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The Future of Prisons

Digitizing the Prison: The Light and Dark Future

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This article takes a rather unusual form blending an interview with my own reflections on the digitization of our prisons. Its focus is based on an interview with Steven van de Steene¹ who is a corrections technology expert. He previously led the design, development and implementation of Belgium's PrisonCloud² for the Federal Public Services Justice as IT Director. Heralded as innovative, PrisonCloud has received much attention from other countries, especially those aspiring to develop their own prisons' digital capability. To date the Belgium's PrisonCloud implementation still remains one of the only catch all digital provision that prisoners can access, other examples are closely following and different technologies are ready to support this intergrated approach. In this interview Steven draws our attention to important features of digitization identifying the successes and challenges for making this valuable transition within the context of the prison. Steven's insights provide us with some thoughts on prisons of the future.

The Birth of PrisonCloud

VK: How was Belgium's PrisonCloud developed?

SS: It has been a long process, because at that time we were overwhelmed by questions related to access to technology. We had a lot of questions concerning telephony and especially the fact that it's very expensive and its very time consuming and often difficult for the inmates to access. We had some problems with the change of television because the public television was going to digital, so a lot of analogue TV Channels we had in the prisons were not supported any more by the television providers... So it was really a mess. Instead of finding a solution

for every individual question we said we needed to design an organisation wide solution that starts from the real needs.

And we developed first of all a concept, a concept where we said OK we need to have a kind of system that supports all kinds of digital service delivery, not only in the cell but at every location inside the prison. Also what is very important for me is that it has to have the possibility to make it tailored to the individual. So that we can allow them to access this service from this location during this time.

And so we worked a lot to develop the concept and discussed also internationally with some people. I was at that time involved in a European project called Licos. It was mainly collaboration between different countries to develop a new learning system adapted to the prison environment based on the open source product Moodle. And so finally we went from the concept to the design. We talked to many different companies and listened to the solutions they had, but mainly they were proposing some part of the puzzle not the whole.

VK: So you couldn't find a solution?

SS: No because what I really wanted was to have a platform that supports the concepts, the vision behind it. So I didn't want to have a classical virtual desktop environment because first of all it's too complicated to use. You have to have the basic PC knowledge already before you can work on a PC, so I wanted to really have an easy to use interface and intuitive system. Finally we met some people who were not used to working in the justice environment, but had a huge experience in working in other very secure environments. It was the company called EBO Enterprises who had a secure content delivery platform and they could offer us the possibility to deliver any kind of digital content at any location and device at any time in a very secured way.

1. Steven@smartcorrections.com

2. PrisonCloud <http://www.ebo-enterprises.com/en/prisoncloud> (accessed 8.2.17).

Rethinking Solutions and Product Development:

VK: Talk me through that process of making the developers understand the prison.

SS: ...it was challenging to understand the real business needs inside. For them it was rather easy to understand the security needs. You have a lot of IT companies who are, especially if they work in government, mainly focused on delivering good services for people who are used to sitting at a their normal office desktop but not for people in the field, in operations. I really didn't want to have a physical computer installed in every cell, for me it was crazy because we already did that and it was very hard to secure the computer hardware. As long as you have computing power inside a cell and you have people out there with the knowledge and a lot of time they will break it. So the process of working with the company went very well, the advantages are also it is a very small company so we had direct access with all levels of the company. We also spoke the same language so that helped.

I am convinced that the most important aspect of PrisonCloud, and also the main reason for all the attention we had from all over the world, is on the concept rather than the product.

I think the most important thing is to have flexibility to tailor your solutions to what you really need or what the inmate needs. And that is the biggest challenge. What I am seeing happening to much in the current prison world is that they start the discussion with the device or the product. In the Netherlands for example there was a whole discussion up to Parliament about allowing inmates to have a tablet or not. The discussion has nothing to do with the tablets, and that's really a big problem. You hear vendors, politicians and also a lot of prison practitioners only talking about tablets when they talk about digital services and solutions. The tablet seems to have monopolized this whole discussion. I have nothing against a tablet. This type of device could be in some occasions a good solution or the method for delivering, giving image access to some services, yes it could be. But you cannot convince me to say that a small seven-inch tablet is suitable for intensive training of inmates. Or you cannot teach them computer skills with that for example. What I really want to focus on

doing is convincing these people to look at what they need before talking about the solution.

Our relationship with technology is not straightforward and the context of the prison adds a further layer of complexity. The need for security, decency and safer custody drives discussion continually towards the device itself- the hardware, as Steven suggests. As Gabriel reported in his study of our narratives about technology highlight that many of us have uneasy, clumsy relationships with technology.³ Digital progress has now and is beginning to thrust prison managers and policy makers into a changing and for many, an alien environment. We use technology, for those of us who are competent or functioning users, to achieve an outcome; transfer money, listen to music, shopping and connect with our friends. How the technology permits that doesn't necessarily concern the average user. Our relationships are fundamentally emotive and led by gratification. Our prison decision makers may well be 'digital natives'⁴ but they are not necessarily experts. As Nellis suggests

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...telecommunications are by their nature hidden, their working opaque to many and understood only by a few, and until recently — by dint of this hiddenness — not easily incorporated into social, political (or criminological) theory...⁵

Technical decision making is often made cautionary and anxiously. This is especially relevant for the prison as the shadow of technical malfunction, security breaches combined with public opinion can threaten an already fragile reputation. In over coming this Steven goes on to say how some of these anxieties were woven into the development stages of the PrisonCloud project.

SS: The first tests were not in a real prison situation: we did had a pilot environment in a prison in

3. Gabriel, Y. (2000). *Storytelling in organizations: Facts, fictions, and fantasies: Facts, fictions, and fantasies*. OUP Oxford.

4. Prensky, M. (2001) *Digital Natives, Digital Immigrants Part 2: Do They Really Think Differently?* On the Horizon, Vol. 9 Iss 6 pp. 1-6.

5. Nellis, M. (2005). Out of this world: the advent of the satellite tracking of offenders in England and Wales. *The Howard Journal of Crime and Justice*, 44(2), 125-150.

Hasselt which helped us engage both staff and inmates into the project, but it was in a separate room, not in a cell at that time. We also had a pilot environment in the Head Office in Brussels where we did some testing. We did the first real installation with the opening of a new prison in Beveren in 2014.

VK: And did it require much adjustment or redevelopment after that test period?

SS: It did, again on the security and technology level there were no big issues. Mainly also thanks to the fact that we had a newly built Beveren prison where all the network was ready to use. But the development of PrisonCloud itself is in fact a programme of different projects. Every single service has to be managed like a different project. Because you have different stakeholders, you have also different target groups, you have different kinds of complexities...we already had an e-learning system in Belgium so we had an advantage that we already had a lot of experience. But even for that we had to work closely together with the Flemish education community to talk to them, what do they think about it and what they would like to do with it. What is very complicated is the change management around the interaction, direct and digital interactions from inmates to the staff. But I was very lucky to have the full commitment from top-level management and was at the same time surrounded with a project manager and technical staff who both had the advanced technical skills as well as the understanding of the concept and real business needs.

These changes in systems and processes do have significant social and psychological impacts on the people within these organisations. As Knight⁶ and others⁷ have documented elsewhere the introduction of mass media to prisons played a vital role in the management and control of prisoners. In England and Wales the introduction of in-cell television coincided with policy guidance on the Incentives and Earned Privilege scheme

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(IEP).⁸ Television, along with other goods, services and opportunities for prisoners is governed by the introduction of rewards for compliance and good behaviour by prisoners. Whilst this model of managing prisoners wasn't a radical shift in the management of prisoners it did trigger change in practice and galvanised an era of managerialist agendas. As Knight found staff were using mass communications to undertake aspects of care (as well as control). One of the consequences of this meant that prisoners looked to television for comfort and care in order to cope with lengthy periods of isolation and boredom as well as separation from their loved ones. In this way the cell became a much more attractive space. Prisoners were in the main much more happy to retreat to their cells. Staff began, in their eyes, distanced from the people in their care and television was in many instances blamed for this distancing and withdrawal. Staff felt impotent because television began to undertake some of their 'work'. In a study conducted by Core Systems⁹ they found that significant time-savings were made by the use of a digital application to deal with meals, shopping and requests. The largest time saving was 88.8 per cent and they observed how a paper-based process was reduced from 12 handling steps to 3 steps. As Steven suggests here the innocent introduction of technology is not neutral and in the case of PrisonCloud this might have benefited from a whole service response to account for the needs and behaviours of all stakeholders including staff.¹⁰

SS: ...we underestimated the change management needs...We put a lot of energy and training in and the change management focused on the inmates, also on the politicians and the media outside...But really working with the staff we

6. Knight, V. (2016) *Remote Control: Television in Prison* Palgrave Macmillian.

7. Jewkes, Y (2002a) *Captive Audience: Media, masculinity and power in prison* Collumpton, Willan.

8. Her Majesty Prison Service (2011) *Prison Service Instruction 11/2011 Incentives and Earned Privileges* www.justice.gov.uk/.../psipso/.../psi_2011_11_incentives_and_earned_privileges.doc (accessed 10/12/13)

9. Core Systems <http://coresystems.biz> (personal correspondence 8.2.17).

10. van De Steene, S. & Knight, V. (2017- forthcoming) *Digital Transformation for Corrections: Developing A Needs Based Strategy* *Advancing Corrections Journal*.

underestimated in the beginning. So we saw that by giving the inmates the possibility to have direct communication with the prison governor the staff felt excluded, they lost a part of their role, a kind of power, and we underestimated that. Before PrisonCloud they were always aware of what is happening because all paper notes were passed through them. And now they were excluded from this communication. An inmate could send a message directly to the governor for example. So there were a lot of problems and it's an on-going learning process to resolve this. Close collaboration with the staff is needed to design this new kind of interaction and the processes behind it. Privacy also has to be taken into account, for example an inmates request to the healthcare people are only allowed to be seen by the doctor and not by the people on the staff.

existing telephone contract, forced to charge expensive rates for a making phone calls that was one of the main things because you give inmates a lot of possibilities for example renting movies and you need to charge them for that. So I think it is very important to analyse this and make a good balance. We have tried to focus on using similar rates as in the outside world. But also for this you need to take into account that they need to have the money so you have to focus on labour and give them the possibility to work.

In this instance technology facilitates and enhances methods of efficient working. Furthermore monitoring and the capacity to observe the prisoner is amplified when technology is introduced, whilst at the same time giving the user confidence that their request is being dealt with. However the regulation of privacy is brought into the fore. This is because our digital footprints leave an indelible trace and these compound fears about our rights to a private life. We know imprisonment by its very nature forces the prisoner into a state of constant observation and technology can refine these features even more. Whilst the prison is heralded as surveillance par excellence digital technology has the capacity to amplify transparency and permanency but as Nellis suggests 'Cruelty has made a comeback. Technocorrections are developing'.¹¹ There is a sinister, dark side to the development of technology within the context of punishment.

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Belgium is not an isolated case here. Digital technology providers are charging out their service, many of which are at the prisoner's and their family's expense. These contractual arrangements between digital providers and prison services have come under scrutiny. For example in North America, lobby groups have identified that video visitation (video conferencing) charges families a fee for each 'visit'. In some States it is claimed that these visits have replaced face-to-face visits. Whilst for many families the video visit helps reduce expensive travel costs, the quality of the visit is compromised both in terms of the picture and sound as well as the benefits of

lengthier co-present face-to-face contact.¹² The marketization of prisoner services means that inflated costs impact directly on deprived populations. These services are impossible to deliver without cost and there is a trend to transfer all these costs to the prisoner and thus not at the expense of the prison. The perceived luxury of goods and services for our prisoners is linked to eligibility and entitlement. The framing of these provisions, it seems, needs to satisfy or at best appease public acceptability based of punishment and rehabilitation. As Steven describes sometimes these services fail and the user, the prisoner, is paralysed — they can't pick and choose the best service provider — they are reliant on those chosen for them. Getting the provision of technology right, like any other service is challenging. In the case of PrisonCloud whereby all inmates are expected to engage

User Responses

VK: And what was the feedback from prisoners?

SS: Most of the feedback was very positive although we had some negative reaction on...the

11. Nellis, M. (2013) *Future punishment in American science fiction films*. In Mason, P. (ed) (2013) *Captured by the Media*, Collumpton Willan.
 12. Knight, V. (2015) *Some Observations on the Digital Landscape of Prisons Today* Prison Service Journal July 2015 No 220 pp3-9.

with the service to order their meals, book their visits, manage their money, make requests, contact family, and so they become very quickly dependent on this service — they need it to manage their life in prison. Opting in or opting out is not a possibility for these users- it has become a necessary part of their everyday lives. This transfer of responsibility is a major shift and digital technologies are instrumental in helping prison services to achieve efficiency in their delivery. These kinds of successes then make decision makers commit and invest. Steven explains there is a commitment to extend PrisonCloud to all Belgian prisons.

SS : ...it has been put in writing inside the governmental agreement., but it will take some time... PrisonCloud is a concept, it's the concept and platform to provide inmates access to digital services, it's more than giving a product or device to an inmate. Mainly the aspiration is to introduce a digital service for every inmate in Belgium prisons. But it doesn't mean that it will be the same [provision]. It also doesn't make sense to have the same installation [in-cell], as in Beveren everywhere. We have prisons where the context is completely different.

Innovation

VK: What is innovative about services like PrisonCloud?

SS: The most initiative thing I think is the concept behind it. I have been working very intensively in all kinds of digital governance projects. Many governments are putting a lot of energy into improving their citizen services and digital governance. I have been in some discussions with other colleagues across Europe. One of the biggest problems with this is what to do with people who don't have access to the internet or don't have the abilities to work with a computer. This made me realise that we have a big population of people incarcerated who do have the capabilities of using it but we just don't allow it. So I think what is different about PrisonCloud is it's a platform and it allows the inmate to go digital and have access to all kinds of digital services and tailored to

what they need and what the security limits are. The tailored aspect is very innovative I think, the possibility to deliver any content — your own developed content or even content directly from the internet — in a very controlled and secure way towards any location or device where you need it.

VK: To specific individuals, so you can target services?

SS: Yes you can say OK this inmate is allowed to go on the internet in a classroom and when he is in his cell he is only allowed to consult the intranet services and watch a movie, but for making a call he should use the Kiosk system in the community area. Giving inmates access to the internet that's a typical discussion of YES internet or NO internet. And in fact there is no such thing as the internet in this discussion: there are different sources linked to each other by a huge network of which you can decide.

And it does make sense to allow an inmate to search for a job a couple of months before he is released, but maybe it doesn't make sense for someone who is a lifelong prisoner to look for a job outside.

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Secure Access

Digital provision in Australia has witnessed much success for prisoners who engage in distance learning. E-readers have been trialled in a number of prisons that allow their prisoners to have an on-line experience within limits. Farley and Pike describe this as a 'walled garden'¹³ and in essence builds a virtual and secure perimeter around an on-line service. Steven helpfully reflects on this concept.

SS: I really like the idea, but I think that we have to avoid making the fences the same for every inmate. I know that is very difficult to convince people that we are not looking for a solution for the inmate, we are looking for a way of tailoring their individual needs. And that's also the basic aspect of security because if you really want to have a secure system you have to avoid abuse by understanding when and why people are abusing it. Of course there will always be a limited number of inmates who will — despite all professional risk assessments done before — will take advantage of the facilities you offer them. But this is a smaller group, there are already many systems in place to react and so

13. Farley, H., & Pike, A. (2016). Engaging prisoners in education: reducing risk and recidivism. *Advancing Corrections: Journal of the International Corrections and Prisons Association*, 1, 65-73.

finally the real security threat is often not that high. We had one incident in Belgium where we opened a website where they can look for a job. One of the features in that website is if you find a job you have a small text box where you can put in an email address. So we had one guy send out a message from this system to a commercial television or newspaper... it was broadcast in the media, so thanks to PrisonCloud the inmates were able to communicate freely to the outside world. This was completely ridiculous of course but it just showed me again the modern motivation to say OK please provide services that make sense for the individual, so abuse will be limited. And you need to have a platform that facilitates this.

VK: How digitally innovative are our prisons?

SS: I think there are not many prisons that can be termed as digitally innovative, most of them are still very old fashioned. The only exception maybe is where it comes into technology purely for security purposes. We see everything that is digital as a risk, not only for inmates but also for staff. If I see how many prisons are really prohibiting their staff to go and do internet or even sending out emails outside, we are really conservative on that. What is digital? If you look at the usage of technology inside prisons there is not a lot of adaption of technology. So especially not for inmates but also for staff. And the way governments are trying to improve the services to the citizens in other departments and other areas it's amazing what is happening. But I haven't seen this in a lot for prisons. Of course we had some good ideas of a portal system where families can request a visit and things like that but even those basic things are so limited in prisons.

The disparity or lag of digital transformation is stark compared to the developments outside. As I have documented¹⁴ elsewhere basic services like email remain restrictive and limited in contrast. Two recent international surveys highlight the extent of this disparity and often mirror the global disparities of digitization of society. Northern Europe, Australia and North America at present seem to be leaders in correctional digitization. And even in these jurisdictions where provision is made they are small and localised. Explanations for these disparities are deeply

rooted in the invisibility of our prisons and further compounded by risk management, and public acceptability. In England and Wales, for example, prisoners who benefit from self-service technology tend to be located in a smaller number of private prisons.

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VK: Why do you think our prisons are being forgotten in these discussions about e-governance?

SS: I think they are forgotten, I think there is such a huge thing in our minds that a prison equals security and so it doesn't matter what or how, it will never be good enough for security. And also there is no big drive of putting a lot of energy in prisons. So I think some countries focus almost only on security, and many countries don't have the means to invest into technology. Even in the more modern countries like

Norway for example you don't see a lot of digital innovation inside. In Halden prison (Norway) I have been told an inmate is only allowed to call 20 minutes a week to the outside. This prison has been stated as one of the most modern prisons in the world with a huge focus on the principle of normality. I don't understand that in today's society an almost complete denial of access to the digital world is anywhere close to normal.

The e-Prison

VK: Consider a prison in 50 years time what will that prison of the future look like?

SS: What I think, and what I hope are maybe two different things. I hope that the prison of the future won't be a prison like we have it today. It should not have any walls. It will be more like a way of 'treating' people, surrounding people with both security related measures and decisions on and guidance to enable them to do their sentence and to stay living a life. So I really hope that we could find a more human solution without a lot of concrete, walls and bars.

VK: And digital technology has a role to play in managing that security then?

SS: Yes because I am very convinced that technology can help, all kinds of technology and also technology that is not yet used inside prisons or even has not been invented maybe, that can facilitate again a more tailored approach and tailored reaction on crime. And it has to be a mixture of more innovation

14. Knight, V. (2015) *Some Observations on the Digital Landscape of Prisons Today* Prison Service Journal July 2015 No 220 pp3-9.

within technology, but also more innovation within justice and corrections. Because legislation forces limits into what we can do. By trying to be clear and equal for everyone, it's often limiting the possibility you have to react on an individual basis. So the prison of the future, I hope more like open facilities or areas with smaller living units close to relatives and society, a lot of open communication, a lot of training and treatment programmes. There is also a need to reshape 'the punishment' part, making it more meaningful for victim, society and the offender and that should be less focussed on the purely physical complete isolation of people. Helping them to take responsibility of the things that they have done and the one way they have to improve their life and getting back into society.

and services reticence to implement digital transformation is a measure of their nervousness.

SS: It's very interesting to see tele-health systems being used in countries like Mongolia where the size of the country so there is a need for that. Those technologies are also used for people outside because there are just no medicines in every village and also distances are huge. The opposite is that this technology is only used as cost cutting things like you see sometimes in the States. There is a balance between being useful to improve your service or being useful for cutting cost without improvements. You see technology can help a lot for example in developing countries. I saw an idea in Kenya who said why don't we use drones to ship medicines to areas, because now we

are flying in planes and they are so expensive. But I'm always afraid about the misuse of technology for cost cutting and to not increase the level of service you give. The same with PrisonCloud a lot of people who are critical of those kinds of solutions they say OK you want to lock up your inmates more in cells and I say no you can save a lot on security staff costs and instead using that to train people or to get staff inside prison to intensively work with prisoners, instead of pushing buttons and being the postman. I think the technology will be adopted and

unfortunately driven by costs of rather than rehabilitative approaches. But I think those don't have to be opposites — you can save costs and at the same time improve the services. The technology should come only at the end of a well thought-through design process, driven from your mission, visions and objectives and supported by evidence¹⁸.

e-Rehabilitation

The 'treatment' of prisoners is nothing new and the introduction of mass communications, like in-cell television¹⁵ certainly align to 'quasi-therapeutic'¹⁶ measures. Here the technology is used to deliver care. Clinical interventions are also gaining credence in our prisons. Elison et al¹⁷ for example trialled an addiction therapy service through on-line and mobile devices in England and Wales. This too offered on-going support for addiction recovery through the gate whereby support didn't cease at the prison gates- it went with them back into the community. As Steven points out there are significant concerns about the replacement of direct interventions — that the user and practitioner is abandoned in favour of an on-line service. Satisfying managerialist agendas present significant challenges at this juncture in transformation. The current evidence base is small and research can only be undertaken when services pilot digital services. Organisational confidence is key

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Robo-Guards

Nellis¹⁹ description of the origins of electronic monitoring takes us into a world of fantasy and sci-fi- an imagined society where dystopian forces like crime, disease,

15. Knight, V. (2016) *Remote Control: Television in Prison* Palgrave Macmillian.
16. Rose, N. (1999) *Governing the Soul: The Shaping of the Private Self* London, Routledge.
17. Elison, S., Weston, S., Davies, G., Dugdale, S., & Ward, J. (2016). Findings from mixed-methods feasibility and effectiveness evaluations of the "Breaking Free Online" treatment and recovery programme for substance misuse in prisons. *Drugs: Education, Prevention and Policy*, 23(2), 176-185.
18. see van De Steene, S. & Knight, V. (2017 forthcoming) *Digital Transformation for Corrections: Developing A Needs Based Strategy* Advancing Corrections Journal.
19. Nellis, M. (2005). Out of this world: the advent of the satellite tracking of offenders in England and Wales. *The Howard Journal of Crime and Justice*, 44(2), 125-150.

disorder are eradicated in favour of 'good' 'normal' 'functioning' and 'clean'. Technology in its broadest sense are pivotal in this endeavor and our collective imaginations are littered with visions of technology — the human-less machine assisting the public good. Korean prison services have piloted robotic guards,²⁰ there is work currently underway across Europe to introducing gaming to help long term prisoners experience the outside world²¹ and developments to monitor vulnerable prisoners by measuring heart rate and sleep patterns by body worn and cell sensors. Whilst these are assistive, the translation of enhancing security, safer custody and resettlement there are some important ethical and legislative factors that remain unanswered and perplexing. If we look at wider debates about the Internet of Things and Web 3 our digital footprints provide the state and private corporations with a whole raft of data that the ambivalent user may not even contemplate when, for example, they make a purchase on-line. In the context of the prison these dimensions present additional challenges as well as opportunities.²²

You have to take into account the staff and their relation with the prisoners, and the importance of the human interaction...

VK: What about the idea that we can microchip our pets, could we be micro-chipping citizens?

SS: No I don't believe that, I think that is a fundamental ethical question. What I do believe is that thanks to new technologies like wearables and the 'quantified self' — measuring all kinds of body properties like blood pressure, heartbeat, the basic electronic monitoring (EM) concept will be extended. EM is already accepted almost everywhere in the world. But there will be additional features on those kinds of devices like using sweat analysis for regarding if there was some substance abuse and things like that. So there will be some evolution on that. But there is for me at least a big difference in putting something on the

body or putting something inside the body. But maybe that can change I don't know.

VK: What kinds of moral, ethical and legal considerations were you having to take into account when PrisonCloud was developed?

SS: You have to take into account the staff and their relation with the prisoners, and the importance of the human interaction...trying to increase the interpersonal dialogue between staff and offender. There is criticism about technology saying you lose human interaction, but we have to be honest and look inside the facilities today: what is the quality of human interaction between prison guards and inmates? We need to be realistic about this; it's a very complicated question. Current legislation is mainly not prepared for this kind of innovation inside prisons. For Example:

there might be a legislation that an inmate has the right to contact his lawyer. But what is contacting his lawyer? Could an email be allowed, or even just be better to guarantee his rights?

If you have been declaring your taxes online and you are incarcerated afterwards you won't receive any paper forms any more. So you cannot declare your taxes anymore because you don't have access to the tax declaration website. So we had to convince the Ministry of Finance and make an exception for that for all incarcerated

people to send again the paper forms, its stupid and its happening everywhere. So not only legislation but any general regulations and things have to be modified. But I think what has to be done is modify the way you are dealing with those kinds of digital environments inside prison.

VK: Can technology make our prisons good?

SS: No, I am convinced they cannot be made good. They can facilitate and improve our prisons. We need to work more to tailor to what needs prisoners have. And I am convinced that technology can help a lot with that. It's not only about technology but technology can facilitate working more efficiently, enabling work with the inmate rather than doing administrative things like pushing buttons or watching cameras. It is the way you use technology of course. Of course it makes a difference because even the prison guards in the more high security prison is not surveying

20. Kim, L. (2012) *Meet South Korea's New Robotic Prison Guards* <http://www.digitaltrends.com/cool-tech/meet-south-koreas-new-robotic-prison-guards/> (accessed 8.2.16).

21. Primedia <http://www.epea.org/pri-medial/> (accessed 8.2.16).

22. Knight, V. (2016) *The Technology of Confinement and Quasi-Therapeutic Control: Managing Souls with In-cell Television* in McGuire, M. (2016) *The Handbook of Technology and Crime*, Routledge.

you into your cell 24 hours. So you don't do that with a camera. As soon as you start to do that with the camera we are crossing some ethical boundaries that always have to limit our ways of using technology. The environment itself with the combination of cameras and scanners and thick concrete walls and fences, it does something to the human being- it is negative. It is not technology itself it is how we use it, you have to be careful with it, you have to be careful with replacing some human processes for example by technology.

As Jewkes and Johnson²³ helpfully outlined the deprivation of digital technology is extensive for our prisoners wide reaching for the prison. New generations of prisoners will be 'digital natives'²⁴ — competent users of technology in which their everyday lives have digital technologies woven into its fabric. It is anticipated these losses will be amplified when they enter prison. As Gary described to Knight²⁵

...as emails now rapidly replace letters and very few people even consider letter writing anymore. I have been in the prison system for 6 years so far with another 16 to go...I am in the position where I can watch as everything changes...Some of us even find those people you grew up with or once were

so close to, forget your there because you're no longer around digitally. (Gary — prisoner)

The digitization of our prisons is, as Steven's interview helpfully outlines, is enabling and yet challenging for users and service providers. For prisoners like Gary the foundations of his presence in society were grounded in his participation with the on-line world. There is an inevitability and certainty that digitization of our prisons will be accomplished- somewhere in the future, not now, not even soon but later, in the distance. Whilst onlookers may consider this a narrowing of or even eradication of the 'digital divide' and policy makers can sit back and observe this accomplishment digital disparity and inequality won't fully be overcome. As Selwyn suggests it not just a matter of giving technology to those 'without'.²⁶ The 'plurality of technologies' encompasses a whole range of services, applications, information and processes and in this sense the 'digital'²⁷ will never be fully completed in our prisons — because it is prison. A glimpse at prison in our future can shed both light and darkness on the complex matter of incarceration.

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