## Annual report on Police data quality

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### Introduction

High quality information is the lifeblood of policing, being used to underpin day-to-day operations.  Robust data are also key to making sense of how effective New Zealand Police is at delivering policing services.  Moreover, having faith in the accuracy of data New Zealand Police collects and uses is fundamental to wider public trust and confidence in Police.

Assurance about the quality and integrity of Police's crime and incident data can be drawn from a range of sources. For a start, detailed guidance is published online confirming how Police offence and victimisation statistics are generated. Independent reviews of Police's crime-related data systems and practices have also been carried out, with results made publicly available; for example, see Review of Police Crime Data. As a further element of such assurance, this report summarises an ongoing programme of work designed to further strengthen the quality of Police's core data.  As part of this snapshot, the report highlights key findings from Police's recently-completed Data Quality Audit Plan 2017/18.

### Background

Police has been on a data quality improvement journey for well over a decade. The pace of progress stepped up with publication of the *National Recording Standard* (NRS) in 2008; which provided a comprehensive rulebook for how Police should record core data in its National Intelligence Application (NIA) computer system. Further impetus came from a far-reaching Data Quality Improvement Programme that was established and driven forward in 2014 and 2015.

Since mid-2015, Police's data quality improvement work has been spearheaded by a specialist Data Quality and Integrity Team (DQIT) based in the Assurance Group at Police National Headquarters (PNHQ).  As part of its work, DQIT delivers on an annually-agreed Data Quality Audit Plan.

As part of a wider commitment to openness and transparency, summary reports on the delivery of prior year's equivalent Audit Plans have been made accessible on Police's website (for last year's equivalent report, see Annual Report on Police Data Quality 2017). This latest report continues that commitment, and similarly is being proactively uploaded to New Zealand Police's website.

### Highlights in 2017/18

Key achievements in 2017/18 included the following:

**Strengthened policy and training support**
- Two significant updates were made to the *NRS*
- Quick reference guides for staff on *Offence Recording and Closure* and *Clearance Recording* were updated
- The online LRT- Codebook was updated making it more accessible and user friendly for our staff
- DQIT's successful DQ Conference has improved Quality Assurance (QA) focus and capability in District
- DQIT is supporting a range of PNHQ workgroups to enhance their second line of defence QA capability
- The addition of a fourth District Crime Registrar (DCR) has grown the DQIT's outreach within Districts
- DCRs are increasingly recognised as SMEs supporting DLTs to effectively implement  local QA plans
- DCRs are increasingly training to frontline Sergeants and Constables to improve knowledge about the NRS
- The National Crime Registrar has actively supported initiatives to improve Police's Alternative Resolution model and Clearance policy and outputs.

**Improved efficiency of systems and processes**
- DQIT's Phase Out Case Statistics (POCS) project closed in March 2018, having successfully implemented all 18 project deliverables.
- The NIA Alerts project has moved to phase 2, and is managed as business-as-usual. A range of nationally agreed system/process enhancements currently sit with ICT - further progress is anticipated in early 2019
- DQIT has delivered over 20 online DQ Assurance resources to support increased local QA activity, plus making three reports available, via Our Business.

**Thematic reviews and cyclical data quality audits**
- Public Order: understanding recording practice
- Pinch-Points: impact on Victimisation recording
- Clearances: understanding recording practice
- Closures Reasons: understanding recording practice
- Audit: Common Assault Recording Practice
- Audit: Re-coding of Victim Offences
- Audit: Fuel Thefts

### Focus areas in 2018/19

Key areas of focus for DQIT in 2018/19 will include:
- Accuracy of clearance practices for all proceedings, including creating a 'pinch-point' view of clearances
- Completing Alerts project activities
- Delivering a follow-on DQ Conference
- Progressively updating the NRS and LRT Codebook
- Development of new NRS coding guides
- Completing 2018/19 Audit Plan deliverables.

## Overview

Police closely scrutinises the accuracy of coding and re-coding of offences and incidents. Checks are done at policing Area and District level by frontline supervisors, whose responsibilities include quality assuring the records entered by their staff (providing *'first line of defence'* assurance oversight). There are also specialist data quality roles in Police, such as officers in charge of File Management Centres (O/C FMCs), who have a watching brief over the quality of the data entered by District staff. Likewise, many Districts have resourced small local DQ teams, to provide management quality controls in a *'second line of defence'* capacity. Such audits happen on a daily basis across the country.

In addition to local assurance checks, there is also regular *'third line of defence'* monitoring of key dimensions of data quality, focused on ensuring consistent application of Police's *National Recording Standard* (NRS) and mandated case management process. Specific audits of crime recording practice are also undertaken as part of a comprehensive, risk based, national, Data Quality Audit Plan. This report provides insights from the recently-completed audits and other activities aimed at improving data quality delivered by the specialist DQIT team at PNHQ, covering the period from July 2017 to June 2018. By way of context, the DQIT has three broad objectives:



- **Championing data quality**: embedding an ethical recording culture, which is underpinned by efficient and effective data quality systems and processes.
- **Evolving the NRS**: as well as related policy and education resources, to deliver improvements in staff knowledge. data quality practice and outputs; and
- **Providing organisational assurance**: delivering an annual risk-based national audit plan, as well as promoting the development of quality assurance capability within Districts and Workgroups, focused on identifying improvement opportunities related to leadership and governance, systems and processes, and people and skills.

Before summarising outputs from Police's Data Quality Audit Plan 2017/18, it is worth touching briefly on the other two objectives of the specialist Data Quality and Integrity Team.

## Championing data quality, and evolving the NRS

Led by the National Crime Registrar, the DQIT has five other staff, including four District Crime Registrars (DCRs). Each DCR is paired with a number of policing Districts; working closely with District Leadership Teams and O/C FMCs and other individuals who hold data quality portfolios to deliver improved recording practice. One DCR is embedded in Tāmaki Makaurau, and also has Northland District in their portfolio; the second is based in Waikatō District, and also covers Bay of Plenty; the third DCR is based in Central District, and also covers Eastern District; whilst the fourth DCR is located at PNHQ and partners with Wellington and Te Waipounamu Districts. Together, the National Crime Registrar,
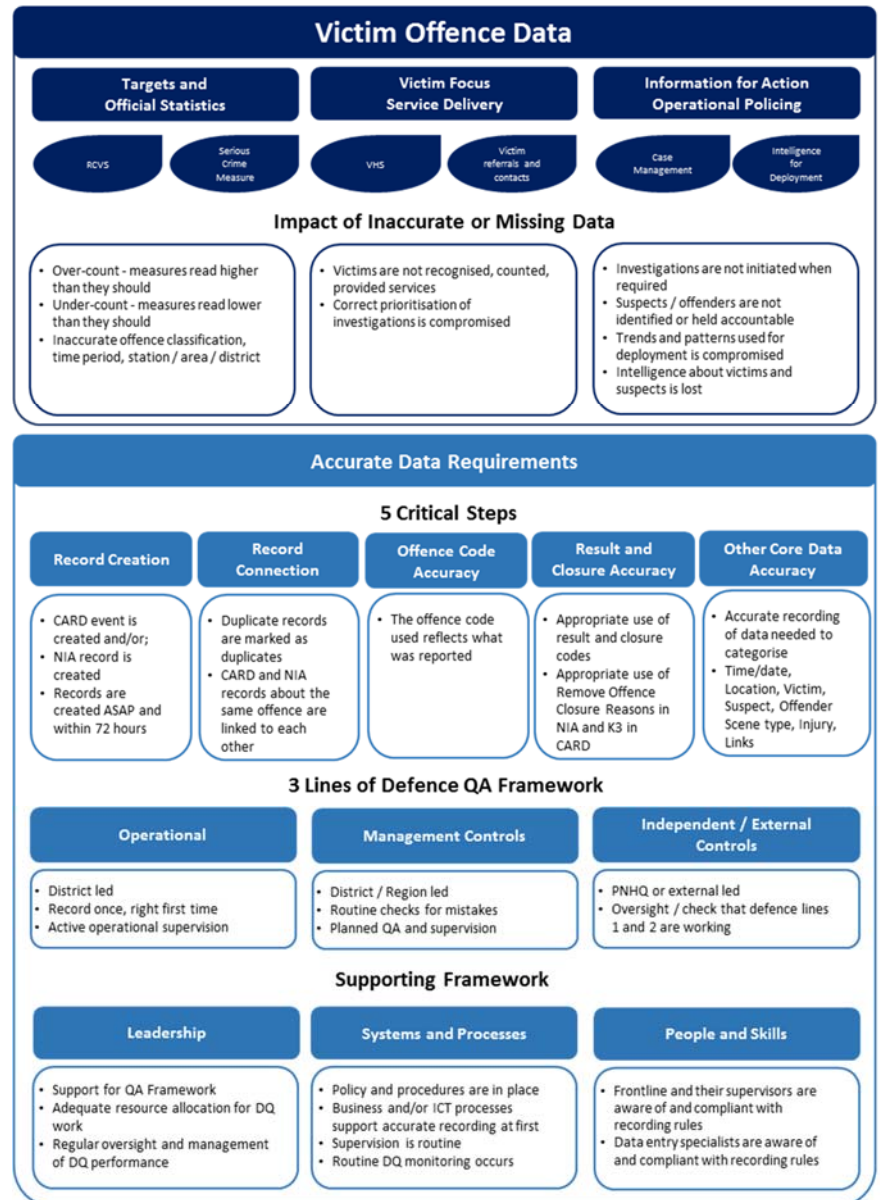
DCRs and a Senior Adviser specialising in data auditing provide visible leadership within Police on data quality issues, and act as vocal champions for a culture of ethical recording.

DQIT continues to make positive strides in raising staff awareness about the importance of high-quality data as a platform for effective service delivery. At a strategic level, the NCR tailors regular communications for key stakeholders about key areas of risk from the annual Audit Plan. DQIT also publishes regular online 'News' items about DQ issues e.g., LRT-Codebook monthly updates, Alerts Project updates, as well general DQ updates targeting improved recording practice. This pro-active messaging, supported by active DCRs partnering with Districts, has been responsible for delivering sustained improvements in re-code, 'no offence' and victimisation recording practice.

The NRS continues to evolve as an intuitive and interactive online resource, with two major updates during the last year. Those updates introduced new *Robbery* and *Wilful Damage* coding guides and delivered a refresh of the existing *Burglary Coding Guide* enabling clearer linkage with NCIGs updated *Burglary Investigation Guide*. This synergetic approach, with NCIG, allows NRS coding guides to be simplified to concentrate recording examples and advice.

Other NRS updates included a refresh of the NIA *Closure Code* section and a new section introducing the concept of *'Removed Offences'* in NIA.

DQIT has also provided a series of online Data Quality Monitoring Reports for use both nationally and within Districts along with a *'How To'* guide. Additionally, DQIT made available 3 new SAS VA reports, which are accessible online via the 'Values Tile' – as part of the *Our Business* performance reporting framework. Those reports monitor Districts' success in improving the accurate linkage CARD and NIA records (which ensures the efficacy of victimisation counts in Police's demand data) as well as comparing District trends in removing offences from NIA.

DQIT has done substantial work to improve the functionality of the LRT Codebook as a 'one-stop shop' source of up-to-date information about offence, incident and task codes. DQIT will continue to improve accessibility and format, providing staff with an updated *User Guide* as those changes are implemented.

Likewise, DQIT has refreshed its short and informative quick reference guides and complementary posters which bring together NRS recording rules, operational policy and technical 'how to' information in easy-to-digest resources. The two guides cover *Offence Recording and Closure* (supporting staff to make consistent and accurate calls on offence codes, re-coding, as well as applying Result Codes in CARD or Closure Reasons in NIA) and *Clearance Recording* (which targets improved understanding of clearance requirements and an uplift in the quality of clearance recording outputs).

Examples from the type of online resources available to staff are shown in the adjacent graphic.



DQIT has also successfully managed two national projects targeting efficiency and effectiveness improvements in NIA. The first, Phase Out Case Statistics (POCS) project, closed in March 2018 having successfully implemented all 18 project

deliverables; including the introduction of *Distinguish Proceedings* (removing the need to record offences for the purpose of charging) as well as the duplicative requirement to record an Unlawful Taking (ULT) offence when a motor vehicle was stolen during the course of a burglary. The second national-level initiative, the NIA Alerts project, is focused on improving policy, governance and operability of alerts in NIA based upon standardised formats and rules. That project has successfully advanced to phase 2 with mandated ICT changes due to be progressed early in 2019.

## Providing organisational assurance

As outlined earlier, the DQIT's third main objective is to deliver on a cross-cutting national Data Quality Audit Plan. The Audit Plan is designed around a quarterly cycle. Patterns of audit activity, under five core strands, are repeated, across different quarters, and across year periods, enabling detailed analysis of improvement over time.
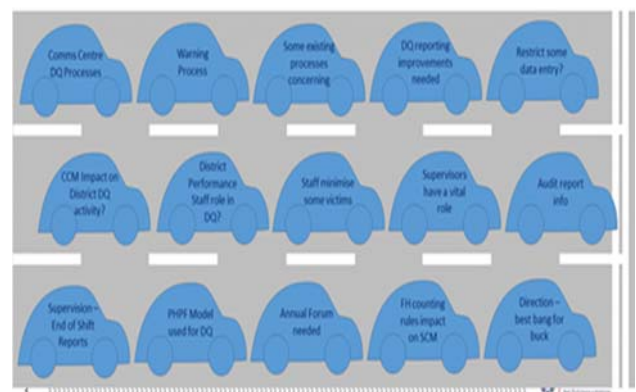
- **Strand 1: Accuracy of converting reports to records:** ensuring accurate conversion of offences which are resulted in Police's Communications and Resource Deployment (CARD) call centre system into occurrences in NIA. This activity requires a detailed understanding of channels through which incidents/crimes are reported to Police.
- **Strand 2: Accuracy of coding:** ensuring the offence code applied to a crime is accurate. This requires review of decision making where coding/re-coding occurs, in order to be satisfied the correct classification is reported (e.g., that a burglary is counted where this is most appropriate, and not a less serious offence, such as wilful damage).
- **Strand 3: Accuracy of removal of offences from NIA:** ensuring the accuracy of actions taken to remove previously recorded offences from NIA. The NRS only permits removal of an offence from Police's recorded crime count in a narrowly-defined set of circumstances (e.g., where a crime has been created in error, is a duplicate record, is being dealt with by a non-police prosecuting authority or where there is credible evidence that the offence initially recorded did not happen [as, for instance, where people report their vehicles stolen from a car park, only to discover they left it in a different location, and thus the suspected offence did not actually occur]).
- **Strand 4: Accuracy of clearance recording:** ensuring the correct application of rules in the NRS governing when a particular clearance can be applied. This area of focus checks that clearance types such as a charge, summons or Pre-Charge Warning (PCW), are coded in accordance with established rules, and offenders do not receive clearances which they are not entitled to, or without sufficient evidence existing to prove their involvement.
- **Strand 5: Thematic reviews and/or bespoke analyses:** enables short notice or bespoke audits where a specific risk has been identified, which lends itself to completing a discrete piece of analytical or assurance activity.

**QA Conference:** "*Enhancing second line of defence assurance*"
Held in Auckland in March 2018 the conference was attended by representatives from every District. Feedback from attendees was overwhelmingly positive with practitioners urging that it becomes an annual event, enabling timely review of progress against local and national DQ plans, discussions about blockages to progress and/or new or emerging risks as well as sharing of best practice.

DQIT has added a 'Forum' page to its intranet offerings enabling the widest possible dissemination of learning and improvement opportunities identified at the conference. All Districts now have DQ Improvement Plans and the DCRs are partnering with Districts to identify and address blockages to progress as well as promoting and share best practice.



The following section of this report highlights key outputs from the 2017/18 Data Quality Audit Plan.

## *Accuracy of converting reported offences to recorded offences*

- *Public Order recording:* DQIT completed a national audit which examined all reports of Public Order offences across a three month period. Currently all Public Order offences, other than Trespass, are classified as '*non-victim offence*s' in Police systems, despite clear evidence that individuals are often specifically targeted (and re-targeted).
- The audit established the accuracy rate for recording RCVS and other victim offences resulting from reported disorder incidents and identified a range of opportunities to improve the consistency of offence recording. The paper provides detailed information about the nature of reports in this category, paving the way for a discussion to consider:

- o Formal adoption of *'victim confirmation'* and *'third party'* reporting rules, within NRS, as 14% of the audit sample was made up of reports from third parties about victim offences where no victim was ever identified.
- o Re-classification of some Public Order offences as victim offences when someone has been directly targeted.
- o Changes to recording processes and culture that would result in routine capture of victim, suspect and offender details for Public Order offending.

## *Accuracy of offence coding and re-coding*

- ▪ *Offence Re-Coding in NIA:* DQIT completed a comprehensive national audit of re-code practice, covering the accuracy of re-coding away from Serious Crime Measure (SCM) victimisation offences. The audit covered all Burglary, Robbery and Sexual Offence re-codes, all other serious crime measure (SCM) offences, as well as all offences re-coded to task or incident codes in the three month audit period. This is the most detailed examination of re-code practice that DQIT has carried out to-date and key findings from this work were:
  - o Since 2016, re-code volumes and proportions are consistently decreasing whilst accuracy rates are increasing
  - o Re-code accuracy rates for Burglary and Sexual Offences shows statistically significant improvement at the national level, each year since auditing started in 2016 - indicating a focus on re-code practice within Districts
  - o Robbery re-codes were audited for the first time, and pleasingly the national volume was very low.  This will remain a discrete area of focus for future re-code audits.
  - o Re-coding of offences to Task or Incident codes has fallen to a three-year low, with monthly volumes having fallen over 80% since the 2017 audit, in part due to targeted collaboration between DQIT and Districts.
  - o Comparing inaccurately re-coded SCM offences against all recorded SCM offences in the audit period, overall SCM coding was found to be 99% accurate (i.e., the inaccuracy level is $\leq$ 1%)
  - o Pleasingly, some Districts are now achieving re-code accuracy rates aligned to international best practice and this positive change reflects the day-to-day efforts of our District staff to do the right thing.

## *Accuracy of removal of offences from NIA*

- ▪ *Removing Offences from NIA:* A fourth national audit, the most comprehensive to-date, is close to completion at the time of writing this report.  Results will be published shortly, after peer review.

## *Accuracy of clearance recording*

- ▪ *Youth Clearances:* This review, comprised four discrete pieces of analysis, sought to offer a broad understanding of the effectiveness of the systems, processes and practice that provide the foundations for  accurate of recording youth clearances. The key findings from the work included:
  - o Acknowledgement that use of the *'cleared offender'* link in NIA is improving, and that current recording practice for youth clearances is better than it was prior to phasing out Apprehension Statistics.
  - o Recognition that Tāmaki Makaurau Districts are leading the way in terms recording practice with strong *'second line of defence'* assurance processes evident in their FMCs.
  - o An opportunity to improve our 'counting rules' for youth clearances was identified and successfully actioned.
  - o Opportunities to improve recording practice were identified and are being actively communicated to Youth Services staff, supporting an update to the NIA Youth Case module, due for implementation in late 2018.

- ▪ *Non-Court Actions as Clearances:* DQIT analysed the scale and extent to which *'Offender Identified'* clearances in NIA translate (or otherwise) to; a) recorded 'Outcomes of Investigation' (OOI) in RCVS, and/or b) a clearance as reported in Police's Crime Clearance Rate (CCR) measures.  In particular the review focused on opportunities to count 'non-court actions' as CCR measure outputs. The key findings from the work were:
  - o Some *'Offender Identified'* clearances don't count in current CCR measures, but Alternative Resolutions (recognised as 'non-court actions') do count. DQIT mapped all 'clearance' options to show what counts in CCR.
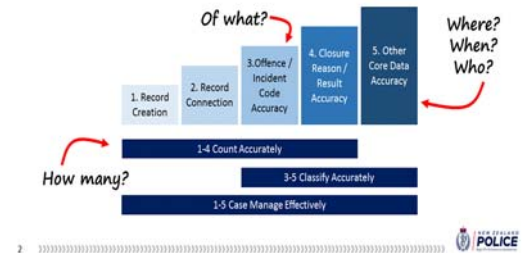  - o Improving the quality/integrity of recording '*Offender Identified'* in NIA would enable increased CCR outputs.

## *Thematic reviews and/or bespoke analyses*

- ▪ *Fuel Theft:* This audit examined NIA reports about Fuel thefts, from Tāmaki Makaurau and Northland Districts, for a one month period.  Fuel theft represents the largest proportion of retail sales loss in New Zealand, which provides an opportunity to improve trust and confidence through better detection and offence clearances.
  - o Over one third of all fuel thefts sampled related to repeat offenders/vehicles: opportunity - better targeting of repeat offenders/vehicles could be expected to lead to a volume crime reduction.

- o Routine filing or inactivation, of offences, with identifiable suspects, is leading to missed clearances: opportunity - revisiting Police's policy around 'inactivating' files and increasing supervision of fuel theft files is likely to result in more offenders (in particular repeat offenders) being held to account.
  - o Communication between fuel stations and Police often provides insufficient information to enable effective (and transparent) closure of investigations: opportunity – the creation of improved guidance for fuel stations, and Police staff, about when circumstances should be considered a civil or criminal act are likely to lead to volume crime reductions.

- *Pinch Points in Victim Offence Recording:* DQIT completed a review identifying points in offence recording processes where mistakes can occur and critical data can be missed, identifying the extent to which this is believed to be occurring. The findings have provided a framework which has assisted the DQIT to better coordinate and prioritise a range of the team's activities such as Audit programme, Training, Policy/NRS and IT System change requests, and has also provided a series of tools to communicate the extent, causes and impact of DQ issues relating to Victim Offence recording across Police.



- The review identified five critical steps in recording which, if not done correctly, result in either:
  - o **A:** No Record, Missing Core Data or unwanted Downgrading; or
  - o **B:** Unwanted duplication/Upgrading, or inaccurate Core Data.
- The review documents a number of specific opportunities to improve, which broadly fall into three categories:
  - o *Leadership:* foster a culture where data is valued ensuring capability exists to maintain a second line of defence
  - o *Systems and Processes:* improve some recording processes and adjust some IT systems to promote complete and accurate record creation.
  - o *People and Skills:* build knowledge of recording rules and processes.
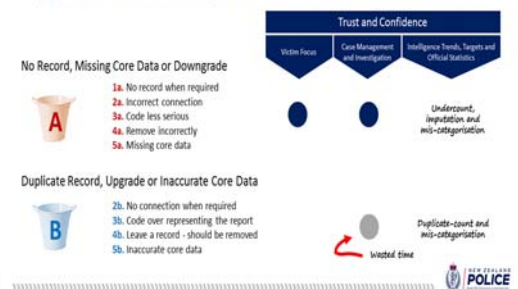


- *Report to Station (R2S) Process: Impact on Victims Offences:* Utilising insights from the Pinch Points analysis, DQIT completed a review of the processes and risks associated with the use, in CARD, of the CANCELEV (Cancelled Event) *'Report to Station'* (R2S) process, by our Communication Centres (CommsCens), when there are no units available to dispatch to respond to identified victims of crime. Key findings from the work were:
  - o The volume of cancelled events is increasing year-on-year, heightening the risk of a) inaccurate recording of victimisations and b) failed service delivery for victim, when the R2S process is used.
  - o Opportunities were identified to standardise policy and practice, to create a transparent 'hand-off' between CommsCens and Districts ensuring compliance with *Our Business* commitment to victim-focused service delivery. DQIT is working with a range of key stakeholders to implement agreed policy, system and process enhancements based on insights from the R2S audit that will ensure accurate offence recording and better service delivery to victims.

- *Understanding the use of Closure Reasons in NIA:* This detailed analysis explored the use of updated closure reasons implemented in NIA in March 2017. Those closure reasons offer Police a more granular set of labels to describe all outcomes of investigations. The report provided baseline information about the proportion of use of each closure reasons by ANZSOC Offence Division, and across Districts, as well as the extent to which Districts are 'inactivating' files and missing potential clearance opportunities. The key findings from the work included:
  - o The top three closure reasons were Offender Identified (OI) - 39%, No Further Line of Enquiry (NFLE) – 37% and Police Discretion (PD) - 6%, so **more** offenders were identified from investigation than files closed as NFLE.
  - o Opportunities were identified to increase Offender Identified outputs by reviewing the use of Police Discretion and Victim/Witness Uncooperative closure reasons - in order to increase adult offender clearance outcomes.
  - o Opportunities to improve youth clearances counts were identified and immediately actioned with internal stakeholders delivering an instant (small) uplift in youth clearances.
  - o Opportunities were identified to improve the management of inactivated files to reduce organisational risk and improve transparency around our investigative processes.

## Conclusion

In summary, the last year has seen significant progress made in terms of continuously improving Police's data quality. PNHQ's specialist Data Quality and Integrity Team has continued to extend its reach and influence in Districts and workgroups, in particular, providing risk and evidence based support, help, advice and focus on key DQ issues.

Additionally, the team designed and delivered a highly successful DQ Conference, attended by representatives from all Districts, which focused on the understanding the risks to high quality recording of victimisations, promoting the creation of local DQ improvement plans to direct the effective implementation of local 'second line of defence' (management checking) processes.

Furthermore the team has successfully delivered on a comprehensive Data Quality Audit Plan 2017/18, setting the foundations in place for a sustained, evidence based programme of activity to improve DQ recording policy, processes and practice.

New Zealand Police aspires to progressively lift the level of confidence in its core data, and a series of data quality initiatives will continue to be advanced in the years to come. Looking ahead, data quality work programmed in 2018/19 will include an emphasis on:

- Increasing DCR foot-fall and reach into Districts, aiming to support and guide staff - at all levels - to improve DQ processes, outputs and outcomes. In particular, it is envisaged that DCRs will be able to increase face-to-face training and/or learning provision for frontline Constables and Sergeants.
- Supporting the implementation of improved data quality governance processes at District level. In particular, it is planned DCRs will support Districts to boost their 'second line of defence' by coaching and mentoring key staff. DQIT intends to release further management information resources to underpin this capability on a monthly basis.
- Promoting technology changes, aimed at making it easier for Police staff to record things accurately at first instance, as well as enabling systems and processes to more accurately capture and/or match data records; particularly where change will improve the accuracy of Police's victimisation data.
- Successfully delivering programmed NIA Alerts project, phase 2 deliverables.
- Supporting PNHQ Workgroups to improve DQ knowledge and understanding amongst their staff, in particular partnering with CommsCens, Prevention and Prosecutions to improve their 'second line of defence' capability.
- Supporting business wide initiatives to improve Police's clearance outcomes, in particular by working with PNHQ's Prosecution Service team to create a detailed pinch-point view of Police's clearances processes and practices.
- Successfully delivering the 2018/19 Data Quality Audit Plan.
- Supporting a range of key DQ improvement initiatives including; promoting effective DQ recording in the new NIA Youth Case node Alternative Resolution framework and 'hate crime' recording processes and practices.
- Increasing the scope of regular internal auditing, covering corporate data sources and exploring the potential for external benchmarking.
- Supporting the New Zealand Crime Victim Survey team with training and advice on offence coding.
- Repeating the success of the 2018 Police DQ conference in engaging Districts, and wider workgroups, to drive forward sustained DQ improvement initiatives.