement and simultaneous structural standardization within correctional facilities.


zVG

**Bmst.in Ing.in
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CEO, Linienreich - General Planning und Project Management GmbH


zVG

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CEO, Linienreich - General Planning und Project Management GmbH

ESDDP – Efficient, Secure and Structural Detention Design in Prisons in Austria

Austria's penal institutions are very heterogeneous in terms of structural conditions and technical design. While some prison buildings have been newly constructed, numerous among them have existed for a long time and some are even listed. The structures of these existing buildings have been adapted to varying degrees. As a result of this high structural diversity, there are hardly any standards that define structural and technical requirements for prisons. This, in turn, has made it difficult to implement the necessary standardised modernisation measures that take into account the needs of all users (prison management, staff, inmates).

The project was subdivided into four work packages (WP).
"WP01 project management" comprised coordinating partner and work group meetings over the course of the entire project period, project controlling and drafting the required reports.

"WP02 theoretical basis" comprised a qualitative and quantitative description of the status quo in Austria's twenty-four (before twenty-three) penal institutions, taking into account the number of inmates, staff, organisational structure, structural conditions and infrastructure. The thus obtained overview was then used as a basis for selecting nine prisons that were analysed in more detail as part of WP03. WP02 also provided the relevant information on legal frameworks, Promising Practices in view of structure and technical design as well as systemic and dynamic security in organisations, both at the national and international level. The findings of WP02 were summarised in a result report.

"WP03 data collection" included an assessment of the nine selected prisons using socio-scientific methods and an analysis of structural and technical conditions based on as-built drawings and on-site inspections, focusing mainly on the users' needs, problems and use cases. Internal processes (logistics) were documented and evaluated based on the project results already available at this stage using an interdisciplinary approach (sociology, planning, architecture, digitalisation). The results of WP03 were again summarised in a result report.

In the final work package, "WP04 analysis and results", the previous findings were used to compare the current situation to the targets in order to define sustainable structural and technical measures. Together with the relevant stakeholders, a package of measures and practical recommendations for planning penal institutions were developed and a digital tool on the basis of a wiki engine.

The digitally available planning recommendations enable both contracting authorities (Federal Ministry of Justice, Federal Real Estate Agency) and contractors to make public tendering procedures more efficient and effective and implement needs-based modernisation measures in Austrian penal institutions more quickly in the future. The results were also made available to the Austrian Federal Ministry of the Interior as a basis for future adaptations of immigration holding centres that are managed by the Austrian police.

PROJECT CONTEXT

The inherent tension between the three primary penal objectives outlined in § 20 of the Prison Act (StVG)—rehabilitation, security, and punishment—undoubtedly presents a challenge regarding the structural and design conditions of correctional facilities. According to the core principle No. 5 of the 2023 European Prison Rules, life in correctional institutions should, as far as possible, resemble the positive aspects of life in society.

An essential factor in designing personal spaces in detention is the concept of „autonomy“ areas, which are considered vital for the well-being and rehabilitation of inmates . This concept refers to spaces where individuals can make certain personal decisions, such as adjusting their living environment or conditions, like temperature, within the facility. Accordingly, § 40 StVG allows inmates to personalize their cells, provided it is compatible with the safety and order of the institution. A positive prison climate also impacts correctional staff, leading to lower turnover and absenteeism. The more effectively the correctional system can foster a positive prison climate and prepare inmates for reintegration, the more successfully the third penal objective, security, can be achieved beyond the period of incarceration.

Universally applicable structural and design standards contribute to a more uniform correctional environment in the medium to long term, but these standards quickly face limitations. The varied requirements arising from different detention and correctional regimes, constantly changing inmate populations, old or new buildings, differing structural conditions, and urban or rural settings are challenging to accommodate.

The Ministry of Justice has a solid understanding of suitable standards, as demonstrated in the unpublished 2020 handbook „Construction and Furnishing Specifications for New Correctional Facilities,“ created by the Ministry. However, defining such standards for existing, often incredibly old correctional facilities presents a far more complex challenge.

DESIGNING FOR REHABILITATION

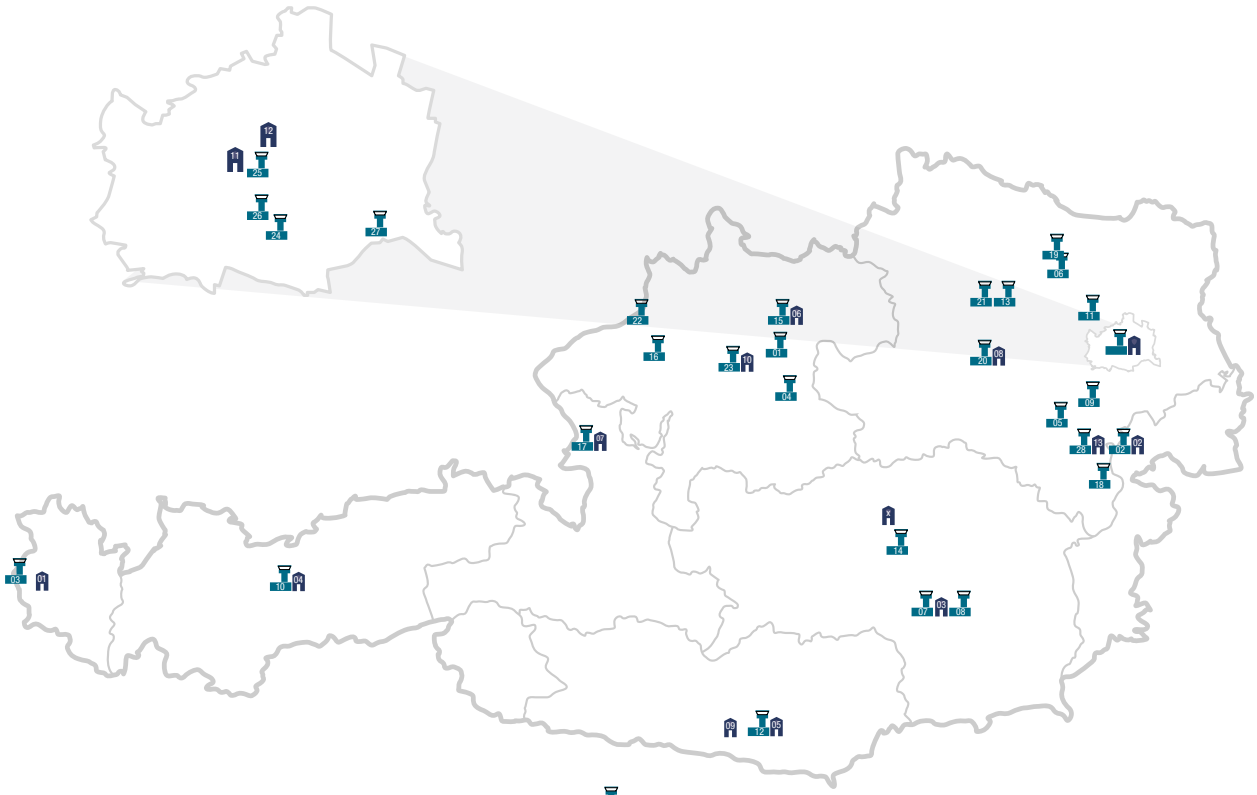
The role and purpose of prisons is increasingly viewed as being required to help prisoners reform ahead of their reintegration back into society. The long-standing design ethos within prisons has traditionally been focused on security and not necessarily on well-being. Research into how the design and layout of buildings and their wider environment can positively influence the mental and physical well-being of their human occupants is now much better understood.

The Designing for Rehabilitation report, prepared by the EuroPris Real Estate expert group, examines a wide range of design considerations (i.e. natural light, green spaces, social interaction, colour, size, density, materials, art etc.) which will allow the design of our prisons to more effectively support the people who live and work within them.

Given the extended periods of time that individuals are housed inside our prisons and the high levels of mental health disorders amongst those entering our prison systems there is a societal and moral obligation on the international community to focus on tackling these issues and work towards the creation of more rehabilitative environments.

Tony McDonnell BSc (Hon) MRICS
Chair of the EuroPris Real Estate Expert Group
Head of Infrastructure & Asset Management, Northern Ireland Prison Service

FOUNDATIONAL PHASE



PAZ: police detention centre

1	PAZ Bludenz	6	PAZ Linz	11	PAZ Wien Hernalser Gürtel
2	PAZ Eisenstadt	7	PAZ Salzburg	12	PAZ Wien Rossauer Lände
3	PAZ Graz	8	PAZ St. Pölten	13	PAZ Wr. Neustadt
4	PAZ Innsbruck	9	PAZ Villach		
5	PAZ Klagenfurt	10	PAZ Wels	x	AHZ Vordernberg

JA: correctional facility

1	JA Asten	8	JA Graz-Karlau	15	JA Linz	22	JA Suben
2	JA Eisenstadt	9	JA Hirtenberg	16	JA Ried im Innkreis	23	JA Wels
3	JA Feldkirch	10	JA Innsbruck	17	JA Salzburg	24	JA Wien-Favoriten
4	JA Garsten	11	JA Korneuburg	18	JA Schwarzau	25	JA Wien-Josefstadt
5	JA Gerasdorf	12	JA Klagenfurt	19	JA Sonnberg	26	JA Wien Mittersteig
6	JA Göllersdorf	13	JA Krems	20	JA St. Pölten	27	JA Wien-Simmering
7	JA Graz-Jakomini	14	JA Leoben	21	JA Stein	28	JA Wiener Neustadt

own representation / DGGD

In the foundational phase, AP02 of the project, an overview of relevant theoretical foundations, the national and international state of research, and initial empirical findings on current practices were developed. Additionally, an overview of the organizational structures and structural-technical conditions of Austria's 23 judicial detention centers and correctional facilities (as of the project's timeframe) was created. Building on this, a criteria-based selection of nine correctional facilities was made for in-depth survey and analysis. Another key part of this phase involved outlining the existing standards of the Ministry of Justice (BMJ) and the current legal frameworks related to implementing structural-technical measures, as well as international guidelines on spatial detention design. This included „lessons learned" from past construction planning and implementation, insights into modern international prison architecture and digitalization concepts.

This overview, the outcome of the foundational phase, was developed using a range of methods. Individual dossiers were created for each of the 23 Austrian correctional facilities, detailing ownership structure, occupancy numbers, staffing, organizational structures, existing digitalization measures, and specific structural conditions as of 31 January 2023 and on average throughout 2023. Exploratory interviews with experts and individuals responsible for prison planning further clarified project-related issues and areas of concern.

A quantitative survey of the views of leaders of the 23 judicial detention centers and correctional facilities on organizational, structural, and technical conditions complemented the national perspective. Interviews with architectural firms specializing in renovating Austrian correctional facilities provided additional insights from a construction-technical standpoint. Furthermore, an analysis report on digital systems used internationally in correctional facilities was compiled, focusing particularly on security, rehabilitation, and administrative technologies.

Currently, correctional facilities appear to be relatively undigitized, revealing potential for the application of technologies in the areas of security, rehabilitation, and administration.

OVERVIEW OF LEGAL FOUNDATIONS

In the context of building and designing correctional facilities, alongside the Prison Act (StVG) as the central norm regulating incarceration, national and regional construction regulations must also be considered, as well as an increasing number of provisions addressing the progression of digitalization.

The Prison Act addresses structural and design-related aspects to a limited extent, with few explicit requirements in this regard. However, many requirements can be clearly derived from the provisions of this law. The European Convention on Human Rights is also legally binding for prison conditions. Furthermore, the recommendations of the European Committee for the Prevention of Torture and Inhumane or Degrading Treatment or Punishment and the European Prison Rules of the Council of Europe serve as important guidelines for correctional practices. These laws and guidelines convey minimum standards for humane prison conditions that align with the objectives and functions of the correctional system.

When constructing new facilities or renovating existing buildings, a range of legal construction requirements must be met. Correctional facilities, primarily regarded as public buildings with restricted access, are partially subject to building regulations for public facilities. Crucial to structural measures are the individual building and zoning laws of each region, which hinder the establishment of a unified national regulatory framework for new construction, renovations, or expansions. Given the historic nature of some correctional facilities, heritage protection laws are also significant in the national context.

Increasingly relevant in corrections are digitalization processes, which bring specific regulatory needs. Although inmates have very limited access to information technologies and networks, which is primarily intended to support post-incarceration reintegration, questions arise regarding the monitoring of such access and the protection of data and personal rights. This involves, for instance, the letter and telecommunications privacy rights enshrined in the Constitutional Law, as well as European and national data protection regulations. Protecting personal and data rights becomes particularly critical when surveillance technologies are implemented in corrections, where a balance must be struck between the rights of inmates and security requirements.

INTERNATIONAL RESEARCH TRIPS

During AP02, three correctional facilities were visited at the beginning of 2023 as part of research trips to gain an overview of the current state of penal systems at an international level: the Regensburg Correctional Facility (Germany) from February 22-23, the Hämeenlinna Prison (Finland) from March 15-17, and the Halden Prison (Norway) from April 12-14, 2023. Due to the high comparability of the Regensburg facility with the Austrian penal system, only essential insights from Hämeenlinna and Halden are presented here. The prison conditions in these facilities differ more significantly from those in Austrian corrections due to the application of the dynamic security concept, which is facilitated by specific organizational and structural conditions. The findings from these excursions were therefore particularly insightful for the subsequent stages of the project.

WOMEN'S PRISON HÄMEENLINNA PRISON

The Hämeenlinna Correctional Facility is a women's prison and a so-called „smart prison," where the rehabilitation of inmates and security aspects are supported through digital elements. The facility was completed in 2020.

Up to 100 inmates serve their sentences, substitute prison terms, or are held in pre-trial detention there. The facility is a two-story, star-shaped complex comprising four wings converging in a larger building. Each wing has sections on each floor, accommodating up to twelve inmates in individual cells, with access to a shared living area. The building in the center, adjacent to the four wings, houses administration, service offices, specialized services rooms, a medical unit, visitor area, chapel, library, hair salon, gym, sauna, workshops, and training rooms, as well as specially secured cells.

Hämeenlinna does not use concrete walls as perimeter boundaries; instead, the grounds and individual outdoor areas are enclosed by wire fences and monitored by cameras. Most cells offer views of the surrounding natural landscape. Cell doors are digitally locked with chip cards (or alternatively battery-powered keys). Six cells have additional security with solid steel doors. In the event of a power outage, a generator powers the facility for up to 20 hours.
As a „smart prison," Hämeenlinna places particular emphasis on digital tools to support rehabilitation. Inmates and staff participate in workshops to learn how to use these tools. Each cell is equipped with a digital terminal, a fixed laptop, and a set of headphones for video calls. Through the intranet and limited internet access (authorized sites only), inmates can take courses at various educational levels up to university, schedule appointments with specialized services and attorneys, and order food or groceries from outside. This fosters external contact in preparation for life after release. Video calls are regulated and must be pre-approved.

Virtual Reality (VR) applications simulate everyday situations for inmates, such as job interviews. Additionally, VR tools assist with drug withdrawal, help reduce social phobias and provide stress relief through immersion in virtual natural landscapes. Training opportunities include facility management and tailoring in the prison's sewing workshop, with work options in the laundry, kitchen, and garden. For leisure, there is a fitness area with a sports hall, a library, and a sauna.

Mirjam Johanna Habisreutinger (5)

HIGH-SECURITY PRISON HALDEN PRISON

Completed in 2008, Halden Prison houses around 250 male inmates and is designed in a campus style, secured by a tall, solid concrete wall surrounding the entire facility and an outer perimeter monitored by cameras. The grounds are surrounded by a small, sparsely planted pine forest.

All men housed in the high-security Halden facility are over 18 years old, with an average age of 39. Approximately 80 inmates are housed per building, in units of 10 to 12 prisoners, with a central service room on each floor. Twenty-eight inmates, identified as particularly dangerous, are held in a "restricted area," which imposes far more restrictive conditions than other accommodations at Halden. The facility is staffed by around 265 correctional officers, supplemented by about 50 external professionals to support inmate needs, resulting in a one to one staff-to-inmate ratio.

The Norwegian Correctional Service outlines its prison policies in a "white paper" that bases corrections at Halden on four pillars: humanity, normalcy, dynamic security, and reintegration. Halden is particularly noted for its implementation of the dynamic security concept, prioritizing interpersonal and systemic safety, with technological security seen as secondary. This concept is supported by the role of the correctional officers, who also serve as "social workers." Each inmate is assigned a contact officer from the beginning of their sentence, who serves as a primary point of contact and support. External specialists (in the "import model") are available for specific support needs (psychotherapy, addiction issues, social work, financial counseling, housing, etc.).

Strong external security allows for greater freedom of movement within the prison. Staff access to various wings, units, and work areas requires both chip cards and manual code entry. The facility emphasizes a group-living model with more extensive freedoms and movement compared to most European prisons, aligning with the goal of normalcy. Single cells are relatively spacious (about 11m^2) and offer ample natural light through fixed, barless windows with narrow, openable side panels and adjustable louvers. Each cell includes a bed, table, and wardrobe (all made of wood),

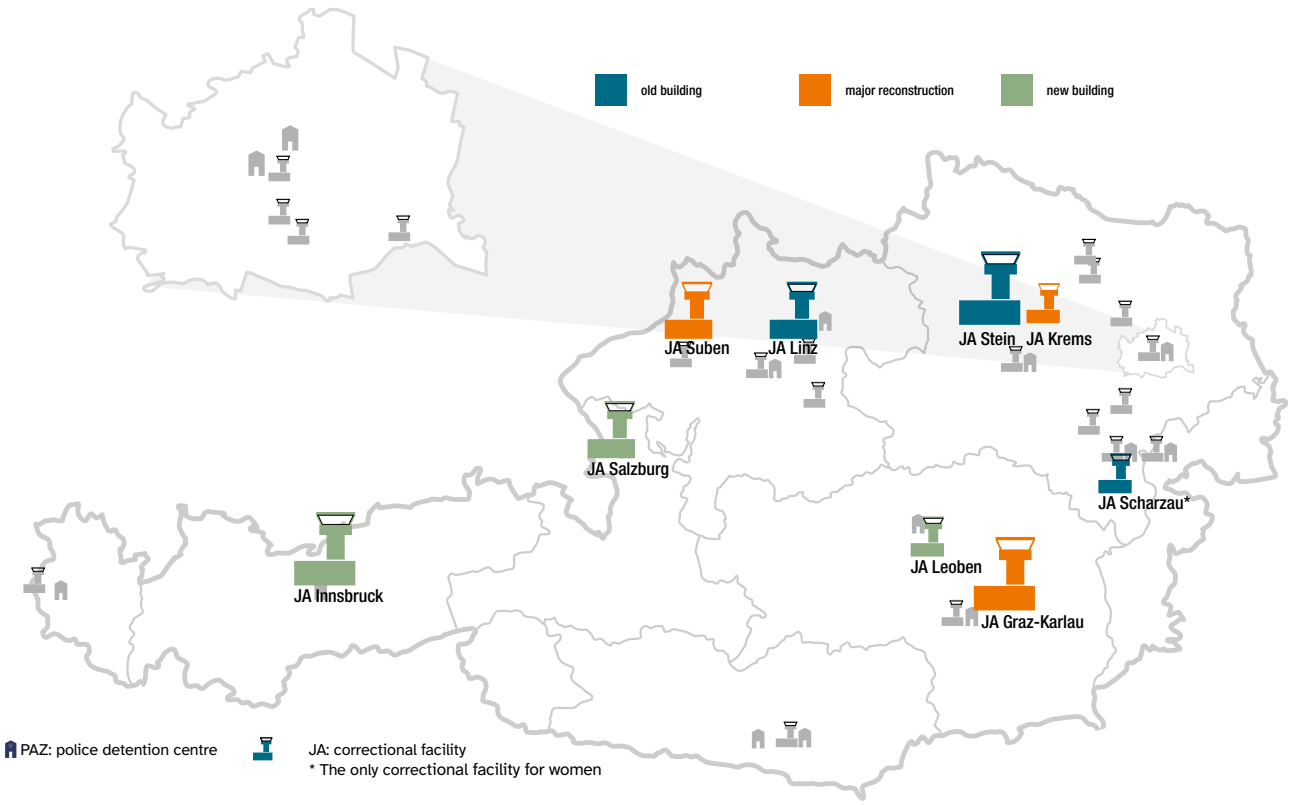
a refrigerator, TV, a bathroom with a toilet, shower, and sink (with an intercom system), and self-regulating lighting. Laptops are permitted in cells but lack internet access.

In-house industries contribute to facility maintenance and allow for external contract work, such as in woodworking or automotive workshops. There is a broad range of educational and vocational training opportunities, including language courses, high school, and primary/secondary school level education, training as automotive mechanics, electricians, carpenters, and culinary training.

Training rooms are equipped with computers, although internet access is limited and subject to approval; even then, Norway's correctional e-learning system only permits access to "whitelisted" sites. Contact with the outside world is maintained through a 60-minute weekly visit and monitored phone calls, which must be scheduled in advance and are limited to 30 minutes. Volunteers also visit the facility. Judicial hearings are mainly conducted via video conferencing, even though in-person court appearances are possible when necessary.

SURVEYS IN AUSTRIAN CORRECTIONAL FACILITIES

Following the foundational phase (AP02), the third work package (AP03) conducted surveys in individual Austrian correctional facilities from April 2023 to September 2024. For this in-depth investigation into the structural, technical, and organizational conditions in Austria, nine facilities were selected from a total of 23 judicial detention centers and correctional institutions. Selection criteria included the year of construction, renovation history, geographic location, inmate occupancy, and considerations for gender sensitivity.



The nine chosen facilities included new buildings, existing structures (some with significant renovations and some without), as well as buildings with varying degrees of heritage protection and various levels of technical equipment. This selection allowed the study to cover a variety of structural and technical conditions, as well as a broad spectrum of experiences, perceptions, and perspectives.
To assess the needs of all groups involved (facility managers, staff, and inmates) regarding structural and technical conditions and the associated challenges in daily life, various qualitative methods were employed in each of the nine facilities.

GUIDED INTERVIEWS WITH LEADERSHIP TEAM MEMBERS

The Department of Risk and Security Management at FH Campus Wien conducted 34 guided interviews with staff. In each facility (with two exceptions), four individuals were interviewed, each holding positions at the time in facility management, correctional security command, economic management, and the social and psychological services department. The interviews gathered data on the overall structural and technical situation, focusing on job-related activities, effective inmate rehabilitation, and the well-being of all. Additionally, questions addressed general and specific procedures as well as logistical issues.

FOCUS GROUPS WITH STAFF

In each of the nine correctional facilities, two focus groups were held with correctional officers and specialized service staff, moderated by the Risk and Security Management team from FH Campus Wien. Due to vacations, illnesses, or limited time and staff availability, not all planned focus groups could be conducted in all nine facilities. In total, 13 focus groups were held—eight with correctional officers and five with specialized service staff.

GUIDED INTERVIEWS WITH INMATES

The IRKS conducted 27 semi-structured guided interviews with inmates in the nine selected facilities, interviewing three individuals per facility (eight women and 19 men) about their perceptions of how structural, design, and technical conditions impacted their daily lives in custody.

ANALYSIS OF EXISTING FACILITY PLANS

The planning office Linienreich analyzed facility plans provided by BIG for the nine institutions, focusing on criteria such as location, external security, deliveries, traffic flow within buildings, crossing and conflict points, cell layouts and pathways, unit arrangement, and the locations of shared spaces, medical units, visitation areas, intake area, guardrooms, staff rooms, and secure areas for correctional staff, as well as the spatial integration of specialized services and building systems.

GUIDED INTERVIEWS ON MAINTENANCE AND UPKEEP

Additionally, guided interviews with correctional staff in each facility, which were primarily conducted in person during on-site inspections, focused on evaluating maintenance and upkeep.. Interviewers from the Architecture-Green Building Department at FH Campus Wien, Linienreich, and Ai contributed diverse disciplinary perspectives.

ON-SITE INSPECTIONS

In each of the nine facilities, on-site inspections aimed to provide a detailed view of areas not evident from floor plans, offering an overview of structural, organizational, and digital conditions and documenting the overall impression regarding atmosphere, accessibility, and well-being. The entire transdisciplinary project team participated in these inspections.

ANALYSIS OF DIGITAL SECURITY SYSTEMS AND EQUIPMENT

Insights into the digitalization of organizational processes, rehabilitation technology, and security systems were gathered by app informatics zt gmbh through on-site inspections and interviews with correctional staff in the nine selected facilities.

The transdisciplinary team's diverse perspectives enriched the analysis of qualitative data structured around theoretical criteria from literature and empirical material. The selected criteria for organizing the findings included:

- Security
- Structural and/or organizational relevance
- Efficiency
- Rehabilitation (work, education, recreation)
- Reintegration/normalcy (building skills for independence)
- Private vs. communal aspects
- Well-being
- Mental and physical health

The findings were documented in a confidential report for the Ministry of Justice, providing an overview of spatial and material functions, atmosphere, accessibility, and well-being. The focus was placed on eleven key topics:

1. Location and external security
2. Internal access and flow
3. Units
4. Cells
5. Work, education, and training
6. Recreational activities
7. Specialized and support services
8. Healthcare/medical units
9. External contacts
10. Other building-related topics
11. Digitalization

INTERIM SUMMARY OF SURVEYS

The surveys revealed considerable differences in the organizational and structural-technical conditions among the selected correctional facilities. These variations largely stem from the respective decision-makers' choices in each facility regarding organizational processes and associated structural-technical measures.

Accessibility and location are particularly relevant to goods delivery, traffic, and external security, which can either facilitate or hinder accessibility and external contact. Furthermore, location often determines the facility's size, potential for expansion, and adaptability. Structural conditions are heterogeneous not only between facilities but also within each facility. Key differences include:

- Spatial availability (e.g., communal areas, recreational rooms, visitor areas, workspaces, specialized service rooms, outdoor spaces)
- Room arrangement and size (e.g., cell and unit sizes, corridor widths and lengths, staff rooms, guard stations, work areas)
- Room equipment (e.g., furniture and technical equipment in cells, communal areas, training, and meeting rooms)
- Lighting conditions
- Acoustics
- Indoor climate
- Material usage
- Maintenance (e.g., building systems, waste, and energy management)

A noteworthy variation exists in cell windows, which differ in size, placement, and sill height, as well as in the layout of sanitary areas.

Knowledge of the planning and construction process systematics is crucial for executing construction projects and can significantly impact the varied structural design of correctional facilities. Ownership arrangements of these facilities, rather than building age, are the primary influencing factor. Coordination with external partners like BIG (the Federal Real Estate Agency), authorities, and companies, as well as the specific responsibilities within each facility, also varies considerably across the sample. Apart from construction processes, preservation requirements , pose additional challenges, requiring longer planning and execution times and extensive communication among owners, users, authorities, and contractors. Structural or technical adaptations during operation further impact daily life in detention.

Clearly defined responsibilities and processes are essential for efficient and sustainable structural interventions. Furthermore, streamlined maintenance and upkeep require a well-planned structural foundation and detailed documentation of building systems.

Besides structural and technical conditions, organizational structures, and workflows impact daily prison life, such as diverse types of work, education, and training programs designed to prepare inmates for post-release life.
The survey also highlighted significant differences in the availability and access to work, education, and recreational opportunities within and between facilities. Limited availability frequently results from structural and organizational factors, including unused, poorly connected, or repurposed spaces and limited personnel resources for conducting and supervising activities.

Rooms for specialized services, such as social and psychological support, allow inmates to participate in therapy and other activities. Almost all facilities in the sample reported a significant need for additional meeting rooms and larger, better-equipped spaces for group settings. This demand stems from the increase in specialized staff, higher occupancy rates, and a rising need for therapeutic and widespread support services.

Healthcare facilities are similarly diverse. All examined facilities have medical units, although the layout and quantity of these spaces are often criticized as inadequate for ensuring privacy and security. The structural, medical-technical, and organizational conditions are not always

sufficient, limiting or preventing comprehensive care for the ill.

To support rehabilitation and reintegration, contact with the outside world via telephone, video calls, and in-person visits is essential. With an elevated level of variability regarding accessibility and availability duration, the samples show inconsistent approaches to implementing security, rehabilitation, and administrative technologies. While rehabilitation technologies have potential to support normalization efforts and relieve staff stress, they are only partially implemented.

As part of the fourth work package (AP04), „Analysis and Conclusion Phase," recommendations for action were developed based on the described results .

RECOMMENDATIONS FOR ACTION

On the Necessity of Appropriate General Standards for Structural, Design, and Equipment Conditions in Austrian Correctional Facilities

Conversations with inmates, correctional staff, and on-site inspections in nine Austrian correctional facilities, revealed significant disparities in the spatial design and equipment standards of facilities, as well as insufficient overall standards.
The recommendations proposed as part of this project aim to support the goals of corrections and make correctional facilities more attractive workplaces. At the same time, it is understood that the ability to implement these standards varies depending on the existing structure and conditions. A three-tiered set of standards is proposed, which, aside from legally defined minimum standards, combines standard enhancements with the necessary level of effort.
Despite best efforts, it is anticipated that some facilities may find the recommendations challenging or impossible to implement due to structural or other existing limitations. To promote fairness and a positive prison environment, compensatory organizational measures are suggested:

- Extended hours for open cell doors could partially offset the fact that some cells may not meet the desired standards of the proposed second or third tier.
- Inmates without in-cell showers should not be further disadvantaged by having limited access to communal showers.
- Correctional facilities that are difficult to access by public transportation should be prioritized for video call equipment, etc.

The following documents and tools were provided to the Ministry of Justice for further development:

- Final report of the foundational phase (WP02)
- Final report of the survey phase (WP03)
- Catalog of recommended actions
- Planning recommendations
- Digital tool based on a wiki engine

A_ GENERAL BUILDING-RELATED TOPICS

Correctional facilities differ from other buildings primarily due to their stringent security requirements, specialized construction and operational standards, strict access and control mechanisms, and the need for continuous operational readiness. In terms of maintenance and operation, these facilities currently face challenges like those in other buildings, including adapting to climate-related requirements and sustainable life cycle evaluation.

This topic addresses areas identified as particularly relevant for the renovation, efficient operation, and security of correctional facilities during the investigation.

ACTUAL STATE:

The heterogeneous structural conditions of correctional facilities in Austria present a significant challenge for adaptation to current standards. A uniform and security-approved documentation system for organized on-site use of all plan data was not observed.

Another critical factor is the diverse ownership structure of Austrian correctional facilities (A-, B-, and C-properties), which entails different responsibilities and complicates a standardized approach.

Additionally, the extensive and time-intensive coordination of security-related tasks limits the correctional staff's resources for their primary responsibilities, such as supervision, care, control, education, training, and rehabilitation of inmates.

Maintenance management in the selected facilities currently lacks a unified approach. When individual staff members have exclusive knowledge of complex processes , valuable information may be lost.

TARGET STATE:

For the modern operation and quality assurance of the building infrastructure in Austrian correctional facilities, two aspects are fundamental:

- Comprehensive life cycle assessment of each facility,
- Responsibilities and processes related to documentation, maintenance, and adaptation.

Criteria for these areas exist within sustainable building assessment systems, such as BIG's Holistic Building Program or the ÖGNB certification system from the Austrian Sustainable Building Council. These frameworks provide a foundation for both planning data integration and reviewing relevant guidelines for sustainable operations. They facilitate the alignment of parameters for a sustainable and efficient operation that meets the specific requirements of correctional facilities, thereby standardizing processes and ensuring ongoing adaptation to sustainable minimum standards. These are particularly relevant considering adapting to climate conditions such as summer overheating and extreme weather events.

To implement a specialized maintenance procedure for correctional facilities, the International Red Cross offers guiding principles. Additionally, the EuroPris study „Designing for Rehabilitation" emphasizes the importance of continuous data evaluation.

RECOMMENDATIONS

Topic	#	Measure
Sustainability and resilience	**MA01**	Data-based building recording
	MA02	Prevention of summer overheating
	MA03	Adaptation of emergency plans
Construction processes	**MA04**	Quality assurance for building adaptation
General structural measures and maintenance management	**MA05**	Equipment room for fire protection: check positioning
	MA06	Fire protection data integration
	MA07	Checking building services systems in existing buildings
	MA08	Sustainable waste management
	MA09	Checking and adapting the room acoustics in existing buildings

These recommendations are described in greater detail in an in-depth report, which was submitted to the Ministry of Justice upon project completion.

B_ CELL ROOM

The cell room can be viewed as the primary living space and retreat area for inmates. The number of people housed in a cell and the duration they are confined each day vary, as do the form, size, furnishings, and degree of personal customization. These variations are influenced by structural conditions, legal regulations, or the type of correctional facility.

A significant challenge in this context is the increasing overcrowding in correctional facilities, which often necessitates exceeding designed occupancy limits. In some of the examined facilities, this results in cell rooms originally intended for one or two people being temporarily overcrowded by adding bunk beds or standardized additional beds.

ACTUAL STATE:

The surveys conducted in the nine correctional facilities reveal a highly heterogeneous picture between and within the institutions in terms of the size, shape, and furnishings of the cells. The Prison Act and the Prison Handbook remain vague on many aspects. For instance, § 40 of the Prison Act merely refers to “simple and functional rooms with sufficient airspace and adequate daylight,” while the Prison Handbook mentions undefined “standard cells” (BMJ, 2022). However, the 2006 Judicial Decree provides clear guidelines regarding minimum room sizes for cells accommodating between one and four inmates. Nevertheless, there is a lack of concrete and binding national standards for furniture, sanitary areas, and equipment (particularly regarding technical devices).

Existing windows are considered problematic for distinct reasons, such as sill heights that prevent an outside view, the absence of shading options, and multiple layers of grilles that significantly limit light entry and air circulation.

Even though the furniture available in the cells of the surveyed institutions varies, it predominantly consists of wood or metal. In some facilities, wooden furniture can be repaired or even produced in on-site workshops. The materials used in the sanitary areas vary as well (tiles or water-resistant coatings). Showers within cells, particularly those located in a separate, enclosed space, are not available in all the examined facilities.

TARGET STATE:

International recommendations for housing convicted individuals emphasize that human dignity should be safeguarded, and, whenever possible, individual sleeping accommodations should be provided. According to the Judicial Decree on cell sizes, a maximum of four people should be housed in a single cell (BMJ, 2006).

International studies suggest the use of colors in cells to convey a sense of individuality and the increased use of softer materials (e.g., wood or cork) that are less sterile in appearance, absorb noise better, and generally enhance comfort.

It is also recommended that inmates be allowed to partially control the lighting in their cells and have a view of something beyond the prison walls, ideally green spaces. If neither a suitable view nor a distant outlook is possible, plants can be introduced as a remedy. These contribute to the enhancement of the cell environment and may alleviate symptoms such as fatigue or headaches.

RECOMMENDATIONS

Topic	#	Measure
Detention room occupancy	**MB01**	Implementation of single and two-person detention rooms
Component standards	**MB02**	Tested component catalogue for prisons in Austria
Detention room window	**MB03**	Develop entire component detention room window
	MB04	Adapt parapet height
	MB05	Check close-meshed window grilles
	MB06	Install sun protection
Wet cell	**MB07**	Standardise the design of the wet cell for detention rooms and adapt existing ones
	MB08	Adapt wet room doors - visibility of detention room
	MB09	Standardise surfaces for wet cells
Detention room door	**MB10**	Steel frame design for detention room door
Binding minimum standards for detention room equipment	**MB11**	Establish a minimum standard for detention room equipment

These recommendations are described in greater detail in an in-depth report, which was submitted to the Ministry of Justice upon project completion.

C_ DEPARTMENTS

Most of the inmates‘ daily life takes place in the departments. The use of a department depends on the available space and spatial conditions as well as the number of detention places, the type of detention, the form of imprisonment, and organizational guidelines. Departments contain a variety of multi-functional rooms such as cells, staff offices, communal showers, toilets, laundry rooms, common areas like tea kitchens or fitness rooms, and balconies or terraces.
Departments face different challenges and needs, which can be addressed through flexible use of the available spaces. In terms of security, the location of the staff office is significant. A staff office can be assigned to one or multiple departments, and depending on its location, the visibility into the departments under supervision may vary.

ACTUAL STATE:

Both within and between the correctional facilities studied, structural conditions, the number of available rooms (especially for communal use), room sizes, and furnishings vary significantly. It also became apparent that the specific location of a department can greatly influence lighting conditions and noise levels, which in turn affect daily life and work within the departments.

The number of detention spaces in a department also differs significantly, with some departments housing up to 100 inmates. In such large departments, cells are sometimes locked for up to 23 hours a day, which further aggravates the circumstances. Consequently, departments were identified that could be divided into zones, allowing certain areas to be operated as open detention within a closed regime when necessary.

In many cases, the lack of explicitly designated communal spaces was criticized. Nevertheless, several facilities use color-coding systems to improve orientation within departments, with these colors extended to the exterior façade.

TARGET STATE:

Ideally, departments should balance security, efficient space utilization, and well-being. Structural conditions must allow for effective monitoring and control, with security measures and surveillance systems optimally integrated, such as through strategic placement of staff offices and cameras. At the same time, rooms—both cells and communal areas—should be functional and flexible, aligned with the objectives of the correctional system to support purposes like education, recreation, and therapy.

Communal spaces should be designed to facilitate social interactions and therapeutic activities. Dedicated spaces for recreation, sports, and therapy within each department are recommended. Should space limitations necessitate multi-purpose use, a flexible and well-organized approach to space utilization should be adopted. Additionally, spaces can be temporarily repurposed and, if needed, subject to increased surveillance to meet higher security needs. Creating divisible departments further enhances flexibility.

In general, future renovations and new constructions should be designed to adapt effectively to changing conditions. Special attention should be paid to the well-being of both staff and inmates. Pleasant lighting conditions, good ventilation, and noise reduction can contribute to a positive atmosphere, as can the inclusion of plants or other design elements.

RECOMMENDATIONS

Topic	#	Measure
Room arrangement	**MC01**	Restructuring in existing buildings
Flexibility	**MC02**	Separation for flexible adaptation of departments
Duty room (DR)	**MC03**	System for the allocation of duty rooms focusing on contact and safety aspects
Colour coding system	**MC04**	Colour and material distinctions for departments in locked and semi-locked areas

These recommendations are described in greater detail in an in-depth report, which was submitted to the Ministry of Justice upon project completion.

D_ SPACE FOR THERAPY AND SOCIAL ACTIVITES

Apart from the detention of convicted offenders, correctional facilities are intended to provide support for release and a crime-free life. To this end, a variety of rehabilitation programs are available, such as therapeutic processing of offenses in individual or group sessions, completion, or continuation of formal education, as well as training programs and courses to support employment after incarceration. This requires adequate and qualified personnel as well as suitable facilities. Communal spaces, especially recreational and fitness areas, are essential as they promote social interaction and offer inmates a sense of normalcy.

ACTUAL STATE:

Significant differences can be observed regarding the presence, location, and furnishings of rooms for social and psychological services. Where available, these rooms are in semi-restricted or restricted areas, in some cases directly within or just outside the departments. Frequently, however, only few or no such rooms are offered in the departments.

Meetings with specialist services in the departments are held in specifically designated rooms, hallways, outside cells, or in communal rooms. This practice allows specialists to gain daily insights into the condition of inmates and respond more effectively in acute situations. It also facilitates faster information exchange between specialists and correctional officers. Disadvantages of conducting meetings within the departments include limited discretion and privacy due to sound-transmitting meeting rooms and noise in the corridors.

Available meeting rooms, regardless of location, were repeatedly described as inadequate since they lack necessary technical equipment and secure storage for documents. What is more, they are sparsely decorated.

Most departments in the nine analyzed correctional facilities also lack dedicated communal rooms. The absence of spaces for meetings and communal activities often leads to multi-purpose use of the few existing rooms, limiting their suitability and availability. These rooms are frequently under-equipped, with insufficient seating for group therapy, and lack the quiet and privacy needed for individual sessions. The fitness rooms differ in number and quality across the correctional facilities visited.

TARGET STATE:

Rooms used by specialist and support services for one-on-one meetings with inmates should be equipped with suitable furniture, such as tables, chairs, and lockable cabinets. Additionally, it is desirable for these rooms to be spaciously designed. For security reasons, it is advisable to place them near the staff office.

Rooms for discussions, particularly for therapeutic purposes, should be attractively designed. This can be achieved through fresh air, natural light, windows with views of nature, appealing color schemes, decoration, and comfortable furniture, preferably made of wood.

For effective communication, adequate technical equipment should be available, including video interpreting systems and computers for immediate documentation.

Designated rooms in presentation zones might meet these requirements better, but since they are in a different part of the facility, long distances can pose organizational disadvantages. The surveyed staff increasingly advocates for rooms for one-on-one meetings with inmates within or near the departments.

To foster community interaction, correctional facilities should provide fitness and recreational rooms. If such spaces cannot be provided or are insufficient, the already limited range of activities should not be further restricted by multi-purpose use.

RECOMMENDATIONS

Topic	#	Measure
Room for one-to-one meetings	**MD01**	Adapt location
	MD02	Plan for minimum size
	MD03	Check and adapt room comfort
	MD04	Standardise equipment
	MD05	Check safety measures
Therapy rooms for groups	**MD06**	Size requirement per max. number of people
	MD07	Check and adapt room comfort
	MD08	Standardise equipment
	MD09	Check safety measures
Multi-purpose room	**MD10**	Check size, furnishings and adjoining rooms
Rooms for social activities	**MD11**	Room arrangement for social activities outside the section

These recommendations are described in greater detail in an in-depth report, which was submitted to the Ministry of Justice upon project completion.

Habisreutinger/FH Campus Wien

E_ GREEN SPACE

Access to nature and fresh air helps minimize stress in correctional facilities, which can arise from confinement and enforced proximity to others. Apart from enhancing the quality of open, green spaces positively impact the outdoor and indoor climate, biodiversity, and reduce runoff peaks during heavy rainfall.

ACTUAL STATE:

The correctional facilities studied reveal significant differences in the ratio of paved surfaces to total site area. Some currently lack sufficient green space or greenery within exercise yards, nor are they situated in environments that offer compensatory views of nature for inmates and/or staff. Differing spatial layouts among the facilities must be considered. Some correctional institutions have generously designed exercise yard areas within their spatial plans, while yards in judicial detention centers are generally more confined, partly due to frequent renovations and expansions. Urban facilities with outdoor areas in inner courtyards often have completely paved yards.

Additionally, outdoor exercise areas are often inadequately equipped, with issues related to location, greenery, security, ground surface quality, soundproofing, size, usage capacity, availability of water dispensers, sports equipment, and protection from sun and weather. In contrast, some facilities already feature agricultural plots or gardens with raised beds. However, these opportunities for outdoor activities are exclusively available to inmates who meet specific security requirements or are permitted greater freedom due to their security classification.

TARGET STATE:

Given that inmates often spend many hours daily in closed spaces, access to nature and fresh air is crucial. Exercise yards with sufficient space and green areas must be created. Individual yard segments should offer more options than simply monotonous pacing. Green recreational and garden spaces enhance the potential for physical activity. Additionally, green areas foster a microclimate which significantly reduces noise and heat buildup around individual buildings or parts of buildings.

The design and equipment of outdoor spaces influence how effectively they are utilized by inmates. Outdoor areas should therefore provide opportunities for activities as well as shelter from severe weather and protection from intense sunlight. Sparse, concrete areas where large numbers of people have little to no engagement opportunities have been proven to lead to stress, frustration, and poor physical and mental health. In contrast, well-designed green spaces offer inmates a range of options for recreational activities and serve as places for rest and relaxation.

National and international examples illustrate how green spaces can be designed and utilized in correctional facilities. Furthermore, it has been shown that the experience of nature can be simulated through wall murals, pictures, and photographs of nature. Such elements, along with views or windows facing nature, can be used as compensatory measures to help reduce anxiety and stress.

RECOMMENDATIONS

Topic	#	Measure
Courtyards	**ME01**	Greening courtyards
	ME02	Greening of cover nets
	ME03	Equipping all courtyards with sun and weather protection
	ME04	Redesigning existing courtyards as therapy gardens
	ME05	Design of courtyards
Building sections	**ME06**	Façade greening
	ME07	Roof greening

These recommendations are described in greater detail in an in-depth report, which was submitted to the Ministry of Justice upon project completion.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F_ DIGITALISATION

The ongoing shift toward electronically supported processes is creating new opportunities for stakeholders of correctional facilities, as well as for process workflows within these institutions. Inmates can gain access to educational resources and acquire digital skills increasing their chances of successful reintegration into society.

The introduction of modern technologies for administration and security within correctional facilities also requires adequate IT infrastructure, including data cabling, power supply, and sufficient server capacity.

ACTUAL STATE:

In the renovation and construction of correctional facilities, adequate IT infrastructure for future expansion of technology use is already being considered. Inmates who meet certain security criteria are permitted to purchase a non-internet-enabled laptop for educational purposes. The DigitRes pilot project is currently working to provide low-threshold access to educational and administrative resources to a larger number of inmates.

Although telephony and video calls are generally available outside the cells, further expansion to ensure appropriate reception quality is recommended. Only one facility offers flexible access to telephony within cells, albeit limited to selected inmates.

TARGET STATE:

The following factors should be considered for digitalization in correctional facilities:

An adequate IT infrastructure for modern technologies should include robust data and power cabling, as well as sufficient server capacity to process and store large volumes of data. This necessitates suitable facilities.

Digital inclusion of inmates through access to digital learning platforms and communication tools can improve their chances of rehabilitation. In daily prison life, this means greater independence, as inmates can, for example, schedule appointments themselves and develop digital skills that enhance their career prospects after release.

Access to telephony and/or video calls within cells helps maintain social connections, supporting the inmates' reintegration and contributing to emotional stability. Additionally, video calls can facilitate court appointments, reducing the need for transport by correctional officers.

RECOMMENDATIONS

Topic	#	Measure
Security, administration and resocialisation technology	**MF01**	Adapting IT infrastructure
Administrative and social rehabilitation technology	**MF02**	Access to digital content for inmates
	MF03	Expanding detention room telephony and video telephony

These recommendations are described in greater detail in an in-depth report, which was submitted to the Ministry of Justice upon project completion.

SUMMARY

The results of the final report of the survey phase (WP03) provided the basis for the current action plan, which focuses specifically on structural and technical topics. In coordination with the Ministry of Justice (BMJ), the transdisciplinary project team selected and implemented the relevant topics. . In this respect, a qualitative assessment of relevance was instrumental, which was derived from the survey phase results.

Given the breadth of topics, the action plan development phase revealed that it was not feasible to comprehensibly detail all recommendations within this project. In such cases, further research is needed, which particularly highlights the significance of addressing climate resilience topics such as overheating, green space design, and sustainable resource planning.

A crucial initial major step in implementing the recommended measures would be a structural enhancement of construction and technical issues within central management and administration to underscore their importance. Appropriate structures are needed to ensure sufficient technical resources for strategic planning and execution of construction projects, as well as for addressing future structural-technical issues in line with international promising practices.

Additionally, these would support the efficient and effective implementation of recommended measures in individual correctional facilities. A selection of measures further served as a basis for developing specific planning recommendations.

THE PROJECT TEAM

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FH-Prof. Mag. Claudia Körmer

Since summer 2014, Claudia Körmer has been actively involved in research and teaching within the field of Risk and Safety Management at FH Campus Wien. She has successfully led and implemented a series of national and international social science projects, including “Economic and Industrial Espionage in Austrian Companies 2010 and 2015,” “Corporate Security in the D-A-CH Region,” as well as the KIRAS projects “AQUS,” “AQUS II,” and “SiKu KRITIS” (from November 2022). Before joining FH Campus Wien, the trained sociologist worked for 17 years in areas such as traffic safety, home, leisure and sports accidents, and crime prevention at the Austrian Road Safety Board.

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Since 2019, Hildegard Sint has been a full-time lecturer and researcher at FH Campus Wien within the Department of Building and Design. She teaches in the Bachelor’s and Master’s programs in Architecture – Green Building. In addition to her work on the KIRAS project “ESBH,” she also collaborates on the MA23 project “[Bau]Kasten – Teaching, Research, and Experiment Workshop.” During her studies, the architect spent a year at the École Nationale Supérieure d’Architecture de Marseille in France. She gained architectural experience in firms in Paris and Vienna.

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Since November 2022, Mirjam Habisreutinger has been part of the research team in the Department of Risk and Safety Management at FH Campus Wien. She organizes and conducts research, particularly within KIRAS projects. A graduate of Cultural and Social Anthropology, she previously worked as an administrative intern at the Austrian Federal Ministry of Defense.


Kristina Hauer

Kristina Hauer, BA

Kristina Hauer joined the department’s team as a research assistant in summer 2023. With a background in sociology, she brings her expertise in quantitative methods and mixed-methods studies to various research projects, including ongoing KIRAS projects and a survey project on economic and industrial espionage in Austria in 2024.


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DI Elena Manolas

Elena Manolas works as a research assistant in the Architecture – Green Building Department at FH Campus Wien. She completed her degree in architecture in 2013 at TU Wien and gained experience working in various planning offices in Vienna during her studies.


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Emily Trummer completed her Master’s degree in Architectural History at UCL London, Bartlett, in 2020, and her architecture degree at TU Wien in 2023. She has worked in various architectural firms and was actively involved as a research assistant in the ESBH research project at FH Campus Wien until August 2023.


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DI Lena Christ
Lena Christ served as a research assistant at FH Campus Wien on the ESBH project from early 2023 until February 2024. Her Master's degree in Green Building at FH Campus Wien deepened her interest and expertise in social and sustainable construction, which she significantly contributed to the research project.


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After studying law and subsequently sociology in the USA, Walter Hammerschick made the Vienna Institute for Law and Criminology his professional and academic home, where he also served as Managing Director from 2008 to 2021. Since the institute's integration into the University of Innsbruck, he has been Deputy Director and Senior Researcher at the Institute for Applied Law and Criminology. His research focuses on criminal law, particularly in correctional studies.


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Rebecca Walter, MA
Rebecca Walter has been a research assistant at the Institute for Applied Law and Criminology at the University of Innsbruck since fall 2018. As a cultural and social anthropologist, she has conducted research on correctional facilities for several years, exploring the impact of structural and design aspects on life and work in prisons, probation measures, alternative sanctions, prison climate assessment, and international judicial cooperation.


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Martin Kampel is a consulting engineer for computer science and the Managing Director of app informatics zt gmbh. His principal areas of work include digital transformation challenges, explainable and trustworthy AI, and human-machine communication. He also teaches and conducts research as a professor at the Computer Vision Lab at TU Wien.


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Since 2006, Nadja Wasserlof has been the owner and managing director of Linienreich Generalplanung und Baumanagement GmbH and has been actively involved in planning, construction management, and project development. For the past 20 years, her work has focused on implementing projects in residential, commercial, and hospitality construction.


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Michaela Polak has worked as an architect since 2014. She joined the Linienreich team in October 2022, where she oversees planning for residential and commercial buildings and has participated in the ESBH research project. In 2023, she completed her doctoral studies at the Institute of Art History, Building Archaeology, and Monument Preservation at TU Wien, with a dissertation on „The Teaching of Architecture at the International Summer Academy of Fine Arts in Salzburg."

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