



# Corrections 2033: Technology, Decisions, and Implications



2023

23RD ANNUAL  
TECHNOLOGY SUMMIT

**RIDING THE WAVE**  
of Technology

JUNE 18-21  
FT. MYERS

June 19, 2023

# Presenters

1. Hakan Klarin CIO Swedish Prison Service
2. Arun Vanapalli Digital Strategy Lead Accenture
3. Simon Bonk Chief Research Officer Telio
4. Lucas Herring IT Manager Vermont
5. Laura Willey Chief IT Branch Fairfax County Virginia

## Corrections 2033: The case for modernization



### Justice Reform and Improved Public Safety

Digital is a must for innovating programs, policies and practices to improve correctional outcomes and reduction in recidivism. More broadly, a modernization agenda can enable it to positively contribute to Correctional Justice Reform.



### Responding to the Long-Term Impacts of the Pandemic

Ability to operate in the “never normal” requires the need to be highly flexible and deliver service in a constantly changing environment.



### Victim Responsiveness

Modernization will enable faster, more transparent and personalised services, built around and responsive to the needs of victims.



### Infrastructure as the Foundation

Investment in aging and legacy buildings and technology infrastructure can build the foundation for all modernization initiatives.



### Importance of Trust and Confidence

Public and Partner trust and confidence, with a focus on transparency, openness, and fairness to all, in particular, over-represented populations.



### Movement to Cloud

A Cloud-first philosophy, with technology and business benefits including increased flexibility, on demand computational power, greater collaboration through digital vehicles, and access to new capabilities.



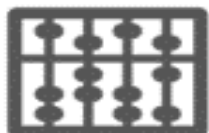
### Improved Health Services

Digital disruption; from integrated systems to improved data management, allow for improved and integrated health care for offenders with improved safety and reduced cost.



### Diversity, Inclusion and Equity

Modernization capabilities can support cultural enablers for diversity, inclusion and equity and help to identify and remove elements of systemic bias.



### Governmental Alignment

Increased focus on Digital Government across jurisdictions suggests that modernizing all aspects of the business of Public Service for both efficiency and effectiveness is an imperative. All government departments, including corrections, have the opportunity to shape the narrative around modernization. This is critical due to the inevitability of financial pressure that will begin to be applied in the wake of pandemic recovery.



# Corrections 2033

## Corrections 2033: Potential benefits of modernization

### Economic

#### Earlier Release

Timely completion of enhanced rehabilitation programming may result in earlier release, reducing the overall cost of care of offenders in custody.

#### Viable Employment

Programming tied to skills training, in conjunction with organizational partnerships, can create improved employment opportunities post-release.

#### Reduced Recidivism

Supporting offenders by creating a corrections environment that reflects the society that they will be released into has proven benefits to recidivism (Principle of Normality).

### Sustainability

#### Rethinking Innovation & Reduction of Carbon Footprint

Modernization is an opportunity to rethink the approach to innovation from a sustainability lens, with an eye to reducing carbon footprint. By nature, corrections organizations have significant carbon footprints due to the need for real property, infrastructure, and on-premises staff. Sustainability an emerging priority will drive corrections organizations to consider optimization from a number of perspectives, including cost, materials, and resources.

### Societal

#### Diversity Outcomes

Tailored programming designed to cater to diverse offender populations may aid in reduction of overrepresentation of marginalized communities and improve re-introduction into communities.

#### Safer Communities

Offenders receive opportunities to contribute to community stability through programming and skills training in an environment that reflects the society they will be released into.

#### Access to Skills

Corrections within communities means that the skills and utilities of offenders, corrections employees, and associated infrastructure can be leveraged within the surrounding environment.

### Organizational

#### Corrections Staff

Staff will receive robust training in preparation for the increasingly complex corrections environment, as well as having access to improved data and information sharing capabilities to aid decision making.

#### Offenders

Offenders will have access to a greater variety of targeted programming to aid in rehabilitation, as well as tools and technologies that mirror society, creating safer environments in custody and in the community.

#### Other Stakeholders

Reduction in recidivism, paroled offenders equipped to contribute to communities and the economy, cost savings during custody, and the opportunity to provide a second chance to fellow citizens.



# Corrections 2033



## Corrections 2033: Conditions for Successful Modernization

---



Collaboration



Culture Change



Change Management



Embracing Risk



Strategic Planning



Governance




Evolution of Skills



Leadership



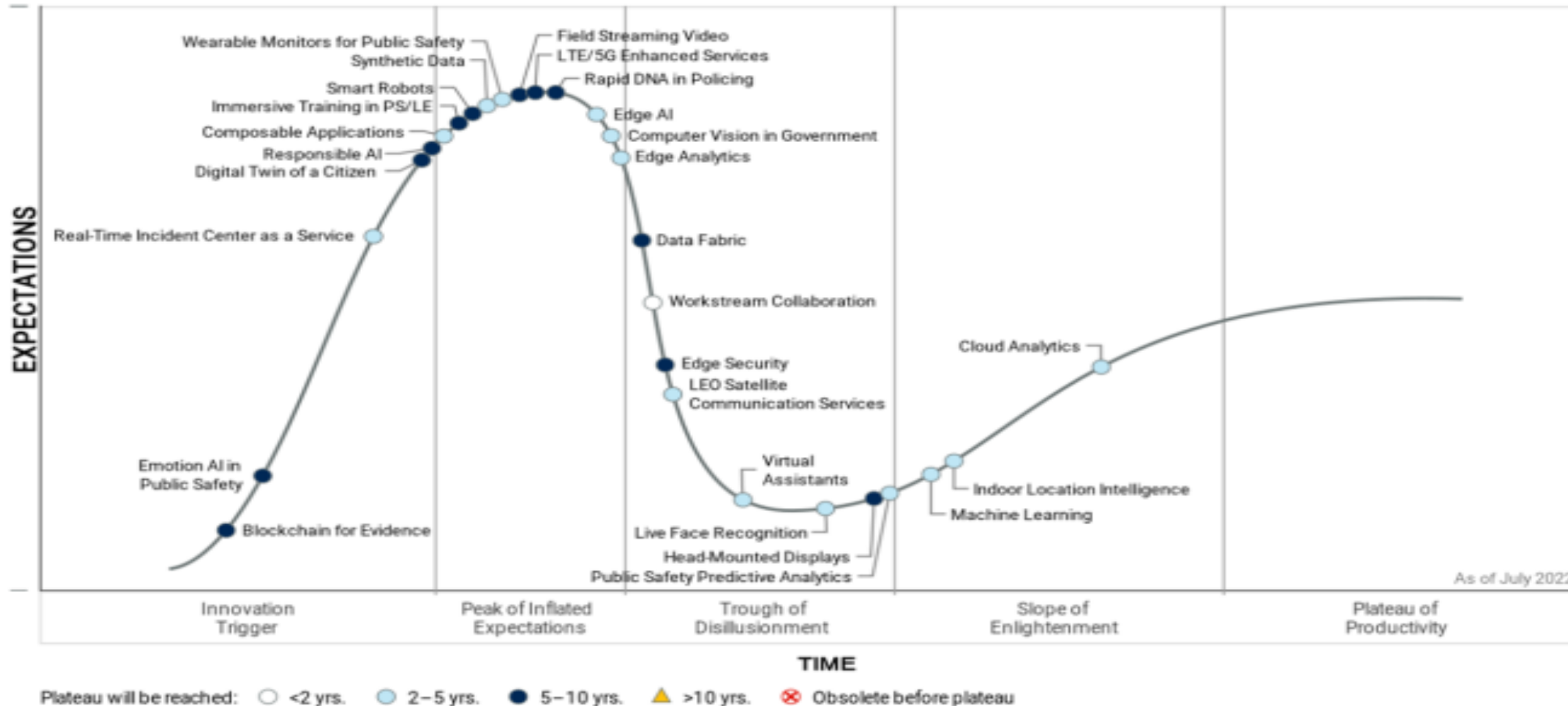
## Corrections 2033: Operating Reality

|                                 |   |  |  |   |               |
|---------------------------------|---|--|--|---|---------------|
| Society +<br>Crime /<br>Justice |    | Demographics of<br>incarcerated<br>population            | Nature and types<br>of crime leading<br>to incarceration | Convergence of<br>mandates across<br>criminal justice |               |
| Emerging<br>Technology          |    | Interoperability +<br>intersectionality<br>of technology | Connectivity +<br>continuity across<br>partners          | Virtual Reality                                       | Dig. Delivery |
| Culture +<br>Capability         |  | Demographics of<br>employee<br>population                | Evolving<br>rehabilitation<br>philosophies               | Influence of<br>criminal justice<br>policies          |               |



# Corrections 2033

## Gartner Hype Cycle for Public Safety and Law Enforcement, 2022





## AI – Incredible Potential, Significant Risk



### Gains

- Effectiveness and Efficiency of operations
- Proactive prevention
- Intelligence through data mining



### Challenges

- Integrity, of data and processes
- Bias within society and learning models
- Establishing respectful boundaries of power and control



### Risks + Mitigation

- Data quality, generated with ethical standards
- Awareness & monitoring of emerging risks
- Strong, multi-disciplinary governance



### Balance

- Centre mission, mandate, and most importantly, people
- Enhance investments in digital literacy
- Build with security, compliance, and scalability



## Potential gains of using AI

- **Effectivity** - Automation, precision, speed and scalability of processes implies lower expenditure and a better prison service overall.
- **Prevention** - AI-systems capable of detecting undue behavior and alerting officers may lower criminality, suicides, violence and smuggling of contraband.
- **Prediction** - The power of machine learning may be harnessed to generate novel insights and predictions which may be used to decrease recidivism.
- **Intelligence** - Data-mining may lead to knowledge that can be shared with other governmental bodies or used in united action with the police.

## Potential challenges of using AI

- **Integrity** - Effective AI-systems require vast amounts of data. Still, practitioners of AI must respect client's personal integrity and the proprietary nature of data.
- **Bias** - AI-developers have found that machine learning models tend to pick up on social bias present in the training data. If the data is not diverse enough, models may become unjust.
- **Power & Control** - AI-models could potentially be used for extremely effective surveillance and behavioral control. However, ubiquitous monitoring may affect the wellbeing of inmates and excessive control measures may evolve into oppression.

## How do you mitigate risk?

- **Data quality** - Good quality data that is representative and generated with awareness of ethical risks will mitigate the tendency of models to become biased or skewed.
- **Knowledge and awareness** - Mitigating risk starts with being aware of the risks and knowing in what situations they are likely to occur. Education for all organizational members may be required as well as continuous research among specialists.
- **Governance** - Management processes and governance structures that align AI-solutions with strategic objectives of the organization. Enhancing performance, mitigating risk and assuring the best interest of all stakeholders.
- **Centre of excellence** - An interdisciplinary team dedicated to maintenance, development and continuous improvement of AI-solutions in the organization, delivering technical functionality and novel insights directed towards achieving organizational goals.
- **Cooperation across borders** - Sharing data, insights and best practices across borders will promote effective solutions and wiser implementation of advanced AI in prison and probation service.






## How do you find the right balance?

- Digital technologies and artificial intelligence bring positive changes in our societies, but also raise a number of ethical concerns regarding human rights, respect for private life and data protection.
- AI and related digital technologies should be used **not only for safety and security purposes** but also for **social inclusion** of persons in conflict with the law and that their reintegration should remain central. This use should **not undermine the human-centered approach** and should **avoid discrimination** and economic and social inequalities.
- **Digital and AI literacy needs to be enhanced** among key actors in the criminal justice system and urgent measures need to be taken to prepare them to make efficient and ethical use of AI and related digital technologies in their everyday work to the benefit of other service users.



# Corrections 2033

## Corrections 2033: Technology and Applications

|  |  |   |  |  |
|--|--|---|--|--|
|  <p><b>Security</b><br/>Use of AI and machine learning for proactive security</p> |  <p><b>Health</b><br/>Wearable technology used for health tracking + crisis response</p> |  <p><b>Operations</b><br/>Bluetooth technology for inmate counts, AI for bed placement</p> |  <p><b>Staff</b><br/>Use of AI and RPA for repetitive tasks or as accelerators, creating capacity</p> |  <p><b>Training</b><br/>Use of Virtual Reality for employee training and rehabilitation programming</p> |
|--|--|---|--|--|



## Corrections 2033: Potential cases for innovation- Efficiency and Effectiveness

### Automation Moving to Hyperautomation (including AI & RPA)

- Coupled with AI improved grievance management
- OMS access for inmates coupled with digital services and tablets/in cell desktop
- Internal processes such as onboarding of new staff
- Placement on release linked with AI (also applicable on intake via suggested processing enhancements)
- Virtual court or parole hearings
- Sentence calculation

### Robotics

- Cleaning
- Counts
- Perimeter verification/monitoring

### IOT

- Smart city approaches to greening corrections
- Proof of life via bluetooth tech
- Lidar for movement detection



## Corrections 2033: Potential cases for innovation –Safety And Security

### In cell Digital Services

- Health services provide in cell or on wing assessments via connected wifi or **private network**
- Extend service to in cell device video consultations to outside medical professionals (telehealth)
  - Waste water monitoring
- Cost efficiencies and less movement risk

Cellphone and Drone Counter Measures

Tablet Technology  
Leverage mobile devices to expedite intake and risk assessments

RFID (IoT)  
Similar to community monitoring leverage GPS bracelets to facilitate movement, counts and signs of life

## Corrections 2033: Potential cases for innovation –Safety And Security

### Proactive Security via Artificial Intelligence and Machine Learning

- Aggression Analysis via text and audio communication
- This could be extended to pattern recognition of cctv feeds
- Similar approach with sentiment analysis to identify mental health markers

### Mobility for staff

- Instant access to information
- Facilitate reporting and administrative duties





# Corrections 2033

## Corrections 2033: Potential cases for innovation- Efficiency and Effectiveness

### Digital Services Promoting Normalization

In cell/classroom education including live streaming of classes

Office Suite with peripherals

Gamification of education

In cell communication text/audio/video

Entertainment including virtual gaming with family

Commissary

All providing computer literacy or at a minimum familiarity

Pre-release support – apply for identification/support identification/

Mental health programming in cell

Data collection

### Virtual/Augmented Reality

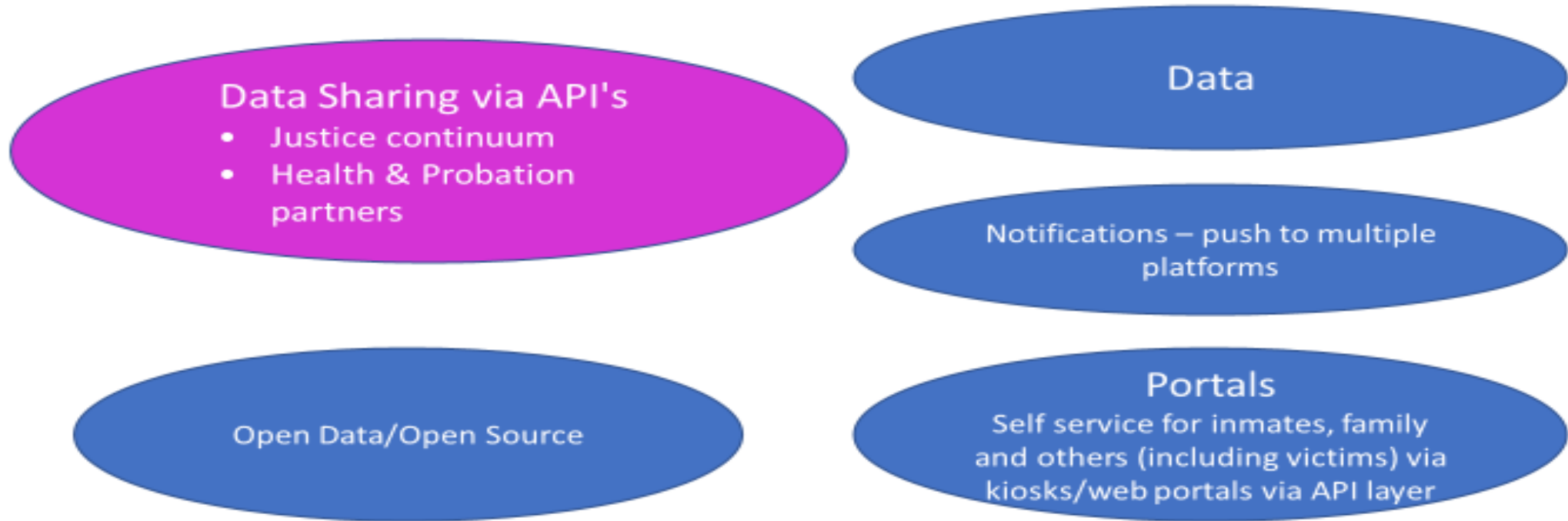
Inmate education

Inmate programming

Other use cases outside of rehabilitation



## Corrections 2033: Potential cases for innovation –Engagement





## Technology risks

---

Bias

---

Cost- note offset with efficiency gains

---

Change management

---

Culture

---

Isolation of offenders

---

Familiarity/Expertise

---

Public Perception



## Conversation Starters

- Would we benefit from the creation of an overarching modernization Strategy or are incremental innovations a more prudent approach?
- Is there an opportunity to reimagine how we deliver corrections through the lens of technology?
- How do we ensure successful benefit realization as we embark on a journey of leveraging emerging technology?

# Contact Us

1. Hakan Klarin Klarin Håkan - [Hakan.Klarin@kriminalvarden.se](mailto:Hakan.Klarin@kriminalvarden.se)
2. Arun Vanapalli - [arun.vanapalli@accenture.com](mailto:arun.vanapalli@accenture.com)
3. Simon Bonk - [Simon.Bonk@tel.io](mailto:Simon.Bonk@tel.io)
4. Lucas Herring - [Lucas.herring@vermont.gov](mailto:Lucas.herring@vermont.gov)
5. Laura Willey - [Laura.willey@fairfaxcounty.gov](mailto:Laura.willey@fairfaxcounty.gov)



# Questions

- Thank You !!