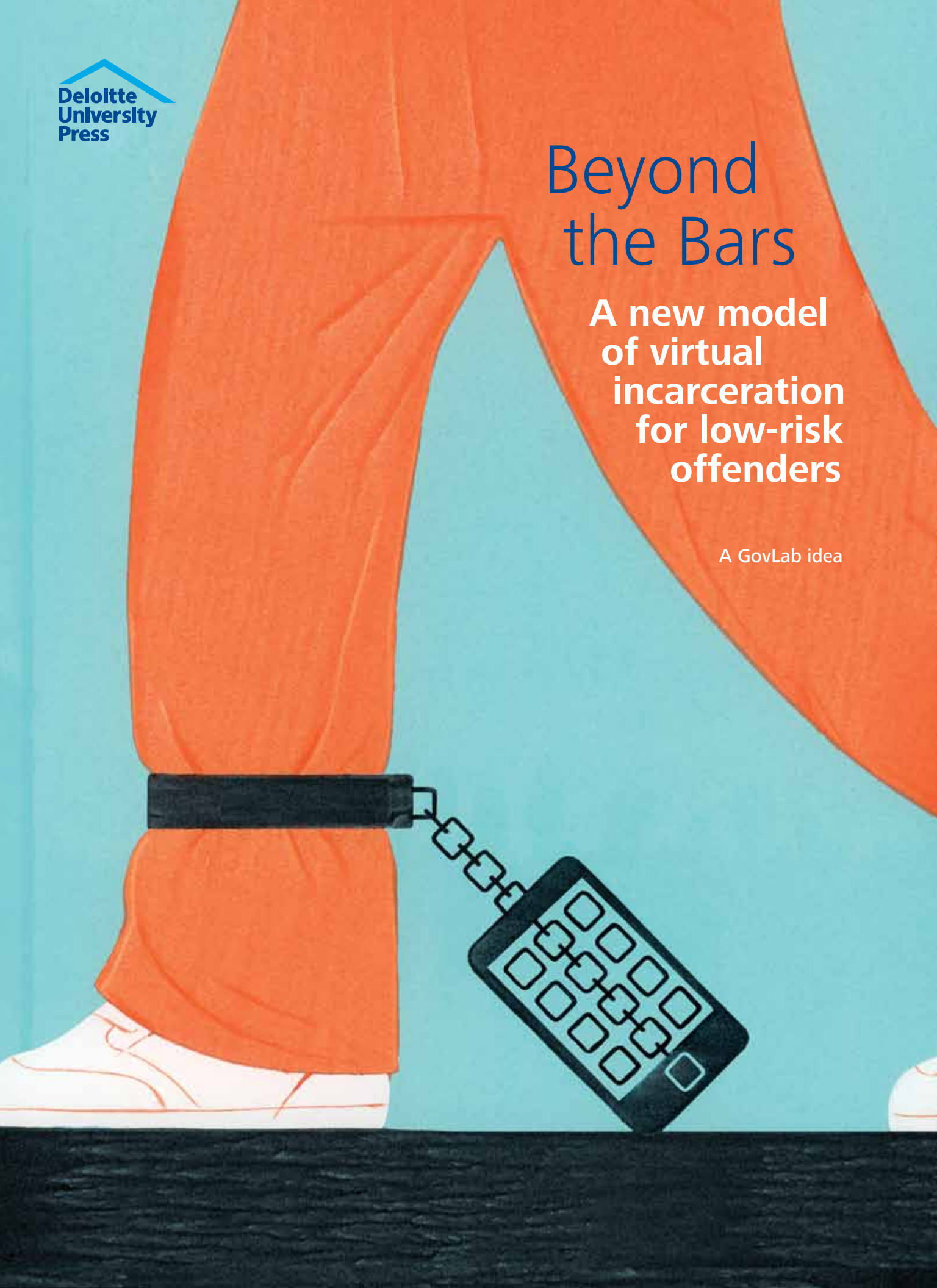


# Beyond the Bars

**A new model  
of virtual  
incarceration  
for low-risk  
offenders**

A GovLab idea



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## **About GovLab**

GovLab is a think tank in the Deloitte Federal practice that focuses on innovation in the public sector. It works closely with senior government executives and thought leaders from across the globe. GovLab Fellows conduct research into key issues and emerging ideas shaping the public, private and non-profit sectors.

Through exploration and analysis of government's most pressing challenges, GovLab seeks to develop innovative yet practical ways that governments can transform the way they deliver their services and prepare for the challenges ahead.

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# Introduction

AS on most days in this sun-drenched part of the country, May 23, 2011 dawned clear and pleasant in California. Surfers took to their boards, golfers grabbed their clubs, and life ambled along as usual for most of the state's 38 million citizens.

In the capital of Sacramento, however, the mood in some quarters was not as bright. State corrections officials awoke to news of a landmark US Supreme Court ruling ordering the California Department of Corrections to take immediate steps either to release 33,000 prisoners or build new prisons.<sup>1</sup>

This decision in *Brown v. Plata* came after the justices deemed that crowded conditions in many of the state's 33 prison facilities violated the cruel and unusual punishment clause of the Eighth

Amendment of the Constitution. In one prison unit, for example, up to 200 prisoners were stacked on makeshift cots in a gymnasium never designed to house them, and in another, one toilet served more than 50 men.<sup>2</sup>

With limited financing to build new facilities, the state was forced to begin releasing 33,000 low-level offenders back into the community with little to no transitional support. Californians were ill prepared to deal with the

onslaught of newly released offenders, and some citizens feared for their safety.<sup>3</sup>

California is not alone in facing high prison costs and overcrowding. States across the nation are beginning to realize that incarceration, while perhaps the safest solution for dangerous and violent offenders, may not be the best option for everyone in the system, particularly nonviolent criminals.

Is there another way? What if states could de-emphasize brick-and-mortar incarceration in favor of a more innovative virtual system for low-risk and nonviolent offenders?

Such systems are possible and are being introduced with positive reviews throughout the nation. By combining cutting-edge technologies with cognitive restructuring techniques, corrections departments

can introduce effective new control mechanisms for select offenders that save money and improve outcomes.

In this report, we will examine these new models and how they work. We will also highlight criminal justice reform efforts—"pockets of progress"—already working across the country, and describe how their principles can be integrated into a new model and even applied to other areas of government.

What if states could de-emphasize brick-and-mortar incarceration in favor of a more innovative virtual system for low-risk and nonviolent offenders?

# Overcrowded, violent, and costly

**D**URING the late 1700s, the Quakers of Pennsylvania devised America's first prison system, with dual goals of confinement and rehabilitation that stood in sharp contrast to the gallows and other harsh punishments of the colonial period. The Quakers' theory was that "punishment should not be such as to plunge the criminal still deeper into destruction. The prison should make better instead of worse."<sup>4</sup>

Despite the evolution of American society and advances in neuroscience, behavioral psychology, and technology, our criminal justice system still largely favors incarceration as the default sentencing solution. The result is a system that is overcrowded, violent, and costly, often resulting in poor outcomes for nonviolent offenders.

The United States is the world's leader in incarceration, accounting for 5 percent of the world's total population but nearly 25 percent of the world's prisoners.<sup>5</sup> At present, 2.3 million Americans are imprisoned, 60 percent of them for nonviolent offenses. When combined with other forms of correctional control, such as parole, the number of Americans in the criminal justice system jumps to 7 million, more than the populations of Chicago, Philadelphia, San Diego, and Dallas combined.<sup>6</sup>

This has not always been the case. This trend toward mass incarceration has occurred over the last 35 years as state legislatures and Congress have shifted toward longer, mandatory minimum sentences, states have restricted parole, and "three strikes" laws have resulted in

life imprisonment. Drug convictions have also skyrocketed, accounting for nearly 80 percent of federal prison sentences between 1985 and 1995.<sup>7</sup>

Tougher punishments have brought higher price tags. According to the National Association of State Budget Officers, US spending for corrections totaled \$51.1 billion in fiscal year 2010. While down from an all-time high in 2008 due to recession-induced spending cuts, this still represents 1 in every 15 discretionary state dollars; only Medicaid's share in state spending is growing faster.<sup>8</sup>

Put simply, the average annual cost of incarcerating a prisoner in America rivals yearly tuition and housing costs at most Ivy League universities.<sup>9</sup> In New Jersey, it is cheaper to send a student to Princeton than to send an offender to prison.

The high costs of incarceration might be justified if it fully achieved its goals of protection, retribution, and rehabilitation. Unfortunately, while overall crime rates have fallen during the last 30 years, half of the individuals released from prison will return within three years of their release.<sup>10</sup> Furthermore, prisons expose nonviolent offenders to networks of hardened criminals, actually increasing their likelihood of committing more serious crimes.<sup>11</sup>

While prisons serve a vital role in our criminal justice system—and should continue to do so for the worst offenders—they may no longer be the ideal sentencing solution for low-level offenders. Various alternatives are emerging.

# Alternatives that work

**C**RIMINAL justice reform efforts are hardly new. For decades, all levels of government have grappled with the expense and limitations of incarceration. Today, many emerging solutions can improve outcomes in terms of protection, retribution, and rehabilitation. These examples could and should provide a foundation for more holistic solutions.

## Improving deterrence and protection

In June 1986, convicted murderer Willie Horton was released from a Massachusetts prison for a weekend furlough as part of an experimental program intended to reintegrate prisoners into the community. Rather than returning to prison as agreed, Horton went missing until the following April, when he assaulted a Maryland couple in their home. Horton's story provides a powerful reminder that, regardless of its merits, any potential reform effort must have public safety as its top priority.<sup>12</sup>

Thankfully, the Horton case remains an outlier, and innovative alternatives to incarceration have demonstrated effectiveness in protecting the general public while easing the burden on the taxpayer. These approaches are important because, as the Supreme Court's order of release to California demonstrates, overcrowding can force states to release prisoners. It is therefore vital to release only those prisoners least likely to commit new crimes and to use approaches that may prevent them from doing so. These approaches include:

- **Electronic monitoring.** Originally developed to help farmers track their cattle more effectively, electronic monitoring is now used in a number of countries to reduce costs while protecting society. Common electronic monitoring approaches involve ankle or wrist bracelets tracked via global positioning systems (GPS) or radio frequency identification (RFID), with a continuous signal sent from these devices to monitoring authorities.

In 2008, the average daily cost of incarcerating a prison inmate in the United States was \$78.95, while the average daily cost of managing offenders through electronic monitoring ranges from \$5 to \$25.<sup>13</sup> These savings have led several governments to adopt electronic monitoring more widely. In the United States, 20 companies provide electronic supervision for more than 100,000 offenders, while in the United Kingdom, about 70,000 offenders are subject to electronic monitoring each year.<sup>14</sup> If used in a strategic manner, particularly with nonviolent and low-risk offenders, electronic monitoring allows scarce resources to be devoted to incarcerating more-violent offenders.

- **Swift and certain punishment.** Research has shown that one of the most effective means of deterring criminal behavior, or recidivism in the case of probationers, is to implement "swift and certain" punishment. In fact, it appears that a low-probability threat of severe punishment such as prison

is less effective than immediate, certain, but milder alternatives.<sup>15</sup>

An example of this research in action is Hawaii's Opportunity Probation with Enforcement (HOPE) program. The program begins with a judge's warning that any violation of probation will result in an immediate though brief jail stay. HOPE requires regular drug testing and focuses on reducing drug use and helping offenders keep parole appointments.

HOPE's results have been decidedly positive. An evaluation of HOPE funded by the National Institute for Justice found that, compared to a control group, probationers in the HOPE program were 55 percent less likely to be arrested for a new crime after one year, 72 percent less likely to use drugs, and 53 percent less likely to have their probation revoked. Efforts to replicate the HOPE program are under way in numerous states.<sup>16</sup>

## Retribution and restitution

The punitive nature of prison is another justification for its existence. Research, however, indicates that non-traditional methods are just as effective as prison in punishing offenders and supporting restitution for victims, without the high costs associated with incarceration.

- **Autonomy with oversight.** Zones that restrict movement, recording of communications, prescribed check-ins with parole officers, and community service activities are punishments that can result in outcomes superior to traditional prison sentences.<sup>17</sup> While some might argue that punishment is negated by allowing offenders to live at home, spend time with family and friends, and enjoy many conveniences and choices unavailable in a cell, others contend that the psychological impact of such non-traditional sentencing can actually result in an

even greater sense of restriction than prison confinement.<sup>18</sup> Modern technologies allow corrections officers to track many aspects of an offender's life, including their physical location, proximity to other offenders, and drug or alcohol use, while simultaneously supporting community, family, and employment ties—important factors in an offenders' post-release assimilation.

- **Restorative justice.** Retribution and restitution go hand in hand. A prison sentence is thought to restore the victim by offering closure, justice, and the peace of mind that comes with knowing that the criminal is safely locked behind bars. Research indicates, however, that a prison sentence is not always sufficient to produce this sense of restoration.<sup>19</sup> Instead, it is achieved when victims take an active role in expressing their needs and, importantly, when offenders make amends.

According to criminologist John Braithwaite, "Restorative justice is about the idea that because crime hurts, justice should heal. It follows that conversations with those who have been hurt and with those who have afflicted the harm must be central to the process."<sup>20</sup> In this model, sentencing can incorporate interactions such as victim-offender mediation, family-group conferences, and community restorative boards, which use trained citizens to confront offenders with the consequences of their actions and discuss possible reparations they can make.

A 2007 meta-study of restorative justice research between 1986 and 2005 found that such sentences yielded generally positive results, especially for victims. Benefits included lessened post-traumatic stress symptoms and related costs for victims and a lower rate of recidivism than prison alone for adult and young offenders.<sup>21</sup>

## Enhancing rehabilitation

Given the current prison system's high recidivism rates and its persistent challenges with reintegrating offenders into society, it's hardly surprising that a variety of interventions have been developed to address the factors contributing to criminal behavior, including drug dependence, psychological problems, financial need, and lack of peer support. While these approaches vary in scope and methodology, many have yielded positive results.

- **Mental and physical health support services.** More than 6 million Americans currently struggle with drug abuse.<sup>22</sup> In 2010, 18 percent of state prisoners and 51 percent of federal prisoners were serving time for drug-related crimes.<sup>23</sup> Furthermore, substance abuse often coincides with—and is compounded by—mental health disorders. Research indicates that over half of prisoners experience mental health issues and 20 percent suffer from significant mental illness.<sup>24</sup> Addressing addiction and mental health issues can play a major role in positive re-entry into society. The state of New York's Parole Support and Treatment Program provides a variety of housing and support services for individuals with mental illness and substance abuse problems. The program reduces re-arrest rates by 44 percent while cutting the cost to less than that of traditional incarceration and less than a tenth of the cost of placing an individual in the Central New York Psychiatric Center.<sup>25</sup> Studies indicate that providing community-based drug treatment such as this provides bigger crime reduction returns than prison, with every \$1 spent on drug treatment in the community saving \$18 in prison costs.<sup>26</sup>
- **Peer support and mentorship.** Social science and behavioral economics research both suggest that peer mentoring and social support can provide powerful incentives for good behavior. A community of support creates a sense of buy-in and provides a model for individuals to follow when making potentially high-risk decisions. The Arizona Prison Experience Workshop Program—an inmate-to-inmate peer-facilitated program created by inmates to help prepare their peers for transition back into society—has shown positive results in reducing recidivism. Although 70 graduates of the program were released from prison between 2005 and 2009, only 9 had reoffended and returned to prison by 2010—a 13 percent recidivism rate, far below state and national averages.<sup>27</sup>
- **Education and skills training.** Providing offenders with the tools necessary to gain and maintain employment may play an important role in promoting positive social behavior. The Delancey Street Foundation, a residential education center in San Francisco for former prison inmates and substance abusers, provides training in basic employment skills to help participants achieve economic independence. After an average of four years, residents typically gain an academic education and three marketable job skills; the foundation claims a 98 percent success rate in preventing recidivism.<sup>28</sup>
- **Ongoing employment and employer support.** Finding and maintaining steady employment is one of the greatest challenges for prisoners reentering society. For example, a year after release, just 39 percent of federal prisoners returning to the District of Columbia were employed either part- or full-time.<sup>29</sup> To address this challenge, organizations such as the Safer Foundation in Illinois provide a variety of employment assistance services to persons with criminal records. Safer Foundation clients who have found employment have a recidivism rate of just 13 percent, compared to the state average of 52 percent.<sup>30</sup>



# A new criminal justice system

**G**IVEN such positive stories, why is the US penal system still plagued by poor outcomes and high costs? One possible explanation is that many promising solutions are not scalable, restricted by high costs, geography, or lack of integration with other interventions.

Emerging technologies, however, can allow us to incorporate important elements of effective programs into more comprehensive and replicable support systems. Imagine a virtual incarceration system that uses advanced risk modeling, geospatial analytics, smartphone technology, and principles from the study of human behavior to achieve superior outcomes at a lower cost.

What would such a system look like, and how would it work?

## Risk modeling

To mitigate the risk of another Willie Horton incident, advanced data analytics could be used during the pretrial hearing, post-conviction sentencing, or parole hearings to help determine the most appropriate candidates for virtual incarceration. These tools could also be used to select an effective combination of interventions for a particular offender, giving each a program specifically targeting his or her individual needs.

Advanced analytics tools are already being used in some parts of the nation. In 2010, the Florida Department of Juvenile Justice began using predictive analytics software to reduce recidivism by identifying the juvenile offenders most likely to commit new crimes. Florida places offenders in specific rehabilitation

programs based on predictors such as past offense history, home life environment, gang affiliation, and peer associations.<sup>31</sup> Similarly, judges in Oregon can use a tool that matches specific types of offenders with the programs or sentences that have proven most effective in reducing recidivism among their cohort in the past.<sup>32</sup>

Using data analytics in this way can help mitigate risk to society from virtual incarceration while pairing offenders with interventions most likely to support their rehabilitation.

## Support services delivered via smartphone technology

Upon entering a virtual incarceration system, offenders could be issued a smartphone-derived device that would augment existing electronic monitoring solutions. These devices would provide one-touch access to a series of support service applications aligned to the needs identified through the risk modeling process.

Today's smartphones can support a variety of activities that previously required face-to-face interactions. By pairing smartphone technology with existing electronic monitoring practices, the justice system could overcome the issue of scalability associated with many effective interventions. For example, smartphones could allow monitored offenders to check in with parole officers virtually, eliminating travel and other external circumstances as a cause for missing parole meetings.

This would be the next technological step past the use of kiosks for parole reporting, a

practice that has garnered positive reviews in certain cities. Between 2003 and 2006, for example, about 70 percent of New York City's probation population was enrolled in a kiosk-based reporting system. An evaluation of the system found that the two-year re-arrest rate declined for both high- and

The application of these new capabilities, used in tandem with existing monitoring anklets or other forms of tagging, could yield more effective rehabilitation and reduced recidivism. Even if such a system were to cost as much as 50 percent more than the most expensive existing electronic monitoring

**WHILE SMART MOBILE TECHNOLOGY CAN MAKE ALTERNATIVES TO INCARCERATION SCALABLE AND EXECUTABLE ACROSS GEOGRAPHIC BOUNDARIES, IT MAY LIKELY BE MOST EFFECTIVE WHEN INCORPORATED INTO AN ECOSYSTEM OF SUPPORT.**

low-risk probationers (by 5 percent and 3 percent, respectively) and that the overall rate of missed appointments fell from 5.2 percent to 4.5 percent. These results were achieved while parole officer caseloads simultaneously rose to more than 400 parolees per officer.<sup>33</sup> Replacing these kiosks with smartphone check-ins could further improve outcomes by reducing the need for parolee travel and allowing case managers to serve parolees over a larger and more diverse geographic area.

As the capabilities of mobile technology increase, moreover, interventions could extend far beyond simple check-ins. Mobile technology is expanding into the training and education sector, and applications designed for services such as mental health support and drug relapse prevention are in development as well.<sup>34</sup> In fact, existing applications can already estimate blood alcohol content nearly as accurately as a breathalyzer—and predict the onset of depression.<sup>35</sup> In the near future, contact with peer support groups, push notifications from case managers, and access to employers and other networks could be available at the touch of a button.

programs, it would still likely cost just half as much as housing, feeding, and monitoring inmates within prison walls, while restricting offenders to a degree that would still feel punitive.<sup>36</sup>

### Integrating game mechanics

While smart mobile technology can make alternatives to incarceration scalable and executable across geographic boundaries, it may likely be most effective when incorporated into an ecosystem of support. One way to develop such ecosystems could involve the integration of interventions through game mechanics. Derived from behavioral economics theory, the process of using game mechanics to improve outcomes has come to be called “gamification.”

The application of game mechanics is growing in popularity in the commercial sector. Airline frequent flyer programs, Foursquare check-ins, customer loyalty programs, and performance management systems such as Rypple are some commonly cited examples of gamifying non-game environments to achieve improved outcomes.

Gamification has also been applied effectively to large-scale public challenges. Mindbloom's Life Game was created to encourage users to establish and pursue personal health goals. The interactive platform allows users to create goals and then cultivate a virtual tree that represents their physical and emotional well-being. Users can earn "water" and "seeds" by engaging in healthy behavior such as walking or healthy eating. The result: In a recent assessment, users visited the site an average of 35 times a week, completing more than 900,000 healthy actions and engaging in 50 percent more reported healthy behavior than before.<sup>37</sup>

Imagine a system in which a variety of actions by a virtually incarcerated offender were linked through a system designed to provide incentives for positive behavior—and to allow offenders to easily see their progress through the program on their smartphones. For example, points or badges could be earned by attending scheduled appointments on time, remaining within assigned zones of movement, completing education or training programs, or maintaining employment for specific lengths of time. A sufficient number of points would earn the offender tangible benefits such as additional freedom or extended curfews. A progress bar or other display could allow offenders to directly link their day-to-day actions to advancement toward specific milestones—a connection not clearly offered in today's alternative incarceration programs.

## Monitoring through geospatial analytics

Geospatial technologies and location-based data analysis can play a vital role in monitoring offenders and improving resource allocation. Modern geospatial analytics combine GPS, geographic information systems (GIS), and remote sensing systems to allow users to

answer geography-based questions, identify patterns and correlations among data, and visualize them to draw conclusions and allocate resources more effectively. Such technologies could help protect society from virtually incarcerated offenders while supporting their reintegration and rehabilitation.

For example, imagine an automated passive monitoring system capable of tracking offenders' movements and pushing notifications to them when they have impending appointments, if they enter high-crime zones, or if their movements indicate that they are becoming more likely to commit a crime. At any point in the process, case managers or parole officers could access a dashboard tracking the movement and activities of offenders under their supervision, see their location on a map, and assess their activities based on gamified interventions.

Geospatial analytics could also play an important role in allowing policymakers to determine how and where to allocate resources and support services. Upon release from prison, many offenders return to neighborhoods or streets that are hotbeds of violence and crime and where support services may be hard to obtain. Such crime hotspots are common in major cities; in Boston between 1980 and 2008, for example, just 3 percent of the city's streets accounted for more than half its gun violence.<sup>38</sup> In Houston, 7 of the city's 88 neighborhoods—home to just 5 percent of the city's adult population—receive more than a quarter of all offenders upon their release from prison.<sup>39</sup>

Such statistics point to the importance of considering location in distributing resources and placing individuals in virtual incarceration programs. One study found that applying "hotspot policing" in 110 Minneapolis high-crime areas reduced total crime calls by 6–13 percent.<sup>40</sup>

# The virtual incarceration ecosystem: A day in the life

**W**HAT would this new model look like to its participants? To give some indication of how this reimaged prison system would work, we offer a series of vignettes that describe it from three perspectives: a judge making smarter sentencing decisions using predictive analytics, a convicted offender in virtual incarceration, and a court-appointed case manager who enforces the terms of release.<sup>41</sup>

These vignettes are grounded in research, but are hypothetical in nature. The systems have not yet been developed, and the characters are fictional. However, their stories are possible with existing technologies and techniques. With that caveat in mind, we invite you to explore the possibilities of a prison without walls.

## Smarter sentencing through predictive analytics

The seventh-floor hall was filled with convicted offenders waiting for Justice Jack Donnell to call them into his courtroom. With each sentence he delivered, Justice Donnell effectively wrote the next chapter of these men and women's lives. The offenders glanced at the door with a mix of anticipation and fear. Would their mitigating circumstances and potential for reform earn them virtual incarceration—or prison?

As he glanced at his docket, Justice Donnell reflected on his 30-year career in criminal justice. Until recently, he had relied on his experience to make sentencing decisions. There were guidelines and state laws he had followed, of course, but he had augmented them with an intuition born from his years in the courtroom. It amounted to educated guesswork.

Today, however, his guesswork has turned into more reliable decision making with the advent of the National Institute of Criminal Justice's Risk Assessment and Sentencing Tool (RAST), a sophisticated data analytics engine that helps classify offenders as low-, medium-, and high-risk and makes targeted sentencing recommendations based on a host of case-specific factors.

The RAST canvasses large data repositories across multiple states and jurisdictions, accounting for both static and dynamic factors. Static factors are unchangeable circumstances related to crimes and offenders, such as offense type, current age, criminal history, and age at first arrest. Dynamic factors, sometime called criminogenic factors, can be



mediated by interventions and include attitude, associates, substance use, and antisocial personality patterns.<sup>42</sup>

The criminal justice system has used risk assessment tools for years. They have proven more reliable at gauging the risk of criminal behavior than any individual professional's judgment.<sup>43</sup> Prior to the RAST, however, risk assessment tools typically consisted of only 10–30 questions evaluating offenders' criminal histories and psychological health, rather like the risk assessment tools used by the insurance industry.

The RAST is more advanced and more useful to judges, juries, and parole boards in three specific ways. First, since the Department of Justice's National Institute of Justice administers it at the federal level, it relies on an exceptionally large, nationwide data set. Second, the data is continually reassessed for its predictive validity: It is reviewed annually to determine how often RAST correctly classifies offenders, accounts for static and dynamic factors, and makes effective sentencing decisions as measured by the rate of recidivism. Finally, RAST differs from traditional risk assessment tools because it takes into account more than answers to questionnaires. Static and dynamic factors are used in combination with specific, real-time data such as an offender's behavior and location.

### Using smart mobile technology to navigate support services

It had been 25 weeks since he began the program. Russell Bateman looked down at the electronic band strapped to his left ankle, and again had to admit that it was preferable to prison.

Russell had never thought of himself as a hardened criminal. He'd never been violent and had just wanted to make a few extra bucks by helping out a family member. But when he was charged with money laundering on behalf of his cousin's gambling operation, Russell had

been sure that he was about to be locked away in one of the state's less-than-forgiving prisons.

Instead, Russell was assessed as a good candidate for LifeLine, the state's new virtual incarceration system. A whirlwind training course followed, along with some support from his case manager in navigating the online employer database and a solid week spent learning how to use his state-issued LifeLine smartphone. Now here he was, cooking an omelet in his new apartment within a mile of his assigned therapist, his new job, and the community training center where he attended financial management courses at night.



As he plated the omelet, Russell accidentally brushed the hot pan with his skin. Running to the sink to splash water over the burn, Russell heard a loud alarm bell ring from his smartphone still sitting on the countertop. That was the one thing Russell still had not gotten used to. If his ankle bracelet ever got more than eight feet away from the LifeLine phone, it warned him that he had 30 seconds to retrieve

it or his case manager would be notified. Rushing back to the phone, Russell picked it up and activated the screen, causing the alarm to stop.

As usual, the first thing he saw was his profile page. His own face in the center, with small straight lines leading out in a star pattern to icons for the various forms of support available to him: case management, peer network and program buddy, employer and jobs database, education and skills development, mental health services, physician. It was a truly holistic support network designed to encourage him to avoid risky behavior and become a contributing member of society.

Beneath the support network icons, Russell saw his progress bar and current risk score. The green “9” indicating his low program risk score was a major achievement in Russell’s mind. The score not only afforded him additional freedom, but also told him that he was engaging in the right kinds of activities needed to shorten his time in the program.

The status bar to the right of the green number was an easy-to-view representation of just how close Russell was to knocking another three months off his sentence. In much the same way as a game allows players to gain experience points as they progress through levels, Russell could earn progress points and badges for his performance at his job or school, or for compliance with mandatory therapy and buddy check-in sessions. The LifeLine system helped Russell feel he was actually doing something about how long he had to remain in the program while providing him with access to the resources he needed to take action on his own initiative.

In the six months since he had started his state-issued remote monitoring program, Russell had found that he actually enjoyed bookkeeping and the other financial activities that had gotten him into trouble in the first place. Numbers came easy to him, but he had never had any training or experience with accounting before working for his cousin’s

gambling operation. Now, though, Russell would actually earn a certificate in accounting and financial management by completing the seventh and final course of his combined online/in-person accounting class. And with that certification, he would gain an additional 10 progress points and an education badge that would reduce his prison term. He was appreciative of his new employer, a small boutique accounting firm that had taken a chance on him to do some low-level bookkeeping while giving him on-the-job training. His hard work and late nights on his employer’s behalf had already earned him two high-performer badges, reducing his sentence by three months.

It was almost time for his biweekly check-in with his case manager. Russell decided he could hurry and eat his omelet before the call.

## Monitoring offenders with next-generation case management

Jessica Chesson heard the monitor in front of her beep twice. She looked down at the detailed map of the city in front of her, taking note of the flashing dot that had just turned from orange to deep red. Within the new risk-based monitoring system, the change meant that the risk level for one of her 94 offenders in the state’s virtual incarceration program had just gone up to “high.”

In front of her, 94 dots ranging in color from green to orange moved across the city map on the screen. Some moved slowly, likely walking home or to a job, while others moved more quickly as they traveled via public transit or in their own vehicles. To the side of the map, a newsfeed of the type commonly seen on social media sites provided updates on her charges’ activities. Each time one used a state-issued smartphone to complete an online training course, document a major behavioral milestone, or note an acknowledgement by an employer or support service provider for a major accomplishment, a new update would be added to the newsfeed. Similarly, risky

movement patterns or behaviors that violated the virtual incarceration agreement—such as a convicted drug offender entering a known high-risk narcotics area—would also receive a notification in the news feed. Each behavior, positive or negative, would affect the prisoner’s risk level, with green dots for the most compliant participants and yellow, orange, and red dots representing higher-risk offenders.

The system allowed Jessica to track each prisoner’s progress in real time with more certainty than ever before. “The joys of technology,” she said to herself. How case managers had once monitored even a few dozen parolees before the LifeLine system was beyond her.

Jessica scrolled her cursor over the newly red dot: Justin Martin. Arrested for cocaine possession four months ago when just 19 years old, Justin was the classic example of a kid who probably would have come out of prison as a more hardened criminal than when he went in. Now Justin had an entry-level mailroom job at a local shipping company, secured via the prisoner-employer database, and had stayed clean for his entire time in the program, according to his monthly drug tests.

Unfortunately, Justin hadn’t been completing any of the mobile training courses offered via his LifeLine smartphone and had lately been hovering closer and closer to one of his old neighborhood hangouts. He had said that he needed to make deliveries there for his job, but Jessica had her doubts.

Picking up her own LifeLine mobile device, Jessica activated its two-way intercom.

“Justin? Why am I seeing you at Harry’s Tavern? You know that’s not somewhere your release allows you to go.”

After a minute of silence, Justin’s face appeared on the smartphone screen. “I was just in the neighborhood and wanted to stop by and say hi to some of my old friends. Besides, I don’t exactly want to be someone’s gopher. I don’t do anything all day.”

“Justin,” Jessica replied, “you know the conditions of your release. I’ll work to get you

a new job placement, but you have to find something that actually interests you and be more active in the program. You’re a smart kid. You shouldn’t be wasting your life in prison.”

“Alright, I’m leaving, I’m leaving,” Justin said. As the mobile screen went dark, Jessica watched his red dot move slowly away from the tavern. As she pressed the “situation addressed” icon on the top right of her monitor, the dot changed from red back to orange, and a small note appeared, documenting



the event on Justin’s profile. Knowing that a troublesome pattern was emerging with Justin, Jessica turned back to his profile screen. To the far left were icons representing Justin’s employer, mental health counselor, program buddy, education guidance counselor, and physician. The system made intervening on Justin’s behalf so much easier.

A quick push of her finger and the icons were replaced by another screen, connecting to Justin’s employer via videoconference. As the burly manager of Herring Shipping answered

the phone, Jessica said “Hi, Mark. Sorry to bother you. Justin was over at one of his high-risk areas again. He seems a little bored.”

“No problem, Jess. I’ve been distracted with a few large orders lately. I’m going to give him a new project where he actually has to show some management skills, and hopefully that will get him more engaged. I’ll email you details shortly.”

Jessica then set up a counseling session for Justin and a touch point with his program buddy, briefing both on his recent troubles. She also scheduled a drug test for Justin during his

Jessica’s monitor beeped again: a calendar appointment of her own—Russell Bateman. One of her success stories. A young man whose analytical abilities could have gone to waste was now progressing rapidly toward a real job as an accountant.

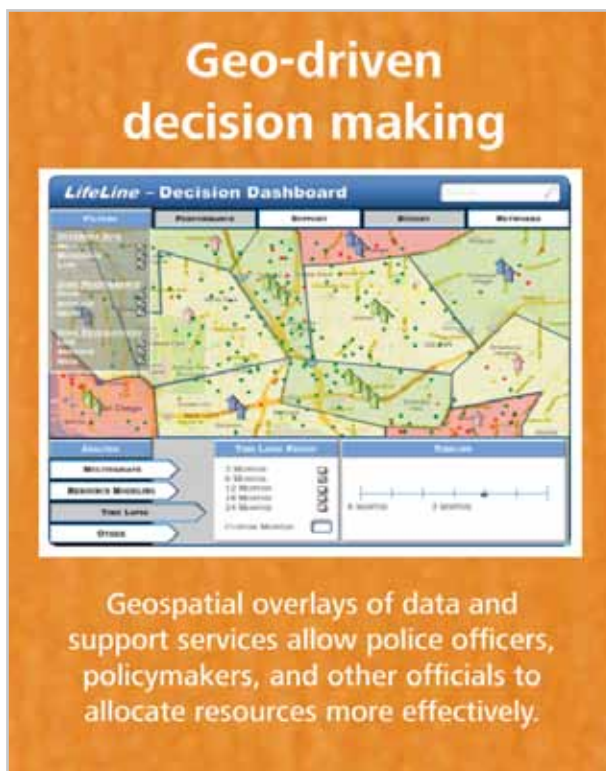
“This touch point shouldn’t take long,” she said to herself. Instead of driving 20 miles to attend this meeting, she could conduct the whole process via video chat. As if on cue, her smartphone rang.

### Smarter policy decisions based on real-time, risk-based data

Gabriela Arredondo heard the clock chime once, indicating she had just 15 minutes left before it was her turn to speak. Looking over the dashboard displays, Gabriela Arredondo went over her presentation once more in her mind. As an analyst in the Reentry and Integration Division of the State Department of Criminal Justice, she had spent two weeks prepping for today’s presentation to the department’s executive committee.

Gabriela had been asked to give a high-profile presentation because she was considered one of the department’s top analysts trained in using LifeLine, the state’s new virtual monitoring and prisoner reintegration system. Looking at printouts of her slides, Gabriela felt quietly amazed that a similar system hadn’t been deployed sooner. The screenshots of the LifeLine Executive Dashboard showed how the system could reveal patterns that would have remained hidden with more traditional methods.

On the first slide was a printout of a map of three-and-a-half square miles on the west-ernmost side of the state’s second-largest city. Arranged across the map were a series of dots ranging from dark green to dark orange, representing the permanent residences of the 218 virtually incarcerated offenders living in the area.



next physical. While his LifeLine was equipped with drug-testing capabilities, sometimes an in-person test was necessary just to double-check that he was staying clean. Justin would receive notifications for each of the appointments, and his calendar would be updated accordingly. Within 10 minutes, she had created a multi-faceted intervention to support Justin in meeting his goals.



The second slide overlaid offenses committed by program participants in the area during the last five months. There were two clear hot zones in which 45 percent of the offenses had occurred. The third slide overlaid Lifeline-affiliated support service zones of three different types over the map, including mental health support services, substance abuse treatment zones, and employment locations.

The colored zones and lines on the map clearly revealed that hot zones for criminal activity often appeared in areas without overlapping mental health and substance abuse treatment (as with an offender living within two miles of only one service). Gabriela's final slide covered her proposal, suggesting mobile treatment programs for zones whose residents lived more than two miles away from one of the two support services. Her theory was that traveling more than two miles to reach these services would expose her charges to too many temptations to violate their conditions of release.

Her presentation and conclusions were solid—and all but impossible to assemble only a few years ago. She drew on data collected by tracking anklets as well as by smartphone devices, analyzed by case managers' dashboards, and then pushed to the state-level executive dashboard. Data analysis and visualization had made it possible for people like Gabriela to suggest more workable and more strategically sound solutions than her predecessors could have.

The clock chimed again. It was time to present. Taking a deep breath, Gabriela walked into the boardroom.

# Criminal justice and beyond



**T**ODAY'S prison system incarcerates too many individuals who pose little threat to public safety, at far too great a cost. They serve their sentences in overcrowded, outdated institutions that expose them to hardened criminals. Upon release, their employment prospects would have changed forever.

They could have served their sentences as virtual prisoners, holding jobs and taking care of family members, feeling the weight of their punishment while seeing a clear path to avoiding trouble in the future. And taxpayers would have gained a clear cost advantage.

This alternative is speculative, but it is based on real solutions and technologies, and its components are grounded in detailed

research. But even the best ideas need testing. In the near term, we invite corrections departments at the state and federal levels to establish evidence-based trials to tease out the most effective elements of this vision.

In the longer term, this approach has intriguing implications beyond criminal justice. The model integrates and digitizes tested programs and services. In arenas such as health and human services, for example, one can easily imagine that a similar system might prove useful for social workers and their clients. The possibilities and applications are only limited by how willing government officials are to embrace a bold new approach.

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