EXIT THROUGH THE PRISON
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To the ones who try to “imprison” us, making us wanna fly...
The subject of this thesis is the controversial case of a prison facility; a space with a very unique nature as it aims to enclosure and detention. In architecture, we usually talk about how to comfort people in a space and make their lives easier, but in the case of prison typology the only fore-thought that went into designing until recently was a primitive/punitive idea that prisoners are animals to be caged. From the other hand, even contemporary alternative - on paper - proposals do not really answer to burning questions like:

"Is there really a need for prisons in 21st century as we know them until now?" or
"Has society started to recognize the paradox of creating malaise in the hope of well-being? And if yes, is it ready to abolish it?"

They tend rather to give architectural solutions that comply simply with the standards of building regulations without reflecting on:

"Is there an ethical component in Architecture? and
"What is the role of the architect?"

"Why is ugliness connected with the repression of crime, thus leading to a standard penal aesthetic."
If maintenance of social order is still thought to be possible only if imprisonment of persons who commit illegal actions takes place and the absurdity of confinement hasn’t been yet recognized by the outside world, what services contemporary prisons should offer? Can architecture be a helping tool in the rehabilitation of prisoners?

Refusing to sweep the problem under the mat, pretending it is not there, here the motto “work with what you have” is being followed. This project is neither trying to reinvent the penal system from scratch nor it is offering merely an extra holding capacity in order to accommodate the current overpopulation. It is tackling the previous issues aiming to answer the question: Does design matter after all?
A profound change in modern penal system occurred between the monstrous late 18th century’s public tortures and the early 19th century. Until then the tortures was the revenge of the sovereign towards the delinquent and they were meant to be public spectacles. The severeness of the comitted crime was then reflected onto the body of the convicted.

It is important to understand that imprisonment was not considered as a form of punishment from the beginning. On the contrary, it was only a holding state until trial/punishment/death. The change to prison as punishment was graded. Experiments like the replacement of death penalties with public chain gangs which would repay to society are evidents of this shift towards more “gentle” punishments.

For example in the United States, the earliest prison, the “Philadelphia Walnut Street Jail,” dates back to 1779. It had a system based on the complete isolation of its inmates and the incorporation of labor within each inmate’s cell. This was one of the first attempts in the country to develop a rehabilitation program that would result in some financial gain for the society. Then came the “New York silent system” developed for Auburn State Prison in 1816 which organized its prisoners into groups that performed hard labor during the day and were confined to single cells at night. The inmates were expected to be silent throughout the duration of prison term.
It is evident that the mentioned shift was not driven by humanitarian reasons: Public execution was ultimately an ineffective use of body with high, sometimes, political cost as the tortured criminal becomes an object of sympathy and admiralty by the spectacle which then conflicts with the sovereign. The revolutionary change that made the prison system part of the punishment was related partially with the ideas about reformation of the soul (late 18th & early 19th century).

“Processors of wild animals to humble ones”

The penal system has been in a constant change since then together with the accompanying correctional philosophies but it is a fact that the design of “new” prisons all around the world differ little from those of 19th century.

Some important examples of prison architecture with the accompanied penal philosophy are described briefly below. The first one, Panopticon prison, will be further analysed on a following chapter.

The Panopticon, Jeremy Bentham, 1748–1832
Example of an architecture in which power is invested. The sentiment of an “invisible omniscience” is created as none of the prisoners was able to tell whether they are being observed or not by the observer in the middle of the building.
Radial design, 1830-
It is a matter of common sense that the design of a building should serve the building's purpose. Therefore, during the penitentiary era of the early 1800's, contemplation, industry and isolation were thought to be necessary elements for a prison to accommodate, the “Pennsylvania” model of intermittent surveillance was developed.

According to penal system's reformations, the dominant philosophy demanded for a separate confinement that allowed for a self-reflection. The aim was a reform rather than a punishment. Eastern State Penitentiary built in 1829 in Philadelphia, Pennsylvania, was the first prison to follow the separate system. Its example was later adopted worldwide. Its philosophy originated and encouraged separation of inmates from each another as a form of rehabilitation.

The architectural plan included a control center at the hub, with several (from four to eight) radiating wings/spokes of prison blocks. These could be separated easily from the central hall and from each other by large metal bars in case trouble erupted. In contrast to the panopticon prisons, although all the prison blocks are visible to the prison staff positioned at the centre, individual cells cannot be seen unless the staff enters individual prison blocks.

The spaces between the prison blocks and the prison wall are used as exercise yards. When the separate system was first introduced, prisoners were required to be in solitary confinement even during exercise;
as a result panopticon-style structures were erected inside these yards, in which a guard post was surrounded by tiny, cell-like, one-person exercise "yards". By the end of the 19th century, these structures were removed in favour of more open – if communal – exercise yards.

Designers of these penal institutions drew heavily on monastic solitary confinement to both destroy the identity of the inmate (and thus make him easier to control) and to crash the "criminal subculture" that flourished in densely populated prisons. Prisoners incarcerated in separate system prisons were reduced to numbers, their personal characteristics and histories were eliminated. The guards knew neither their names nor their crimes, and were prohibited from speaking to them. Prisoners were hooded upon exiting a cell, and even wore felted shoes to muffle their footsteps. The result was a dumb obedience and a passive disorientation that shattered the "criminal community."

The regime extended to the prison chapel. Lincoln Castle for example, was used as a gaol in the early Victorian period, in which the prisoners could all see the chaplain, but not each other.

The general radial arrangement is nowadays followed by few new-built institutions. There are many though old ones which still function.
Centralized design, 1970-
The next generation of prison facilities applied a remote / indirect surveillance. Program services and activities took place in day-room spaces. The assumption of negative behavior by the inmates asked heavy barriers and supervised movement.

The design of this “second” generation of prisons allowed for services to be centralized aiming in minimized security personnel through improved security technology and hardware. As a result, it created a bigger barrier between the inmates and the correctional staff. In general, conditions in these facilities were austere and designed to resist “expected” abusive behavior. The basic operational assumption was that inmates would exhibit negative and aggressive behavior simply because they were inmates. These facilities were organized to respond to behavior problems rather than to prevent them. Yet, second-generation prison design opened the door to further studies as it served as an experimental model.
Decentralized/Podular design, 1980-

The next generation of prisons were manageable units with decentralized services and direct supervision. It presented a more humane approach to the prison problem. The philosophy now assumed that inmates will have a normal behavior in a normal environment and the intention was to prevent negative behavior before it occurs.

In this model, large prisons are divided into smaller groups of units controlled by staff. Prison staff, should no longer be considered wardens and they would work directly with inmates. The curriculum of the sentence in some includes labs, education, exercise etc. The key characteristic of the facilities in this generation was that offenders were confined to an environment “as normal as possible” for both inmates and staff while maintaining necessary safety and security.

The last two types of prisons are both currently used in the prison system. However it is the latter that guides contemporary design for the creation of a new typology - character for such institutions. The older type of facilities remains active because it is cost-effective, it does not demand for further research, it complies with the still prevalent idea of “lock’em up” and also most of existing prisons date back into the early twentieth century and have not been redesigned.

Architectural plans of both last two generations vary from “telephone pole” arrangement to free campus buildings and courtyard schemes.
Criticism – Protests
Nowadays, regarding mostly the western countries, there is increased scepticism over the real objectives of imprisonment. The rise of prisoners’ rights movement, acknowledgement of notions as the “innocent until proven guilty” and of the importance of the re-integration of the inmates to the community, as well as awareness of the high operational cost of these institutions are leading the process of a change.

The Prison Abolition movement stems from a multiple stories worldwide. Concerning the Netherlands, there was a pattern of decarceration which lasted until the mid-1980s and seemed to establish the Dutch system as a model prison system, and the later rise in prison construction and the expansion of the incarcerated population has served to stimulate abolitionist ideas.

The design boycott movement among architects, engineers and planners is seen as a way to start a conversation about prison system with an audience largely unfamiliar with the subject. On the other hand and as mentioned in a draft of the architect organization’s position paper:

“To refuse to design and build new correctional facilities to replace outmoded, inhumane, inefficient, costly-to-operate existing facilities is to force those confined to endure their sentences without opportunity to benefit from them.”
The correctional philosophies are in a continual state of review and critique while the movement for civil rights of inmates and concerns about economical expenses of their long term detention are increasing. The most favored by the reformers idea is the aim of providing inmates with opportunities to develop themselves professionally, socially, spiritually etc. But it has to confront political populism and ignorance in order to prevail.

Prison architecture is still fighting its past – a shabby building with shortage of resources and unskilled staff-. The majority of new prison facilities are designed with the same principles as the ones 50 years before. However there are some exceptions; luxurious compared to anything that preceded, which offer a more "normal" residential environment based on modern penological principles. Compulsory participation in activities, education, training, sport facilities allow for a development of skills, therapy and increase of autonomy of the participants and communication with the world outside.

**Leoben prison**

Leoben prison in Austria, designed by Muller architects (Josef Hohensinn) in 2009, surprises with the excessive use of glass and the shiny office-like appearance. It offers private rooms for all inmates, cafeteria, gym, indoor courts etc. This transparent sleek structure made of wood and concrete, which is flooded with sunshine in the daytime and glows from within at night, allows for critique about the way public money is dispensed. Comments as "Maybe I should move to Austria and rob a couple of banks" mentioned on press come as a reflex but are naive and foolish. Leoben has received quite a lot of attention and in Europe, Hohensinn’s design has become an opening statement in a debate about what it means to construct a prison.
Halden prison
Halden prison in Norway, designed by Eric Moller Arkitekten in 2010, costed 220million$ and houses 252 inmates. The inmates keep the keys of their rooms and they can spend their time in the library, gym, school, workshop area, training room, or experiment at the sound studio.

Moller won the job in open competition, for quality of design and the integration of landscaping, resulting to an interior more of a holiday camp than a correctional institution.

The key philosophy here was that people will behave as animals if behaved and caged as such. But given the opportunity and surroundings to realise their inner humanity and build on it, they will behave normally and once released they may be more capable of operating in the society than before.

The prison is not without brutality, the arrival experience, and the perimeter walls are finely finished but nevertheless intimidating masses of concrete. Anyone seeing them can be in no doubt of their key purpose. This is just as well, because Halden’s inmates are convicted killers and violent criminals.

Once inside though, the sensitive landscape, light buildings, with much local timber on display, and shockingly large windows allow for a dialogue between inmates and their surroundings to be initiated. Prison staff enjoys a much better working environment here as well, allowing less conflict between inmates and guards.
Bastoy Island

The maximum sentence of 21 years, the degree of freedom and the rights of inmates and the alternative programmes to imprisonment have made the Norwegian prison system to be reportedly more successful than many at reducing reoffending rates. The island of Bastoy in the Oslo Fjord is one of the unusual to the rest of the world prison facilities.

The prison ferry boat from the port of Horten, about two hours south of Oslo brings one to what was once a state institution for delinquent youths and has now become the final stop for male inmates nearing the end of their sentences. They live and work in conditions that authorities hope will prepare them for a normal life after they get out. All new arrivals are trained how to cook, clean and look after themselves. Each inmate has his own space in the typical four-bedroom cottages. During the day, most inmates are employed in some form of livestock, farming or maintenance work.

These facilities appear clean, professional, functional and more “humane” than the rest of the new-built prisons. They constitute the continuation of the development of correctional systems away from the medieval model and an embodiment of a mature society’s focus on rehabilitation rather than punishment.

However it is a fact that they still depict the prevalent attitude towards delinquents. It may be that the windows of Halden prison are without bars but the high impenetrable wall, the remote isolated location, all determine in advance a problematic relationship between inmates and the world outside.
Although the real attractive thing would be to start designing a world were prisons are unnecessary, the basic mission and need of confinement in people’s mind remains.

“We cannot abolish the prison, because our ways of thinking about and carrying out punishment will not allow it.” (M.F.)

Proposals for the future suggest that the prisoners are enabled by the architecture to focus on activity, work to provide resources to the outside world or be trained for gaining in the future a job position. Substitution of control with direct – intermittent supervision with the use at the same time of electronic surveillance is also under discussion since the wasteful aspects of managed movement and security have been proven. Most of these alternative proposals are emphasizing in open and normal living conditions, abolition of fencing and other elements of prison’s traditional hard architecture, sophisticated electronic aids and interaction with staff and society.

While these moderate and optimistic proposals question how to compare the living standards between an inmate and a citizen, in an effort of bringing them closer, there are other alarming ones which see remote space colonies for the unwanted. This type of isolation and exclusion originates from the penal colonies which date back in the 17th century. It is about a settlement used to exile prisoners and separate them from the populace by placing them in a remote location, often an island or distant colonial territory.

VISIONS OF THE FUTURE

{21st century prison, H. Cottam, 2002}

{Vertical prison, C.K.Toong, 2010}

{The Creative Prison, W.Alsop, 2006}

{Satopticon, J.Kozakiewicz, 2005}
The (architectural) history of the prison indicates there are three basic factors determinant for the development of prisons: the political factor –the initiative–, the social factors which keep the structure / penalty and the economic factor –cost of operation of an establishment–. For this project, the aim could be neither the reinvention of the correctional system from scratch, neither the creation of different penal laws and prison philosophy. Although it is admitted that crime prevention rather than punishment is what the society must work on, it is also considered as an obligation for an architect to reflect on this social problem and participate in the ongoing conversations, sharing the knowledge of his profession. Therefore, having decided to "work with what we have", two main aims, concerning the architectural planning, programming and design are set:

1. A new prison typology.

Architecture gives both a conceptual and material structure to societal institutions. Its products, the buildings, are the tools to strengthen or challenge traditions, affirm existent cultural values or create new ones. In the case of a prison building, instead of creating a mere object of visual seduction, architecture should relate, mediate and project the related social ideas. Architecture expresses the legal and the political principle of punishment for a crime and also it depicts the prevalent attitude towards the marginal groups of delinquents.

Initial aim of this project is to bring architecture in confrontation with questions of human existence in space and time in order to intercede with the society and fix the problematic relationship between the users of the prison, the supporting staff and the world outside.

**AIMS**

- alteration of the traditional skepticism towards delinquents
- a new symbiotic relationship between prisoners and the world
- a new prison typology
A different physical layout of prison facilities was the desired product of this project which would enable a new symbiotic relationship between the prisoners and the world and affect the traditional skepticism towards delinquents.

2. A pilot program.
Prison architecture has been changing throughout time as a function of the dominant correctional theories. The inverse is suggested in this project. Feeling that the objectives of current correctional theories and prison institutions are reprehensible, a new function of the prison was researched. The second aim of this project was the formation of a pilot program, a new approach concerning the services a prison should offer to both “users” and society. The physical layout of the prison would stem from this functional program.
inmates' drawings, project: My life now, 2008
This project does not aim at a single product, a building for a specific site somewhere where more prison space is needed. It rather describes a new typology for further investigation in the future. However, in order to test this typology a first location had to be decided.

Being in accordance with the development plans of Haarlem’s municipality and the demands for densification, urbanization and creation of a city entrance in the area east of the old Haarlem, the scheme locates the new prison in the east edge of the city, where the existing Panopticon prison is. The proposals for east harbour development and transformation of old industrial areas are in this way also delivered.

The aforementioned area comprises of a low density area with small scale factories, automobile repair garages and craft work spaces along river Spaarne. A dwelling complex is planned to be built in the same place. Another dwelling complex has already been built on the NE edge of the prison facilities. This includes elevated semi-private gardens with a parking lot underneath, two rows of 2-stories houses and a larger block 4-stories tall acting like a barrier between the latter and the railway.
The railway is running on the NE of the prison and acts like an austere segregative line for the general area. Houses of only one or maximum two stories high are lying along the SE bank of the river. Lastly, the large NedTrain facilities (rolling stock, maintenance, servicing, cleaning) occupies all the E side of the site.

As in many similar cases, this piece of land in the margins of the city does not have a clear identity and character. The fragmented empty spaces, the dominant presence of the railway on the NE and the wide motorway between the prison and the NedTrain complex, nameless undefined spaces and small scale of housing generally create a non-stimulating, indifferent environment with only exception the pompous presence of the Dome.
The prison's facilities consist of a Dome (de Koepel) and rectangular buildings around (the Vest). The building, designed by architect W.C. Metzelaar, has been in use since 1901. The monumental structure has a diameter of approximately 55m and a height of 36m. Its typology is the one of a Panopticon prison.

Haarlem’s prison together with Arnhem’s, Breda’s and Den Haag’s, all built around that time, are part of the planning for 1600 cellular cells to cover the deficit observed in 1884. The location of the prisons was largely determined by the locations of the courts and to a lesser extent by the presence of land in state’s property. Netherlands was relatively late in the implementation of the reformed opinions in comparison to neighboring Western countries. Legal confirmation of the cellular system was set in 1851 and in 1854 followed the abolition of corporal punishment.
The word is formed from Greek words: παν “all” + οπτικός “visual”.

Jeremy Bentham developed his ideas for the Panopticon in a series of letters between 1787 and 1789. The Panopticon derives from the two actions of power’s mechanisms: the segregation between normal and abnormal which is dictated until present to every individual, and the unceasing control, count, discipline and reform of the abnormal ones. Thus, it is an example of power invested in an artifact, a building in this case.

Its architectural form is the result of the synthesis of an annular building with a tower in the middle. The circumferential part is divided in cells which each one has the depth of the whole building. It counts in total four layers of 50 cells each and it was considered a luxurious “resort at the expense of state” at the time of its completion.

The inspection tower has big windows which correspond to the internal windows of the cells. The light penetrates from the outside window throughout the cell and thus, the inmates are visible because of the created glow and shadow. In this space, there is only need of a single observer. His power is visible but uncontrollable. One could not say if the observer was there or not: blinds along the windows and partitioning walls in its interior made the betrayal of his presence impossible.
Every cell is a small theatrical stage with a lonely actor. The imprisoned is constantly in same position, directly opposite to his observer. He is seen but does not see. The cell’s oblique side walls forbid the contact with his fellow prisoners and determine a unique axial visibility.

A PANOPTICON PRISON
The choice of the location implies the incorporation of the Dome in the design proposal but the way this is done derives from the current situation. Thereby, the way the prison functions today must be reviewed and assessed.

It is a fact that the Dome has long before abolished its Panopticon principle: the functional core of the building, the inspection tower, has been transformed to the staff’s canteen where the observers are now being observed. Thus, the typology has lost its purpose. Moreover, the envisioned empty interior space is always busy and overcrowded in an attempt to comply with the changes in the regime. Outside of the perimeter an aggregation of parasites (shed buildings) located randomly to fulfil new spatial needs, fragment the ground and make the area between the Dome and the perimeter wall difficult to guard.

The aims of the construction of the new prison in the specific location can be divided in two categories. The first one refers to the relation of the building with the city.

1. Enriching the urban fabric
   The design proposal aims in answering the desired densification enriching the urban fabric. The transformation of the old industrial space will add greatly to the area creating both indoor and outdoor spaces that become part of the surrounding city and driving the design of other plots nearby. The design allows also...
for movement over and under the existing barriers (motorways/waterways/buildings’ volumes) and create new open or framed public voids and passages.

2. A new landmark
Secondly, the new prison is considered to be a new landmark for the city, reflecting its considerable act of questioning the present penal system. Haarlem’s model should give the paradigm for similar efforts.

3. Proximity
Thirdly, the location of the prison within the limits of the city and not in a setback space, aims to create a mutual trust between “the outside world”/society and the “marginal” groups of the prison. The traditional remote location of these institutions creates fear of the unknown, empathy, sentiments of superiority of those being outside and darkness about the actual conditions of living of those being incarcerated. Proximity and blending with the city is considered here crucial. Prison isn’t eclipsed but it is considered as a part of the urban life. This proximity allows for an enhanced physical contact and active communication with relatives/friends/public which is part of the community-based program, contributing to inmate’s future integration. Moreover, as Haarlem belongs to the greater area of Amsterdam, the new prison will contribute to the coverage of positions needed. As expected, Amsterdam area has usually a shortage of prison space when prisons in Tilburg are empty.
The second group of aims refer to the structure of the new prison in relation with the Dome. The latter is decided to be kept intact but devoid of its function. The uniqueness of a purely theoretical building and the fact that it consists a part of the country’s architectural heritage and a landmark of the city makes its maintenance undisputable.

1. Liberating ground level
The typology that is proposed derives from the function/role inherited by the prison and liberates the surface of the site from the surround parasite buildings. Thus, the new structure is detached from the ground and the unnegotiable height becomes the “wall” between the prisoners and the outside world. The proposed detached structure aims to give back to the public this part of the city after approximately 110 years of being blocked by Metzelaar’s prison. Excess capacity of the space inside the Dome allows for a programmatic flexibility which can be taken advantage of.

2. Dissociation
The next aim is showing a dissociation with everything the Dome represents. That is why the new structure does not blend with the Dome but it evolves arounds it trying to “reach” the city. A gently rising ramp structure with changeable heights which blurs the image of the Dome and the city's skyline. The new prison avoids entrapment by the existing and tries to dismantle the Panopticon’s function denouncing its center, the eye tower.
Prison and Discipline are linked with indissoluble bonds. The mode of operation of the discipline is based in an allocation of individuals in space and a TIME distribution in Space. This is why:

"TIME is the executor of the punishment."

The proposed design uses the language of an architecture of time. Here the basic aim is the experience of life, time and space by the users of the architectural product as if the prison was a journey, experiential and referential. Experiential as the "user" is sensing the instant and "referential because this present experience is referred to previous or future ones, thus bringing together different moments in time."

The product of the design should help in building confidence and self-awareness, trust, co-operation and respect - vital capacities when it comes to reforming attitudes and behavior, and developing resilience in vulnerable people. This is besides the purpose of this prison. It is a space of intensive care, exercise, education where knowledge and practical skills are acquired gradually.

This is translated in a graded elevated structure where the tasks are exercised in a repetitive and gradational manner, and where one can experience a progressive way of moving and functioning, both in time and space.
This succession of functions around the Dome creates a spiral ramp-like building with defined physical levels which correspond to the different phases (periods of sentence/time).

The physical grades and the notion of the progressive responsibilities and abilities are related also with the notion of one’s uplift. This is experienced by an increasing comfort, a more pleasant and “normal” environment as the users pass to the next phase; a reward for their efforts and a motive to continue the journey.

The fragments of the prison, the elevated levels, define the position of each individual in this community and thus the communication with the outside world (limited for the first, more expanded for the next ones), the relation with the staff (remote, immediate), the relation with each other (classmates, group members, roommates, neighbors) the tasks, responsibilities, offered leisure activities etc.

The time spent in each fragment is decided by the individuals as they have the opportunity to move to the next phase/level (in a time and space sense respectively) when they are ready/willing. Prison as a space and as a “function” is not forcing them to a specific sequence/speed/rhythm. In this journey inmates are free to choose their own way and time of experiencing the space, functioning, living.
The term "urban fabric" describes in the architectural language the physical aspect of urbanism: building types, empty space, facade walls, and streetscapes excluding any functional and sociocultural aspects. In this project, the prison is on the one hand part of this urban fabric but on the other it consists a diffusion social fabric which filters the population.

After a certain period of time in a prison’s level, the inmates can “penetrate” to the next one through the porous fabric cover of the building and continue the “journey”. Infiltration to a space is the compensation for one’s efforts.

This implies an analytic space and the necessity of observation, review and assessment mechanisms which demand in their turn different degrees of visibility, transparency, porosity. These are indeed the different qualities of the fabric layers that are used here to enclose space.

Even if the scheme proposes a constant progress and a certain degree of freedom in each level/grade of the building, the certainty of detention is fixed due to its function. The prison’s fabric together with its elevation from the ground ensure the confinement and detention of the population within its limits.
1. Recidivism - Institutionalization

Recidivism refers to the act of a person repeating an undesirable, usually forbidden by the rest of society, action/behavior, after he/she has either experienced negative consequences for this particular action/behavior or has been treated to eliminate it. In conjunction with criminal behavior, it practically means the frequency with which people are detected or apprehended committing additional crimes after being released from prison for similar ones.

It is a fact that the use of prisons to control crime has increased in frequency in the last decade. Most recently, mandatory minimum sentencing policies have gained widespread popularity—especially throughout the USA—severely limiting judicial discretion in sentencing. The principle reason for mandatory minimums is the false belief that the length of time in prison acts as a deterrent to future recidivism.

However, numerous reports attribute lower recidivism rates in cases where there is a focus on rehabilitation and education of prisoners compared with the cases where punishment, deterrence and keeping potentially dangerous individuals away from society is prevalent. Moreover, they indicate that prison produced slight increases in recidivism while there was some tendency for lower risk offenders to be more negatively affected by the prison experience, thus increasing the likelihood of future delinquencies.

<AN ALTERNATIVE PROGRAM>

<HEALING ARCHITECTURE>

<effective programs at reducing recidivism>

<percentage of released prisoners rearrested in 3 years>
Traditionally the time spent in prison is considered as meaningless time, empty years. Lack of contact with the world outside obliges that the inmates socialize only with a "crime community", increasing the likelihood of recidivism. In fact, the belief that prisons are "schools of crime" has widespread support: "The inmate who has served a longer amount of time, becoming more prisonised in the process, has had his tendencies toward criminality strengthened and is therefore more likely to recidivate than the inmate who has served a lesser amount of time".

The controlled and strict regime, the long hours in crowded cells, the deprivation of all aspects of freedom lead to the institutionalization of the inmates. They lose their ability of operating in an environment other than the one they are accustomed to and that of taking decisions independently. Their identities are eroded due to the uniform daily routine and the group way of living. Complete dependence and lack of privacy lead to humiliating sentiments and explosive behaviors.
2. Pilot Programs

Accepting that people are not permanently criminals once they committed an action "unacceptable" by the rest of society, a great number of pilot programs have been developed in the last decades. Rehabilitation effort takes in each one of them a different form. Community-based programs, half-way houses, home incarceration, community service, supervised release etc. aim at maintaining relations with relatives/friends/society. Others emphasize on vocational education which as reports reveal, are the most effective programs at reducing recidivism. For example, the Stockholm programme (2010) of the European Union -towards an open and secure Europe serving and protecting citizens- encourages greatly the countries to reflect about alternatives to imprisonment, pilot projects and detention conditions. This includes measures to promote early release of prisoners, discretionary mechanisms, monitoring arrangements for offenders, social inclusion and work remission.

Punishment only trains a person what not to do. If one punishes a behaviour what is left to replace it? “Against one ugly obsession, a good habit, against a force, another one: the force of feelings and sensibility....” This is why it is stated that the most effective way to produce behavioral change is not to suppress "bad" behaviour, but to shape “good” behavior.
Many prisons offer school-classes to inmates with the possibility of earlier release as a reward. Some of them offer also degrees educational or vocational: a Bachelor of Science in Commerce, for example, is a curriculum designed to help inmates start their own business after serving their terms. Also, learning programs for preschool/elementary/high school levels are a way to deal with the high illiteracy rates of the inmates. Moreover, through individual or group activities, discussion, workshops etc, several art programs try to foster an environment where everyone can put forth their individual talents, energy and vision. Art in the form of plays/writing/dance/music/visual art that is eventually shared with the society through performances/exhibitions, can bridge the inmates with the outside world.

However, all the rehabilitation theories come across the same difficulties. There is the human experimental learning and behaviour modification literatures coupled with the social psychology of persuasion knowledge base which they provide evidence to refute the notion that rehabilitation is an easy matter. The offenders’ personality literature attests to the fact that the positive affect on them is complicated. There is no sound scientific research to determine how different individuals react to the same rehabilitating methods. The latter may depend decisively on the individual’s psychological background, which may be too complex and costly to be successfully implemented in most countries.

Vocational Programs - Courses

- Agriculture
- Farming
- Floristry
- Landscape Gardening
- Auto Mechanics
- Electrical
- Bike Repairs
- Arts & Crafts
- Graphic Arts
- Design
- Theatre/Music
- Cooking
- Catering
- Carpentry
- Masonry
- Painting
- Building Maintenance
- Household Repair

Stimulating Body and Mind

- Sense of Hope
- Self-Respect
- Self-Reliance
- Responsibility
- Self-Awareness
- Progress
3. Haarlem's model

It is important to recognize that most people are currently in prison for financially driven crimes and drug-related offences. This project proposes a pilot program aiming to the rehabilitation and reintroduction of the convicted population to the society, preventing habitual offending (recidivism) and healing rather than harming. However, the categorization of the convicted depending on their crimes is considered necessary and this model is referring to prisoners with a low to non-violent profile. The target group is especially people with low level education, low income, minorities etc. This disadvantaged group is the most vulnerable group to recidivism, part of the traditionally social outcasts.

A continuous curriculum of activities is used in this prison to provide inmates the opportunity to develop themselves socially, culturally and professionally before their release. The proposed model aims that the "users" of the prison must see themselves and be seen in roles other than that of prisoners. Since individuals react differently to the same "rehabilitating" methods, a more personalized program is necessary. The services of this prison are divided in 4 phases which correspond to the 4 different levels of the building. A large number of activities, vocational education, labor, will help each inmate in acquiring a new image for himself and a new position in his community. Encouragement of individual success through a

<table>
<thead>
<tr>
<th>AN ALTERNATIVE PROGRAM</th>
<th>SELF-PROGRESS</th>
<th>SOCIAL EDUCATION</th>
<th>VOCATIONAL TRAINING</th>
<th>ACADEMIC EDUCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>recompense for efforts</td>
<td>housing outside the facilities</td>
<td>gaining self-confidence</td>
<td>setting personal goals</td>
<td>gaining self-knowledge</td>
</tr>
<tr>
<td>job positions inside</td>
<td></td>
<td>single studios</td>
<td>double housing rooms</td>
<td>small group housing</td>
</tr>
<tr>
<td>vocation career degree</td>
<td></td>
<td>personalized environment</td>
<td>free elective courses</td>
<td>psychological support</td>
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<td></td>
<td></td>
<td>internships</td>
<td>workshops</td>
<td>modest comfort level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>extensive contact with outside</td>
<td>more pleasurable interior</td>
<td>group responsibilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>sport facilities</td>
<td>educational environment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>imposing atmosphere</td>
</tr>
</tbody>
</table>
progressively positive environment: Quality and comfort increase evokes an awareness of possible improvement. Goals are set by the "user" in accordance with the program’s demands. Thus, the conditions of sentence and time of release are partly chosen by him.

The importance of choice is crucial opposite to the danger of institutionalization. Each person is voluntarily involved in the offered programs which give him the possibility of decreasing his sentence. The latter can only be applied and function if it has an end. As the time passes and the "user" of the prison goes from one phase to the other, the affects of the sentence are moderated. In the end of each phase an exam decides if he can go on or not.

This disciplinary "program" – since it has rules, limits, demands and people in charge for evaluating and examining – is no different than the one individuals have to follow in the "free world of society". "We all live in a little Village. Yours may be different from other people’s. But we are all the same: prisoners..." Our 21st Panopticon prison stretches from the reality TV and the internet (c)age to public surveillance by CCTV and integrated systems for emotional state recognition. As M. Foucault explains, the same strategies of power and knowledge operate both in a prison and in a city. The mechanisms of discipline, the methods of observation and evaluation that control the delinquent also control the citizen. This project accepts that this prison could not escape from being a part of our society’s extended carceral network.
The main purpose of architecture in this project is the accommodation and rehabilitation. But making a step further, its mental task is the reinforcement of one’s body and soul and integrated experience of the world, attempting to reconstruct a normal state of being. Life enhancing architecture has to address and provoke all of the senses simultaneously and fuse the image of one’s self with his experience of the world. Thus, environmental psychology and philosophy of perception offer the base for creating a healing space which will stimulate senses and offer physical challenges.

It is a fact that the perception of sight as our most important sense is well grounded. The problem arises from the elimination and suppression of other senses which increasingly reduce and restrict the experience of the world and one’s self into it. This dominance of the sense of seeing is even more evident in the current culture of Western countries. The eye surveys, controls, investigates. A culture that seeks to control citizens promotes the opposite direction of interaction, away of individuality and identification towards a public detachment. A society of surveillance like the society of a prison, is one of a sadistic invading eye and constant illumination that leaves no space for mental withdrawal or privacy.

Here a sensory architecture is proclaimed in opposition to the psychological withdrawal and depersonalization that carceral institutes traditionally cause to inmates. A conceptual interior whose surfaces and 3d
elements, materiality, qualities and general organization and form force the user to define his relationship with the space. Our bodies and movements are in constant interaction with the environment. Reflection on ways to engage/be engaged to space is achieved here through: physical and mental effort to adopt and perceive the constant changes, control of senses and control of body. Body is not regulated, arranged, supervised, led. It is trained to adopt and manoeuvre, it is exercised and reinforced. The inmates must learn how to act, behave, make use of, respond to, move and finally live in this space. This is considered the first step in the process of their learning how to perform the above in society. Space is being used as an educational healing tool. Each individual has to find each position and function in this space, in this temporary community, as later in his future society.

Key themes of this aspect of architecture is the Contemporary Sensory deprivation, the Hegemony of the Eye, Kineasthesia, Synaesthesia, Hapticity, Discourse of learning through perception, Phenomenology. Kinaesthesia refers to the ability to react on a physical environment. It is a physical and reactive phenomenon dependent on outside circumstances. Phenomenology is attempting to depict phenomena appealing directly to consciousness in its own dimension of consciousness, not in an empirical way. One of the main arguments is the difficulty of understanding one’s role in the image he/she constructs of the world around him/her.
A building which claims back the plasticity and connection with the language of the body. Irregularities in plan and section bring the building to life while the play between inside and outside, enclosed and open, sheltered and susceptible results to a space that is not fixed and ever fully grasped; it must be experienced. Proportions of a space express and provoke senses. In short, when something is wider than it is high it is ungainly and relaxed. When it becomes even wider it loses its energy. When it stretches and becomes slim it causes an unstable, restless feeling, an upward ascendant desire. When it is square it is bulky, promoting a more immobile situation, a heavier and slower movement.
Tactility and Details crafted for the human body. Touch is the sense of nearness, intimacy and affection. Sequences of different materials, angles, slopes and widths re-activate knowledge of movement and behavior in order to create orchestrated routes. These routes, guiding and testing at the same time, enable bodily capabilities and create awareness.
preliminary collage
A balance of harmonic, slowing-down tempo parts of spaces and others evoking a more rapid tempo is achieved with the use of vertical elements. Speed of movements, meeting and relaxing points, abrupt stops and points from where views are enabled, functions, are all directed through the structural elements and rhythmically repeated elements that arrange and divide the space. Rhythm is crucial regarding as well the notion of time as mentioned before, as together with repetition, speed, escalation, time divisions, sequence are primal regarding the aim of a patrolled time, a time of quality in the traditional correctional philosophy. The proposed prison scheme is trying to incorporate the notion of time in architecture moving away however from the imperative discipline that a space like this should carry.
There is an inherent suggestion of action in elements of architecture, a promise of function and purpose. As a consequence a bodily reaction is an inseparable aspect of the experience of architecture. Examples: Stepping “stones”. Watching one’s step as he picks his way along irregular step stones. At each movement he must pause and look down to see where to put his feet next. Openings whose weight must be confronted and where the act of entering is considered and not only the visual design of the door. Similarly looking out of the window rather than the frame itself is the important issue. Self-passages, which must be walked down/up slowly making the users feel maybe insecure, giving the possibility of going further until a point where a positive experience is earned.
SENSORY STIMULI

{reflection, translucency, overlay and mirroring
{hearing constructions
{realms of darkness & light
{plasticity and proportion
{tactility and details
{rhythm
{elements of action
{materiality and time

Natural materials allow our vision to penetrate their surfaces and enable us to become convinced of the veracity of matter and also express their age and history. The patina of wear incorporates the dimension of time and the unavoidable process of aging and evolution.
preliminary collage
These themes create a sense of spatial thickness, as well as changing sensations through movement and light. Particularly through mirroring one’s image and projecting it to the environment it can be said that the mind reconstructs the complete image of both the person and the environment. This acts like a reminder of the fact that the person is part of this environment and counteracts with it having a role of both a subject and an object. The person sees him/herself seeing using an active vision instead of a passive one of a mere spectator.
preliminary collage
Sounds articulate the understanding of space. We can experience sounds of hospitality, invitation, intimacy, monumentality etc. Moreover, sounds unite us with the crowd making us aware of our participation in the space, city, society etc. Technical elements serve also as sources of acoustical experiences. Some examples: piping leading rainwater from the roofs introduce the sound of flowing water, connecting the inmates with the outside world as well as making the building be felt like a living organism. Air gaps between the accessible floor surfaces and external walls allow a flow of air to penetrate inside, sound and movement effects of wind to be present and the notion of the world outside to be evoked. Acoustical effects can be handled by sound absorption/reflection materials. Thus environments of spiritual silence are also created, useful in a self reflection process.
preliminary collage
Shadows are essential because they dim the sharpness of vision, make depth and distance ambiguous and provoke peripheral vision which integrates us with space. The opposite: focused vision pushes out of the space, making us mere spectators. Unfocused way of looking evokes a meditative state, a daydreaming and imagination stimulation of imagination. An uneven distribution of light intensity makes a sequence of spaces more enjoyable enriching both visual and acoustic/tactile experiences. Distant light sources are like gifts after a long residence at darker spaces and are approached with pleasure. On the other hand, hard distant strips of light in a dark space give the notion of the point to be reached, of the aim. Moreover, as shown on section, the movement along the phases/building is translated into a progressively pleasant, full of light atmosphere.
Moving from the theoretical base of the building to the technical and pragmatical aspects of its formation, three important systems must be defined: the natural lighting conditions, the circulation of all types of users and supplies and the structural system of the building.

After studying the sunlight path, the allocation of shadows throughout the longest and shortest day of the year—summer and winter solstice—some basic conclusions were reached concerning the quantity and quality of shadows around the Dome.

Haarlem’s latitude ($\phi$) 52 23 N and longitude 04 39 E

The sequence of the functions in the streams of spaces have been allocated depending on natural light conditions.
Sunlight path & conclusions about the quantity of sunlight around the Dome

West wing
- Visitors halls
- Health care
- Amphitheatres

South wing
- Classrooms
- Gym
- Studios
- Workspaces
- Libraries

East wing
- Residences

North wing
- All day activities
North wing
The north wing of all levels is occupied by the residences of the inmates. Even when the sun is in its peak of warmth and brilliance, daylight in northern rooms will have a blue undertone because all light here is cool and exclusively reflected from the sky. Therefore north wing’s rooms are open and facing the south to allow the maximum exposure of the surfaces to the sun. Additionally, the shadows cast by the Dome add to the obscure atmosphere. In total, this is not considered negative here since the inmates are encouraged to spend their days out of their rooms, following the curriculum of the prison. The north facade of the prison is the most opaque as it keeps the cold northern winds out and acts as a barrier wall with the adjacent residence area. The materials were checked for their thermal capacity.

East wing
The east wing is the most well lit wing of the prison and that is why all the daytime unsupervised activities, lounge areas, kitchen and dining spaces are located here. The East facade of this wing as well as the one of the west wing are shaded with the use of vertical elements that divide also the double layered translucent wall in panels.
South wing
The south wing is occupied by classrooms, gym, studios, workspaces, libraries etc, functions with a longer residency needed. The facade of this wing is shaded with horizontal external louvres and internal venetian blinds for better and manually control of light conditions. Moreover, the double layered glass surface allow for transparency and translucency variations.

West wing
The west wing is poorly lit on lower levels but on higher ones, the golden light creates a pleasant ambience. The fact that warmer colors show up with great brilliance is taken advantage of for shaping the visitors halls, health care facilities and amphitheatres.

Except of the residences of the northern one, all main spaces of all wings are located along the most well-lit side while the other side is reserved for the circulation paths.

Moreover, as the building keeps a distance from the Dome, it gives prominence to the latter, leaving the naturally lit sides of it visible with their warm reddish tone.
The entrance to the prison is through the existing central building where the admission space is located. The beginning of their journey starts once they ascend to the first level, passing the dark corridor ramp of the south wing.

The circulation diagram shows the gradual movement upwards through the diffusion points that allows the inmate the transition to the next phase.

Opposing to traditional confinement in a small cell this model allows for a certain freedom of the population inside each phase. From the multi purpose space of the east wings, one can reach both the residences to the north and the spaces for the other designated activities.

Staff enters from the rear side of the central existing building or from the administration existing administration building in the East. Their circulation to the upper levels is done through the same cores used for emergency exits. Each stop of those cores has a control point/a management office for the specific level. The control of the inmates of first phase is indirect (separate corridors) while the interaction in the upper levels is only direct. One of the cores passes through the health care facility with an elevator shaft for transporting injured and unable. The end of each emergency exit is in a water pond so that they are not approachable from the public. Visitors enter to the visitors hall of each phase through the Dome.
When the colossal concrete walls are seen together with the normal-sized buildings it becomes apparent how immense the building is. The structural system which forms the meandering corridor-like spaces is a composition of imposing reinforced concrete load-bearing walls as the base and a woven timber structure on top. These concrete walls which seem to be extruded from the mass of the Dome, have a radial arrangement corresponding to its divisions. They “tie” together the wings of the first phase of the prison, adding to the brutal image as they penetrate the interior.
The first issues that came up were the dimensioning of these walls which would serve better, taking into consideration the structure above: the angle of their vertical section, their height and the distance between them so that the needed interior space could be wrapped among them.

The option of designing typical concrete beams was left aside as the desired result of levels floating transversing the vertical surfaces of the walls would not be achieved. These levels could also be hanging from the concrete element, but after consulting a structural engineer this option was considered dangerous in case of a fire – the stressed parts from which the slabs would be hanging could fail easily leading to a collapse of the whole prison to the public ground floor. Also cantilevered slabs were not considered an option as rough calculations demanded that they would be of a great thickness (up to 80cm) incorporating in this the needed beams and reinforcement. So what was decided was the use of steel H beams carrying hollow core slabs. These elements are thin enough so that they do not affect the floating image of the wings.
The next issues that were researched roughly were the connection between the structural timber and the concrete base. The solution in the second image was chosen for it is the easier to achieve and because it offers a more accurate alignment.

Moreover, the 450cm thickness of the concrete walls that was considered from the structural engineer necessary, was thought to incorporate piping installations, having a hollow section part, easily reached in certain points to maintain from the exterior.
The arrangement of the structural posts and beams is shown in this image as well as the connection between them. What should be used is high quality glued laminated timber—Glulam—which is composed of several layers of dimensioned timber bonded together with durable, moisture-resistant adhesives. The secondary timber posts are not load-bearing but they carry either the facade panels or the shading structure.

The initial design asked for a series of posts that were later assessed as non-functional statically as the load of the structure would in fact burden only the first one, causing unwanted tensions to the rest of the structure. This is why the section changed, keeping a minimum of 3 m distance between the 2 closest.
the grid

structural timber elements
The lines of the liberated ground floor lead to the Dome. Its interior hosts public functions and its mass encloses a new public void. A promenade beginning from the grand canal of Haarlem, passes over the river and connects the old center with this new focal point of the city. This was thought necessary as the two other ways (bridges) to pass over the river were in great distance. The path leads to the central building which has a hollow double height part creating a public passage. The ground level of the dome has been opened and 2 vertical circulation cores have been added for transition to the upper levels.

The second characteristic of the urban design is the re-introduction of the canal in the position where it used to be as shown on the adjacent map.
Coming from outdoors, where all is bright and open, the future inmate’s vision must adjust itself before he can fully perceive interior shapes and colors in the more obscure environment and subdued lighting of the 1st Phase. This readjustment takes place in the entrance hall, the central existing building.

The double height interior of the waiting area and main hall is divided by the rest of rooms (photograph, interview, wc) with a glass panel partition wall. From there a dark long and steep staircase begins and ends with a dramatic view through the central window to the Dome outside on the upper level of the building. Once the symbol of freedom’s degradation, now ironically represents the world outside and the desired destination of this “journey”. The EXIT sign suggests that the passage through this prison is a way out of the negative facts that brought someone here in the first place.

Staff also enter through this building to the interior of prison facilities. Their entrance is in the rear west side and the circulation core that brings them to the upper level is isolated from the rest of the building.
a public passage through entrance building
(b - waiting area of entrance building)

c - exit through the prison
The tables include all the functional areas for every level and the colored diagrams below show the allocation of the functions. What is highlighted mostly with the following plans are light and material qualities, and the structural elements that divide the space and give a rhythm to the circulation.

The maximum capacity of inmates in the prison is approximately 275 people. That is close to the number of the usual capacity of urban prison centers. Each phase/level serves 60–80 people. During the 1st phase of the program, inmates live in a very basic in quality and comfort space, they sleep in large group rooms, having responsibilities over their living environment, food preparation, cleaning etc. It is considered crucial that each one of them is personally accountable to their “house” and this suggested the division of sleeping area in smaller housing units. These are open to the south side, with the staff corridor running along and are equipped with movable partitions that allow for some privacy and flexible arrangement.

PHASE 1

<table>
<thead>
<tr>
<th>Entrance / Preparation</th>
<th>Health Care Facility</th>
<th>Staff General Facilities</th>
<th>Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>control room &amp; vehicle sally port</td>
<td>control and staff office</td>
<td>public waiting area &amp; wc</td>
<td>33</td>
</tr>
<tr>
<td>main hall &amp; wc</td>
<td>general working area &amp; wc</td>
<td>conference room</td>
<td>20</td>
</tr>
<tr>
<td>open waiting area</td>
<td>medical treatment</td>
<td>warden &amp; secretary</td>
<td>15</td>
</tr>
<tr>
<td>staff's entrance</td>
<td>dental treatment</td>
<td>equipment room</td>
<td>10</td>
</tr>
<tr>
<td>2 rooms(interview/photos)</td>
<td>waiting area</td>
<td>staff workspace &amp; wc</td>
<td>30</td>
</tr>
<tr>
<td>showers</td>
<td>laboratory</td>
<td>storage</td>
<td>30</td>
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<tr>
<td>clothes and linen</td>
<td>medication storage</td>
<td>TOTAL</td>
<td>140</td>
</tr>
<tr>
<td>TOTAL</td>
<td>TOTAL</td>
<td></td>
<td>385</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Sleeping area</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2 levels - 80 inmates</td>
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</tr>
<tr>
<td>group sleeping rooms ( m² / inmate)</td>
<td>10.6</td>
</tr>
<tr>
<td>2 wc - shower rooms</td>
<td>40</td>
</tr>
<tr>
<td>2 laundry rooms</td>
<td>40</td>
</tr>
<tr>
<td>TOTAL</td>
<td>925</td>
</tr>
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</table>
The south wing spaces for gym, telephone area leading up to classrooms, library and examination room, which is the infiltration point to the next phase. The light that one has to reach. The water pond is running along the north wing, collecting rainwater for auxiliary usage in the facilities of prison.
The inmate reaches the first level through a dark corridor. Rhythmical strips of light coming through the narrow openings aligned with the concrete walls and a narrow proportion of its section stimulates other senses than the sight, and demand for a fast movement along it and towards the interior. Once one has reached the open space of the 1st phase, he finds himself in an interior of a brutal character which aims at an inner focus. Translucent concrete blocks, allow for some natural light penetration and a skylight along the whole east wing increases this amount. But apart from that, artificial light is used, highlighting more intense and stimulating areas.
On the top floor of this phase but also of the others the open air space is developed, for sports, green areas and other outdoor activities. In every case, one reaches the outdoor space both from the east wing or from the vertical core of the residencies in the north wing. From here one, after passing through a control point, reaches the visitor’s hall. The latter’s interior is filled with a pleasant light and colored surfaces.
\{p - control point\}  \{o - visitor's interior space\}
n - towards visitor’s hall
What is important to note here is the more pleasant ambience created by increased sunlight inside—in comparison with the previous phase—warmer materials and smoother surfaces. Entering from the transition point at the edge of the south wind, one finds himself at the well-lit space of workshops, mechanical training etc. Using the bridge of east wing he can reach the housing area of the north one. South wing, which is a gentle wide ramp leading to the upper level of 2nd phase, includes dinning and kitchen apart from other multi-purpose rooms, all divided by the structural elements which arrange the functions and act also as shading devices. West wings theater/lecture hall can be reached from the visitor halls’ elevator allowing for public shows, connecting city and prison life.
The 2nd phase south wing section with the outdoor space on top, shows the relation with Dome’s top level promenade as well as the view to the city. The east facade consists of a layer of transparent safety glass on the exterior and a layer of resin composite panels in different opacities and textures depending on the function of that area. In between, ventilation and shading with blinds is located as shown in the section.
PHASE 2

The housing area of this phase has a total different character. One’s progress along the prison’s program is rewarded through a more normal residential atmosphere. The intention was the creation of an environment with resemblance to an urban one, with small scale modular housing, answering the demands of the number of population. One has a feeling of his temporary “home” being somewhere outside the facilities of the prison where he performs the curriculum/training he chose along with additional leisure activities. Each module houses 2 persons, having their own room and wc and a common living space. This wing is actually an outdoor space with these cubes arranged in a lining or one on top of the other, enclosed by layers of perforated metal and secured with laser fields.

The amphitheatrical arrangement of the lecture hall on the lower level of this phase is followed by a sequence of spaces in a progressively narrower ramp space: study spaces, library, examination room, control and infiltration point to the next phase.
horizontal section at +23000mm
{plan of housing unit/module}
s - housing units, towards visiting hall
The 3rd phase occupies the top level around the Dome. It consists of a sequence of spaces very friendly and residential in character. When one reaches the level after passing the narrow transitional ramp, he finds the control point followed by creative spaces (design studios, arts&crafts workspaces), computer lab, hot spot, lounge, media area etc.

### Housing studios
- **(max capacity: 65)**
  - 32 studios
  - (for 1–2 persons each)
  - $24 \times 32$ m$^2$
  - $768$ m$^2$/inmate
  - circulation $250$ m$^2$
- **TOTAL** $1120$

### Multipurpose wing
- kitchen and dining $200$
- staff/control $35$
- wc $60$
- free space $400$
- **TOTAL** $695$

### Visiting hall / Exodus
- examination /control $30$
- waiting area/circulation $50$
- control $10$
- 3 private meeting rooms $30$
- cafeteria/internet point $70$
- **TOTAL** $190$

### Studios
- library $55$
- studios $245$
- meeting spaces $35$
- media / lounge $110$
- hot spot / computers $55$
- **TOTAL** $500$
Gym, kitchen and dinning and other multipurpose rooms are located in sequence along east wing. North wing again occupies the residential area of private studios which are extended along west wing also. The last infiltration point – exodus is on the corner of the west wing.
After the completion of the 3 phases, the inmate is transferred outside the perimeter of the Dome, in the area along river Spaarne, as shown in the map (yellow area - grey enclosed space).

This area is planned by the municipality to be developed: residential blocks and shops are part of their project. Taking this under consideration, it is proposed here that family housing and studios for the inmates should be incorporated in the plan.

The public promenade from the grand canal passes through this area where open market, shops, park and sport fields can be located. The “prisoners” of the 4th phase will then work there, depending the education and vocational training they had inside the prison. This way, the community engagement with the institution, with its functions and users will strengthen and prison’s - city’s life boundaries will be eliminated.
SECTION A-A
Light transmitting concrete blocks (Litracon)

Litracon™ is a combination of optical fibres and fine concrete. It can be produced as prefabricated building blocks and panels. Due to the small size of the fibres, they blend into concrete becoming a component of the material like small pieces of aggregate. In this manner, the result is not only two materials - glass in concrete - mixed, but a third, new material, which is homogeneous in its inner structure and on its main surfaces as well.

The glass fibres lead light by points between the two sides of the blocks. Because of their parallel position, the light-information on the brighter side of such a wall appears unchanged on the darker side. The most interesting form of this phenomenon is probably the sharp display of shadows on the opposing side of the wall. Moreover, the colour of the light also remains the same.

Load-bearing structures can be also built of these blocks, since glass fibres do not have a negative effect on the well-known high compressive strength value of concrete. The blocks can be produced in various sizes and with embedded heat-isolation.

EXTERNAL WALLS

{LIGHT TRANSMITTING BLOCKS}
Properties / characteristics

1. 96% concrete, 4% optical fibres
2. 2100-2400 kg/m³ : U value 0.55
3. 1200 x 400 mm x 300 mm size + custom sizes
4. Compressive strength : 50 N/mm²
5. Bending tensile strength : 7 N/mm²
6. 3 colors: black, grey, white
7. Steel frame for wind pressure
8. Embedded heat-isolation

The darker, more brutal environment of the first phase is the result of the combination of cementious materials as the above described blocks and the following cement panels. Finishes of poured concrete or epoxy floors and rough metal fixed furniture complete the image.
DETAILING

EXTERNAL WALLS

{LIGHT TRANSMITTING BLOCKS}

1. 360mm floor construction
   200mm fixed reinforced-concrete slab
   60mm recycled EPS insulation
   vapor barrier
   70mm cement screed underfloor heating
   30mm colored epoxy resin floor

2. 380mm gravel flat roof construction
   200mm fixed reinforced-concrete slab
   LED strip light 30x40mm
   70mm screed
   vapor barrier – water proofing membrane
   50mm board insulation
   protective geotextile
   40mm gravel
   120x80mm gutter
3. Transparent concrete corridor
HE 360B steel framing of block-wall for wind pressure
400x1200x300mm Litracon transparent concrete blocks
DETAILING

EXTERNAL WALLS

{wall of light transmitting blocks}
{steel frame}
{insulation}
{in place}

{fixed slabs on reinforced concrete walls}
{insulation}
{external layers}

{Cella Septichora, main entrance gate}
LIGHT TRANSMITTING BLOCKS
Transparent cement panels (Italcementi Group)

A new type of cement has been set up which, by bonding special resins into a newly conceived mix, allows manufacturing solid insulated yet light-transmitting construction panels.

These solid insulated panels were presented in the Expo 2010 in Shanghai, for the Italian pavilion. Bonding a plastic resin matrix (50 chains of 2-3mm thick plastic resins) into a final panel that combines the typical robustness of cementitious materials and the possibility of filtering light both inwards and outwards. The Italian group of researchers haven’t fully disclosed what was put into the mixture to make the cement, they did say that it had transparent thermoplastic resin and inorganic materials such as alumina which can become solid without the use of water. The block is said to transmit 20% of the light it captures. The transparent effect is more evident when it is dark and, seen from the outside, the building will allow the interior lights to filter through while, from inside, during the day, it will show the changes in the levels of daylight. The material is highly cost effective (the resins have higher transparency performance than the optical fibres and cost much less).
Properties / characteristics

1. Cost effective (the resins have higher transparency performance than the optical fibres and cost much less).

2. 500 x 1000 x 50 mm size

3. Elastic load = 2 kN

4. Max failure load = 8 kN

If mounted on wall, light source is used as a second layer. For these purpose LUCEM light panels were selected.

They are small plates that get lighted laterally with high efficient, energy-saving LEDs. The light panels are 4-10 mm thin and available in different colours. The use of RGB-LEDs allows state colours or colour changes from time to time. In contrast to other deeper systems, the lighting occurs laterally depending on the size of the panel and the requested luminosity. LUCEM light panels are marked with an individual raster or prism-laminated film to guarantee a homogenous spread of light.

EXTERNAL WALLS

{TRANSPARENT CEMENT PANELS}
1. Translucent Cement Panel, 50mm
2. LED plate 10mm
3. Anchor
4. Rolled steel profile
5. Elastic sealant
6. Fixing steel angle
7. Double Glazing panels

{AGRAFFE SYSTEM / metal brackets}

{TRANSPARENT CEMENT PANELS}

{horizontal section}

{facade}
1. Translucent Cement Panel, 50mm
2. LED plate 10mm
3. Anchor
4. Rolled steel profile
5. Elastic sealant
6. Double Glazing panels
7. Vertical Mullion
8. 400mm floor construction
   - 200mm hollow core concrete slab
   - HE 240x240mm steel beam
   - 60mm recycled EPS insulation
   - vapor barrier
   - 70mm cement screed underfloor heating
   - 30mm colored epoxy resin floor
DETAILING

{TRANSPARENT CEMENT PANELS}
OPPOSITE PAGE
{section of west wing: visitors' hall on upper level and health care facility below}
PRELIMINARY IMAGES

{view of south facade}
{view from south wing’s top level towards east}

{view of east facade}
PRELIMINARY FACADE COLLAGES

{west facade – view from 4th phase outside facilities}
{south facade}
SOUTH FACADE
EAST FACADE
The design proposal incorporates the old Panopticon prison of Haarlem. Instead of functioning as a disciplinary enclosed space of detention, incarceration and observation as until now, the Dome will form the frame of a new open-air public void. An inversion/reversal of its character and architectural language is achieved in this way, expressing the change in the institution’s role. A space which was before forbidden to visit, walk around, being secret and unknown, is now converted to a public space open to multiple functions and movements. What was before the heavy exterior wall, the barrier between the inmates and city, becomes an internal permeable surface which allows the infiltration of “users” to the interior while the once internal wall is now playing the role of a 360 external surface, a new public void in the city’s urban fabric.
Panorama:
Formed from Greek words: πᾶν “all” + ὅραμα “sight”
1. A complete view in every direction.
2. A picture presenting a view of objects in every direction, as from a central point.
3. A picture representing scenes too extended to be beheld at once, and so exhibited a part at a time, by being unrolled, and made to pass continuously before the spectator.

In the 1671 Amsterdam, A. Kircher includes an illustration of a strange device for recounting stories in circular form, the Smicroscopin or Simulacrum as the inventor calls it. The story of Christ’s death, burial and resurrection are depicted in eight separate slides, or scenes. Kircher’s revised this invention and provided the magic lantern (lens, mirror, light source (lamp) and slides produced an image on the wall). The slides are offered in the inverted position in order to provide an upright presentation.

The later enormously popular forms of entertainment, Panoramas, were the closest thing to a movie theater in the late 18th/early 19th century. Artists like P.J. de Loutherbourg, T. Gainsborough and L.J. Mandé Daguerre, excelled in perspective and large-scale productions and provided spectacular scenery. Daguerre would open the first Diorama in Paris in 1822 (a partially three-dimensional, full-size replica or scale model of a landscape typically showing historical events, nature scenes or cityscapes, for purposes
of education or entertainment) and right after this, several other ‘versions’ came out of them; Pleorama, Giorama, Cyclorama, Betaniorama, Cosmorama, Kalorama, Kineorama, Europerama, Typorama, Neorama, Uranorama, Octorama, Poecilorama, Physiorama, Nausorama, Udomara. In 1901, the Lumière brothers, better known as the inventors of motion pictures, opened a Photorama in Paris, which projected circular film loops of French panoramas onto a 360-degree screen.

The Panorama was unique in the sense that one could not only see the center of the picture but also, the peripheral vision could be seen, as in nature, the outer corners of the view. This gives the sense that there is no boundary other than the limitations of the eye itself. Today’s Panorama is of course the IMAX format.

Contemporary art has also been influenced by the se models. E-Cyclorama—Immersed in Color, by Sanford Wurmfeld is a recent example. A grand canvas painting, stretched onto a 37-foot long Elliptical cylinder, that is viewed by entering the elevated structure from beneath. “If ever one could stand in the center of a rainbow and experience the entire spectrum of color, this is it.” As one’s eye moves across the painted surface, the impact of the shifting color is affected, too, by changes in depth and distance, leaving one a dramatic effect, wondering what is really being seen.
Inspired by the tradition of Panoramas, the circular facade of this public plaza – entrance to the prison will carry motion pictures of the city. Being in a space surrounded by images creates unpredictable results and feelings. As it was explained above, the artist of such panoramas may intend to transfer the spectacle to a far away exotic but real place or confuse their senses by projecting surreal and delusional images. Baroque artists who painted the church’s ceilings, wanted the effect of lifting the visitors out beyond the actual architecture of the church into a glorious world beyond. In this case, the illusion of viewing a peaceful scenery of the cityscape or an entertaining video-art projection contrasts with the actual enclosure by a prison facility. This evokes in visitor’s mind the possibility of being entrapped without being aware of it. At the same time, a closed-circuit television system with the use of video cameras will transmit in real time its image to surfaces throughout the prison, reversing the roles of the observed inmates to observers and bringing in front the idea of the panoptic society.
It has been said that there is not a prison building that is not at the moment of its completion out of date. Without making claims of being definitive, the proposed scheme of this project aims in being (after its assessment/evaluation) a new starting point for a series of coming solutions to be revised in their turn. Furthermore, the experimental character demands an independent action of the prison in its regulations, admission of inmates, direction etc. The architectural design and functions presented here should be redefined with specialists from other areas: psychologists, security experts, structural engineers, sociologists etc. in order for the whole project to claim its feasibility.

Researching the possibility of using architecture as a rehabilitating tool, this project fulfils both a social and psychological role, through the creation of a humane, secure but not repressive environment.

However, even if design matters after all, even if a more humane environment inside a prison is possible, where people might actually have a chance of progressing/learning and surviving after their release, the question remains: Do we really need prisons?

In order to imagine a world without prisons a new popular vocabulary will have to replace the current language, which articulates crime and punishment in such a way that we cannot think about a society without crime except as a society in which all the criminals are imprisoned.

Personal wish of the designer/author is to inspire and force the readers to reflect on this social issue.


Foucault M. (1973). *The Punitive Society*

P.Gendreau, F.T. Cullen, & C.Goggin. (1999) *The Effects of Prison Sentences on Recidivism*. Centre for Criminal Justice Studies, University of New Brunswick & Department of Criminal Justice, University of Cincinnati


*Prison Policy Initiative* (http://www.prisonpolicy.org/research/prison_programs_recidivism_reentry/)

*The Prison Creative Arts Project (PCAP)* (http://www.lsa.umich.edu/pcap/)


*Italcementi Group* (http://www.italcementigroup.com/ENG/)