Police Service
of Northern Ireland

Digital Strategy
2021 and Beyond

we care
we listen
we act

Contents

Chief Constable's Welcome

I want our Police Service to Care, Listen and Act - in support of the community; our partners and our colleagues. In order to achieve that, we need to modernise how we work and evolve our culture.

Creating a Digital Police Service of Northern Ireland is critical to our modernisation plans and will make our Police Service more visible, accessible and community focussed. I want a Digital Police Service of Northern Ireland that takes advantage of rapid changes in

mobile technology, underscores how the Service interacts with the public and also how we use, deploy and locate our officers and staff.

I have already invested in technology so the officers and staff can be equipped with the tools they need to make smarter decisions at the point of delivery; as well as allowing for more flexible and agile working patterns across the Service. Further investment in technology will make it easier for the public to make contact with the police and enable us to make better use of digital intelligence and evidence.

I am pleased to introduce this Digital Strategy. The provision of fit for purpose Information and Communication Technology (ICT) is a prerequisite to achieving our objectives, and I am committed to maintaining and investing in the ICT resources, infrastructure and projects that are key to maintaining our operational effectiveness and advancing our programme of business change.

Simon Byrne
Chief Constable
Police Service of Northern Ireland

Our Story

Who We Are

The Police Service of Northern Ireland is the policing organisation for all of Northern Ireland.

We see our role as a visible, accessible, responsive and community-focused service that reflects the needs of those who count on us.

Our Purpose

Keeping People Safe.

We are the Police and our purpose is to serve our community and to keep safe those that live, work and visit here.

It is when we work together with our communities; our partners and our colleagues, that we achieve our greatest success.

What We Do

We Care: We Listen: We Act.

We are an organisation that demonstrates through our actions and behaviours that we care, we listen and we act.

Our purpose — Keeping People Safe

What we do — We care : We listen : We act

How we do it — By delivering visible, accessible, responsive, community-focused policing

Foreword From The Head of ICS

This refreshed Digital Strategy 2021 and Beyond aims to consolidate the direction of travel for the Police Service of Northern Ireland's digital ambitions across the organisation and prioritising investments in Technology to deliver initiatives aligned to the corporate priorities.

A key tenet of this strategy is to ensure Police Service of Northern Ireland continues to keep people safe in a Digital Age.

This alignment, underpinned by our core Strategic Themes, will help to enhance public confidence in the Police Service of Northern Ireland.

Information and Communications Services branch (ICS) provides and operates the ICT systems that support policing 24 hours a day in Northern Ireland. This includes all telecommunications services, including radio communications for all emergency services, our CCTV and Video systems that protect officer and members of the public, and IT systems that are essential for day to day policing and back office functions.

ICS is the strategic voice for technology across the Police Service of Northern Ireland. We will lead the development and exploitation of digital tools, technologies that give us more opportunities than ever before to improve the vital public services we deliver, exploring how we can use technology to make our streets safer.

This Strategy addresses maintaining existing ICT services upon which policing operations are dependant and providing powerful, new digital capabilities:

- Police Officers and Police Staff have the digital tools and service to support them in doing their job

- Our workforce will be able to conduct most of their tasks in the field and have access to the right information at the right time

- Automation is common place and used effectively to release capacity for staff and officers to focus on high value work

- Effective working with partners to allow secure exchange of data and digital evidence cross agency boundaries enables new ways of working and improves public outcomes

- A member of the public can use their everyday devices and applications to easily engage with the police

ICS is indebted to the Chief Constable and senior police officers and staff who have collaborated with and support the development of this strategy by articulating future business needs, and by embracing the potential for innovative solutions capitalising on emerging digital technology.

Jeff McNamara
Head of Information and Communication Services
Police Service of Northern Ireland

Our Purpose

The purpose of the Police Service is to Keep People Safe by delivering a service that is:

Visible, Accessible, Responsive and Community Focused.

Developing Our Vision, Mission and Strategy

Police Service's Digital Strategy 2021 and Beyond

Vision

Police ICT Solutions Developed to a World Class Standard.

Mission

Deliver Exceptional Technology Services and Solutions through Innovation, Leadership and Collaboration to Enable Police Service of Northern Ireland to Keep People Safe in a Digital Age.

Vision

Police ICT Solutions Developed to a World Class Standard.

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Deliver Exceptional Technology Services and Solutions through Innovation, Leadership and Collaboration to enable the Police Service of Northern Ireland to Keep People Safe in a Digital Age.

Horizon 2025

Police Service of Northern Ireland Modernisation Plan.

Finance and Support Services

2021 - 2022 Business Plan.

Northern Ireland Context

Horizon 2025 references some of the challenges facing Policing in Northern Ireland, however a number of factors relevant to this Strategy are worth highlighting.

The Northern Ireland digital footprint marks us as the most connected nation in the UK and home to one of the most vibrant tech ecosystems in the country.

Key facts about Northern Ireland and data highlighting the changes in how people communicate with others, watch or listen to content, shop and participate in the digital world.

In 2022 333 Exabytes of Global IP Traffic per month

In 2019 64% Of households in Northern Ireland owned a tablet computer

In 2019 82% Of people in NI over the age of 16 owned a smartphone

People 1.9m Residents in Northern Ireland Projected 2 million by 2025

In 2020 50bn Devices with smart sensors connected to the internet globally

In 2019 507.5 Zettabytes of data created globally by 'internet of everything' devices

In 2019 84% Of households within Northern Ireland had broadband access

Internet users 82% Purchased goods or services online in 2019, while use of social networking sites grew significantly to 79% of adults

In 2022 87% Of people in Northern Ireland aged 16+ used the internet in the past 3 months

Hours 24 Spent online per week by people in Northern Ireland

Total Fraud Crime 4185 Report. Which is a 23% icrease from 2018

Cyber-enabled NI Northern Ireland is the most cyber-enabled part of the UK

Future EU Future EU interoperability

over 1m Followers across the PoliceService of Northern Ireland social media platforms

Programme for Government

Our strategic themes support the Service's seven strategic work areas.

The Programme for Government is constructed around a framework of wellbeing outcomes expressing the ambitions of the Executive for everyone in society. Our governance arrangements ensure everything we do contributes to having a safe community.

Our community approach, means that prevention is our priority and we will work with communities to problem solve and prevent harm. It also means that when crime does occur our response is swift, effective and sensitive to the needs of victims.

PfG Outcome 7: We have a safe community where we respect the law and each other

Our purpose — Keeping People Safe

What we do — We care : We listen : We act

How we do it — By delivering visible, accessible, responsive, community-focused policing

Strategic Priorities form Horizon 2025

- Tackling Serious and Organised Crime
- Dealing with Violent Extremisim
- People feel safe and have trust and confidence in the Police
- Protect the most vulnerable in our communities
- Building a culture of community policing
- Progression for a diverse workforce and procedural fairness
- Encouraging innovation and risk taking

ICS's Strategic Themes

Digital Engagement

Digital Investigation and Evidence

Digital Collaboration

Mobility

Strategic Themes

Digital Engagement

Public expectations of how people communicate continue to be more digital and varied. Whilst this brings some challenges, there is also the opportunity of multi-channel contact, improving customer relationships, and drawing on richer media to keep people safe.

A customer-centric approach to contact provides better context for threat, risk and harm assessment, leading to increased public satisfaction.

Digital Investigation and Evidence

An end-to-end digital strategy will expedite evidence and intelligence into custody, other policing functions and our partners.

We will share digital evidence electronically bringing offenders to justice more efficiently, and providing a better service to victims and witnesses. Our digital enforcement capabilities such as ANPR and CCTV will continue to be prioritised for investment.

Digital Collaboration

Policing requires working in partnership internally, externally, locally and nationally. Our Strategy will ensure ongoing support for business collaborations as well as helping drive new opportunities and enhancements.

Anticipated solutions will support easier file sharing and multi-agency team coordination without compromising on the security of citizen and employee data.

Mobility

Our first generation mobility (PUMA) focused on the mobilisation of key business processes and replicating line-of-business applications into a common set of mobile applications.

'Next Generation Mobility' will build on providing relevant information at the point of need, leveraging mobile-only capabilities to drive innovative uses, with approaches that provide agility and represent value for money.

Overarching Priorities

The Police Service of Northern Ireland has initiated 3 strategic outline cases (SOCs) to provide the springboard for significant transformational change over the next number of years:

'Digital Police Service of Northern Ireland', 'Police Service of Northern Ireland Estate' and 'Additional Officers'. These SOC's set out the transformational agenda which Police Service of Northern Ireland is seeking to develop in order to attain the overarching goals outlined in the Police Service of Northern Ireland's Service Modernisation Plan, 'Horizon 2025'.

This sets out a range of foundation principles, a revised Service Operating Model and a Strategic Performance Framework on how the Police Service of Northern Ireland will deliver a modern fit for purpose policing service. It will also contribute and link to the PC2025 initiative which looks beyond the scope of existing projects for digital innovations, and opportunities for future change.

A more detailed roadmap for delivery of other initiatives can be found in the 'In-view ICT projects' section.

This Police Service of Northern Ireland Digital Strategy will enable our Neighbourhood Constables to support victims of crime, hold offenders to account and focus on preventing harm.

Introducing new ruggedised laptop devices will allow them to remain accessible and familiar to the public, enable local community engagement and meaningful partnership working to protect people, prevent and detect crime.

7500 Officers

Digital Police Service

Estates

Digital Strategic Outline Cases

Agile/Mobile/ Remote working

To ensure that the Police Service of Northern Ireland Officers and Staff have the necessary equipment to enable agile and remote working.

Data Exploitation

To use data and analytics to gain predictive insights in areas related to crime and keeping people safe.

ANPR Enhancement

To develop ANPR to expand the coverage through additional fixed cameras and through partnership with third party ANPR systems.

Northern Ireland Next Generation Emergency Service Radio

To agree the spectrum requirements and develop a migration platform for the new emergency services radio system.

Robotic Process Automation and Artifical Intelligence

To roll-out robotic process automation, to perform repetitive rule based tasks.

Foundation Principles for Transformational Change

Any change that we design and deliver should, where possible:

Sustainable Solutions

Bodyworn Video Tech refresh
Next Gen Mobility
Agile Working

10 Consider environmental impact and sustainability

1 Prioritise Community Policing

2 Be in line with the Service Values of "We Care We Listen We Act"

Digital Citizen Services

3 Embed crime prevention and problem solving

Bodyworn Video Tech refresh

ANPR

4 Be evidence-based and informed by objective consideration of data

Data Analytics
Corporate Reporting
Pulse Performance Portal
Video Analytics

5 Harness technology to:
• Make it easier and quicker for the public to contact us
• Help staff increase productivity by reducing bureaucracy and duplication
• Fight crime

Linking up with PC2025 to bring innovative technology to our frontline officers

Digital Citizen Services

Automation/ Robotics

External Sharing and Public Ingest

Digital Citizen Services

6 Reflect community needs and expectations

7 Involve communities to build trust, cohesion and respect for the Rule of Law

ANPR

8 Be as a result of decisions that have had no more than two people touch them

9 Enable or utilise:
• Co-location with partners
• Home or agile working by staff

Next Gen Mobility

Agile Working

Impact Statements

Core ICT Strategic Areas	Digital Contact	Digital Investigation and Evidence
Public	" I've numerous ways to contact and connect with the police via digital channels. Getting case updates is also easier and faster. "	" The time between calling police and getting my case to court is quicker. "
Policing	" I can easily share and receive information and connect with the public. Internally, I can find the information and people I need."	" I collect a range of evidence at the scene and have access to live time digital data services."
Partners	" There's less of a 'gap' between the police and us - through digital collaboration and conferencing."	" Multi-media evidence is shared across all partners rapidly and securely, speeding up justice with a strong focus on victim care."

Core ICT Strategic Areas	Digital Collaboration	Mobility
Public	" Government appears more joined up - I don't have to repeat my personal information over and over. "	" Police are more visible and accessible, and spend more time on local, community issues."
Policing	" Inter-agency responses to incidents are more agile with virtual teamwork and secure data sharing."	" Working remotely or at the desk is seamless. New solutions allow me to be more visible and accessible to the public."
Partners	" Security and information sharing protocols are robust, but invisible. We share more information and complete tasks quickly on collaborative platforms."	" The police aren't confined to their locations and can be collaborative on mulitple platforms."

Our In-view ICT Projects

The following Projects have been prioritised and included in our 10-year Capital plan.
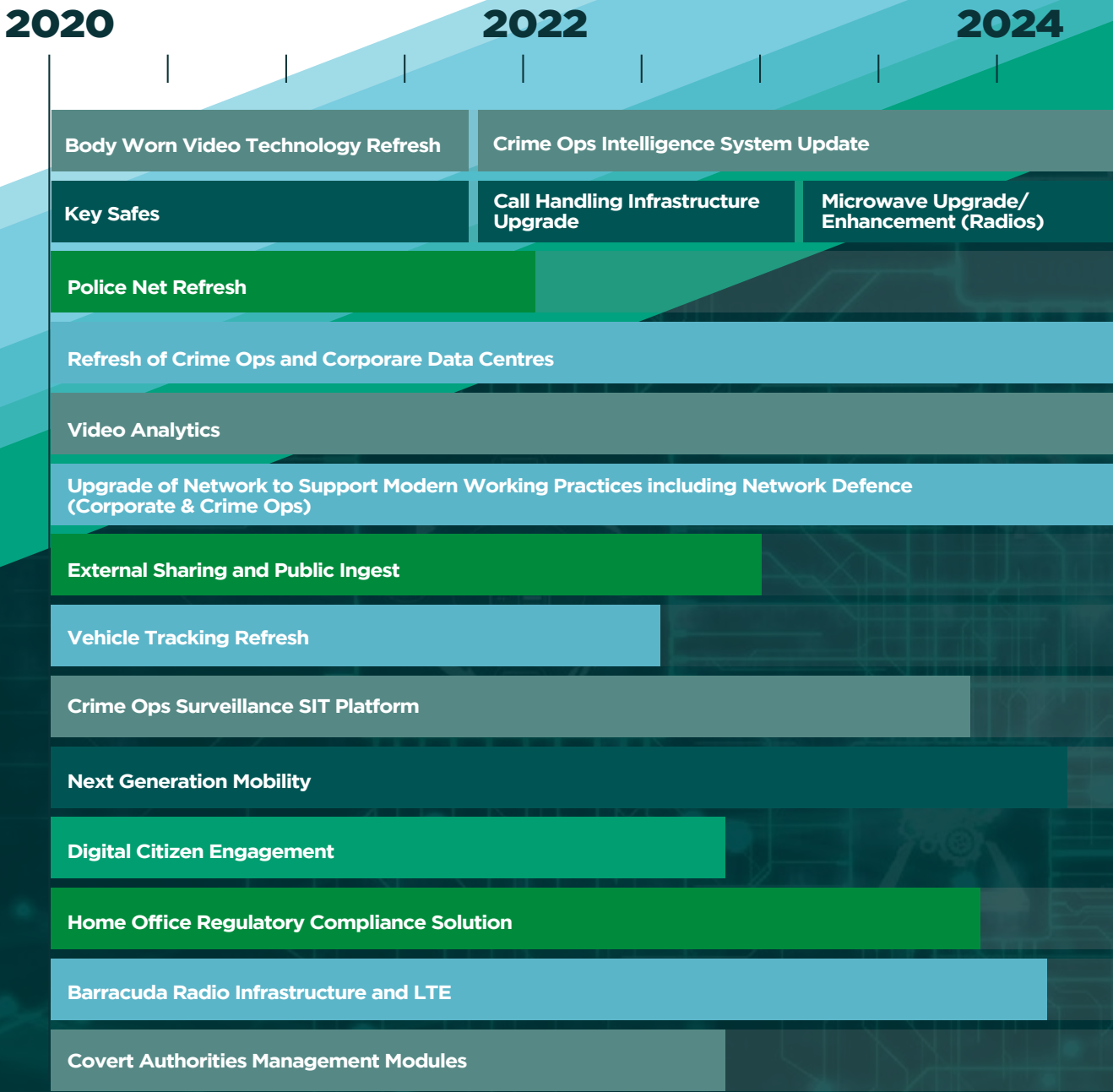
KEY

- Digital Engagement
- Digital Collaboration
- Digital Investigation and Evidence
- Mobility
- ICT Efficiency and Performance

2020 — **2022** — **2024**

- Body Worn Video Technology Refresh
- Crime Ops Intelligence System Update
- Key Safes
- Call Handling Infrastructure Upgrade
- Microwave Upgrade/ Enhancement (Radios)
- Police Net Refresh
- Refresh of Crime Ops and Corporare Data Centres
- Video Analytics
- Upgrade of Network to Support Modern Working Practices including Network Defence (Corporate & Crime Ops)
- External Sharing and Public Ingest
- Vehicle Tracking Refresh
- Crime Ops Surveillance SIT Platform
- Next Generation Mobility
- Digital Citizen Engagement
- Home Office Regulatory Compliance Solution
- Barracuda Radio Infrastructure and LTE
- Covert Authorities Management Modules

2020 — **2022** — **2024**

- CJDS
- Crime Ops Video Management System
- Agile Working - Laptops
- PIDS - Outsource (Security/Intruder Detection - Health and Safety)
- Natural Language Processing
- Conference Room Video Uprades HQ Sites
- Augmented AI
- Crime Ops Secure VTC Unified Communications
- ANPR Programme
- Corporate and Cyber Infrastructure Upgrade/Expand
- College Management System
- Replacement Public and Property Protection Alarm System
- PA/BA - Outsource (Bomb Alert/Panic Buttons - Health & Safety)
- Corporate Reporting
- Niche Major Release
- Replacement Records Management System
- Digitilisation of Police Service of Northern Ireland CCTV
- Firearms Shogun Replacement
- Robotics

2021 and Beyond Video Narrative

We have created a video to briefly communicate our vision of the future for digital policing.

Scan the following code to view this video on your smart phone device.

A 'QR Code' reader and Internet connection are required.

ICS's Governance Structure

The authority and oversight in delivering all ICT solutions is governed according to the following structure.
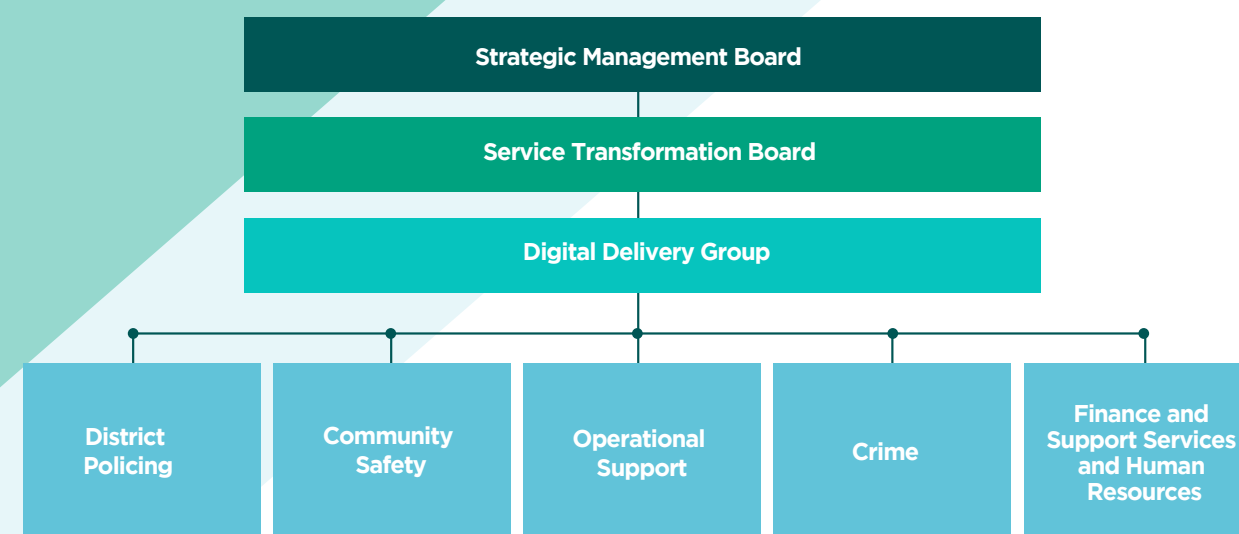
Prioritisation

ICT is a significant contributor to the achievement of strategic goals and objectives. As such, there is a need to prioritise the diverse set of ICT needs within the organisation.

A prioritisation matrix, that considers the value and weighting of potential projects against assessment criteria, will be ratified by the Digital Delivery Group. This matrix will be utilised to prioritise all projects that require resources and/or funding and as a minimum will be reviewed quarterly to ensure continued strategic alignment.

Measuring Success

This robust governance structure facilitates scrutiny and challenge across all ICS services. As well as formal Service Level Agreements, ICS commits to producing Benefits Realisation Plans and Post-Project Evaluations in an ongoing process of both corporate and external oversight and accountability.

Strategic Management Board

Service Transformation Board

Digital Delivery Group

District Policing	Community Safety	Operational Support	Crime	Finance and Support Services and Human Resources

Funding

The ICT budget represents less than 5% of the total Police Service of Northern Ireland DEL budget. The majority of ICS's budget is committed to "run" our ICT operations – maintaining and running the existing telephone, radio, data and computer systems. Acknowledging this, ICS has practised a strategy of targeted capital investment into those legacy systems that create a costly revenue tail. This tail often results from expensive supplier support that is exclusive to too few clients. Upgrades, replacements and system mergers create some headroom for "grow" and "transform" projects by reducing the revenue pressure.

Regular financial planning allows us to identify assets that do, or have the potential to, create revenue pressures, such as systems coming end-of-life. This triggers in-depth user engagement and pre-project research into more cost-effective alternatives with a particular focus on Commercial-Off-The-Shelf options.

In terms of 'growing' and 'transforming' the digital portfolio, Capital is bid for annually and on the back of Governance agreed projects. Example capital investments have been Radio refresh, new base stations, Body Worn Video cameras, Command & Control replacement, Digital Photo Albums, refreshed Intranet and much more. In addition to savings,these investments have also increased radio coverage into more rural areas, improved evidence gathering for some of our most vulnerable victims and increased operational time out of station.

The Police Service of Northern Ireland recognise that there are greater efficiencies and improvements to service delivery to be obtained by further investment in ICT. This is evidenced by the upturn in funding allocated to the branch in recent years. ICS is committed to investing this funding in projects which will deliver the greatest benefit both to the organisation and, to the public we serve.

KEY

Additional

Main Grant

40000000	
35000000	
30000000	
25000000	
20000000	
15000000	
10000000	
5000000	

2016/17   2017/18   2018/19   2019/20   2020/21

Current Digitalisation

DIR
Digitised interviews speedier process

NICHE
Major Business Improvements

PUMA
Return on Investments £3 for every £1

CAUSEWAY
Saves £200k per year 60khrs per year

RADIO GEN3
Improved battery GPS enhanced, better audio, receiver boost, better audio

NEW C&C
Enhanced dispatch intergrated comms

ROBOTICS
Automation of high volume, low complexity tasks

DAM
Single multimedia source

BWV
Rduced complaints, enhanced evidence collection

ANPR
Fixed and mobile

FIREARMS/LICENCE
Online: 100k Less pages per year, Efficient public service

LOCATE
Saved:112 vehicles £1.3m capital £1500pa maintenance

NEXT GEN MOB
More apps, increased device choice

RADIO NET
Improved bandwidth, reduced costs, increased capability

BIG DATA
Greater insights, improved decision making

EXT DEM
Partner collaboration

AI
Natural Language processing, cognitive automation and AI

CCTV
Improved viewing, increased analytical capability, live streaming

Future Digitalisation

Collaboration with National Policing Programmes

The Head of ICS is an active member of the National Police Technology Council and is assigned as the national lead on Futures. ICS staff play a pivotal role in developing National Programmes that aim to improve Policing Services across the UK through active participation in the following key programmes.

National Police Chiefs Council

The National Policing Digital Strategy 2020 - 2030 sets out the new digital ambitions for policing within the UK. The strategy sets out a number of tangible digital priorities and outlines the key technology and data that is required to deliver these. It also recognises the need to harness new and emerging technologies to help modernise our policing services. The Police Service of Northern Ireland's Digital Strategy 2020 and Beyond works towards aligning the Police Service of Northern Ireland with these principles.

National ANPR Service

The national ANPR Service (NAS) is new technology that will replace the existing national and local ANPR systems within forces to create a single national ANPR data set. The NAS Programme is a Home Office led delivery to implement the NAS technology to UK Law Enforcement. The mission of the NAS Programme remains the same and is as important as ever; the NAS will transform ANPR technology on a national scale to better safeguard the vulnerable, prevent crime and improve transparency.

National Law Enforcement Community Network Programme

Police Service of Northern Ireland are actively engaged in the National Law Enforcement Community Network Programme (LECN) run by the Home Office. This is focused on replacing the current PSNP network which connects National Police forces and Government bodies together using a Software Defined wide area network SD-WAN technology to give greater connectivity and more flexible for future growth.

The National Enabling Programme

The National Enabling Programme (NEP) is helping police forces to transform the way they work and collaborate. By introducing a secure, trusted, cloud-based digital platform along with tools, applications and services that help work better such as Teams for Video conferencing. Delivering these enabling programmes on a national basis provides greater economies of scale, common standards and consistency in the way that police forces use technology to support the rapid realisation of both operational and financial benefits through better ways of working.

The National Law Enforcement Data Programme

The National Law Enforcement Data Programme (NLEDP) is working to provide Law Enforcement and other agencies, on-demand and at the point of need, with current and joined up information in order to prevent crime and better safeguard the public. NLEPD started as a technology refresh as the existing PNC & PND solutions were coming to end of contract and end of life.

The Home Office

The Home Office Biometrics programme (HOB) is working towards combining biometrics into a single platform that will remove duplication and costly or inefficient workarounds in operational delivery. This will not be a new data set, rather a singular platform which existing data can be accessed from.

Collaboration

ICS will work collaboratively with partner agencies, particularly in Northern Ireland, to identify information sharing opportunities and efficiencies through shared ICT capacity and infrastructure. Police Information sharing with other UK police services and An Garda Síochána is already business-as-usual for ICS and our Police Service. We continue to build on these partnerships and recommend collaborative National ICT systems rather than insulated police systems. We will continue to engage with the National Police Technology Council and the Police ICT Company to exploit any collaborative opportunities.

NI Criminal Justice

Nearly 15 years on, Northern Ireland remains a UK pioneer in terms of joined-up data sharing between criminal justice partners. ICS will continue to support Northern Ireland's Causeway Programme alongside our partners in the Public Prosecution Service, Northern Ireland Prison Service, Forensic Service of Northern Ireland and Northern Ireland Courts and Tribunals Service.

Recognising the growth in production of digital evidence we are already engaged with these bodies to establish additional cost effective ways of making this evidence available at the point of need, thereby speeding up justice and improving our services to the community.

Education and Employment

Leading the way for other Police Service branches, ICS works in partnership with Queen's University Belfast and University of Ulster as well as other UK universities in offering year-long ICT Student Placements. Additionally, we collaborate with the Northern Ireland Civil Service (NICS) and Belfast Metropolitan College to recruit new entrants into a 2-year Apprenticeship Scheme, with most obtaining an HND qualification, permanent contracts and automatic promotion to ICT Level 2. The established ICT apprenticeships have now been joined by a cyber apprenticeship scheme as well as an engineering apprenticeship scheme.

Northern Ireland Public Sector

ICS has already collaborated on the provision of network services to the NI public sector as well as the delivery of digital services to the public, such as Online Firearms Applications. We will continue to work in partnership with Department of Finance Enterprise Shared Services to drive down cost and improve quality of service where specific ICT solutions have a requirement to be delivered externally to the core Police Service infrastructure.

Partner Agencies

ICS recognises that there is an increasing need to share information quickly and securely with partner agencies such as Health, Probation and Education to enhance the protection of vulnerable persons in our community. We will enhance our systems during the life of this Strategy to facilitate exchanging information under agreed protocols with partner agencies.

We will provide and maintain Barracuda radio and radio network provision to all the emergency services and other public sector partners. Future network enhancements provide new opportunities for greater public sector digital collaboration.

National Procurement and the Private Sector

ICS will continue to work with other police and partner agencies to leverage the benefits of collaborative ICT procurements driving down cost and enhancing information sharing opportunities. We will continue to collaborate with private sector organisations to further enhance our service provision. We embrace the government mandate to select suppliers with open data standards, an important component of our vision for greater integration.

Sustainability

ICS will continue to pioneer and prioritise the use of low energy sustainable technologies and integrate consideration of sustainability into all our activities.

ICS reduced its physical footprint in recent years with major enhancements to our Data Centre.

All our new desktop PCs are Energy Star compliant with ultra-low power screens. Our planned desktop refresh is ongoing and will ensure that the modern low power processors (Skylake and Kaby Lake) will replace legacy desktop technology across the province.

The move to Microsoft Windows 10 within the life of this strategy will further enable aggressive power saving policies. Application-based power usage tools will be important in addressing the Police Service's ICT carbon footprint.

Integral to this is the move towards a remote working capability through the use of Virtual Desktop Infrastructure (VDI). A planned roll-out of 5000 laptops during the life of this strategy will drive down the ICT desktop estate thereby further increasing power and energy efficiencies.

Sustainability is already a component of our procurement exercises. We seek suppliers that are conscientious and innovative in their approach to improving sustainability both for them and their clients.

The successful implementation of Secure Print has driven down the consumption of paper to print documents within the organisation and this will be further enhanced by the move towards more remote working. This drive will continue during this strategy period by introducing support for group working where officers and staff attend meetings with briefing papers available on their mobile devices.

A further opportunity to reduce our Police Service's carbon footprint will come from the introduction of video conferencing via the desktop. Officers and staff will be able to convene a meeting via video to reduce the need for travel to different sites to attend in person. This will augment existing video conferencing efficiencies within the organisation.