COMMISSIONER IAN STEWART

Hello, I'm Commissioner Ian Stewart of the Queensland Police Service. I am honoured to be given the opportunity to say a few words of welcome here today, and to discuss the Queensland Police Service Open Data Strategy and our online crime statistics portal. I acknowledge Dr David Solomon AM of whom the Solomon lecture series was named in honour of. I would also like to thank the Queensland Acting Information Commissioner, Clare Smith, for inviting me to introduce the presenter of the 2013 Solomon Lecture as part of the annual Right to Information Day. By embracing open data, we become a more open and accountable agency for the Queensland public. By moving information online we make that information accessible to the community of Queensland. The aim of the open data revolution is to release as much government data as possible, to encourage the private sector to develop innovative new services and solutions for the State. The open data website operates as the portal that will enable the public to find the data they are looking for. The Queensland Police Service is committed to working towards maximising our contribution to the open data agenda and value adding to future additions of our open data strategy. Additionally, the Queensland Police Service is committed to managing information such that an individual's personal information is still stored securely and protected from unauthorised access, and to protect information from falling into the wrong hands. There's a fine line between providing a Police Service that is transparent and accountable, and protecting a citizen's right to privacy. To this end the Queensland Police Service data is managed in accordance with standards that are outlined in an information management manual. The policies outlined in our information management manual are regularly reviewed, and form part of the information and communications technology strategy which is consistent with State and Federal government information standards. The Queensland Police Service is dedicated to ensuring that appropriate public information is published in accordance with the Queensland government's open data principles. Although it is not a brand new arena for the Queensland Police Service, as in the past we have released an annual statistical review, moving this information online is. Our objective in regard to open data is to release appropriate raw data in machine readable format, that will encourage the development of new and innovative services and solutions for the State. In the short term,

objectives are to augment appropriate government structures to enable the ongoing management and release of data. In conjunction with this, raw data is released and regularly updated when available. In the longer term, objectives included the publishing of all appropriate raw data in accordance with the open data principles and the relevant State government information standards. The Queensland Police Service, creates data in relation to crime statistics, traffic related data, and corporation information. For example, annual reports, strategic plans, human resource and financial data. Specific Queensland Police Service data sets, are outlined in the Queensland Police Service information asset register, and the identification of data sets, was based on past requests for data from the public, media, but in particular academic researches. Key points of contact within the Queensland Police Service have been identified throughout the State, to assist with the identification of appropriate data and data sets. These key points of contact identify information assets within the area of control that are appropriate for release. Relevant custodians of the information assets, are assigned by the key points of contact who then take responsibility for the management release and subsequent updating of the data. If the data is suitable for publishing following the quality assurance process the data is published on the open data portal. From a developer's perspective, the API for this application was made available through the open data portal, and has already had an Apple application created as well as an application for Windows. The Queensland Police Service is committed to continued improvement, in both the processes to identify and manage future data sets and the improvement of data quality. The Queensland Police Service has a dedicated data quality approach that will result in an ongoing improvement in data quality itself. Stakeholder feedback is important and ultimately will lead to a more improved data provision service. Through further consultation and feedback from the general public, further data sets will be created in line with demands from the community. The Queensland Police Service has and will, continue to release crime statistics and traffic related statistics including the approved locations of speed cameras. In addition, an online crime statistics portal has been released, allowing users to locate reported offences at street level. I'd like to outline the specifics of the newly launched QPS online statistic portal which can be found via the Queensland Police Service internet page. This application provides members of the public with access to crime statistics for the street, suburb, postcode, local government area, Neighbourhood

Watch area, and Police region in a matter of moments. While the portal is not necessarily the first of its kind for Australian Police jurisdictions, it has revolutionised the way the public has access to crime information. Users can key in a suburb, street name or postcode, and select a specific time period or select an offence type and hit the search button. An area map will appear with icons or clusters, which represent where the crimes occurred, what types of offences occurred, and if they are solved or unsolved. Data on the screen can show selections as hot spots, or can be shown in graph format. The data can also be represented as a 24/7 clock which indicates what day and time the crimes are taking place. The data contained in the portal, dates back 13 years and is updated on a nightly basis being one week in arrears, and can be accessed by a desktop computer, smart phone or tablet. This is the revolution that is being brought to you by this new way of providing data within the Queensland Police Service. The desktop computer version allows the user to export data selections into a spreadsheet for further analysis, and also allows the user to do comparison searches between areas. The portal was developed in response to a review of the Freedom of Information Act along with the Office of the Information Commissioner's compliance reviews. It took three months to develop, and one of the aims of the portal is to encourage users to become familiar with their area, and engage in appropriate crime prevention strategies to ensure a safer community. Furthermore, since the development of the crime statistics portal, members of staff have been freed up to focus on analytic work rather than react solely to answering statistical requests. But this portal though, is not just a one-way access to information. I am hopeful that when members of the public become more familiar with their area and the instances of crime occurring there, they will be able to assist Police and prevent many of these occurrences occurring in the future.

Now that I've finished the ad for our new crime portal I'd like to introduce to you today's keynote speaker Professor Anna Stewart. Professor Stewart is the former head of the School of Criminology and Criminal Justice at Griffith University, and founder and co-program leader of the Justice Modelling at Griffith University. In 2007/2008 she was the Deputy Dean learning and teaching, in the faculty of Humanities and Social Sciences. She received her PhD from the University of Queensland in 1994 with the thesis topic, An Investigation of Decision Making by Child Protection Workers. Since this time she has been interested in the research uses of government administrative data. Using this data she has

examined the longitudinal contacts individuals have with child protection, youth justice, adult criminal justice systems, systems responses to youth offending, and domestic violence. She has also looked at the management of risk, diversionary responses, and systems modelling. She has published over 50 peer reviewed publications, government reports and non-peer reviewed publications and has been involved in partnerships that have obtained over $4 million in national competitive funding consultancies and other government research funding. To speak on the topic, Finding Gold in Mountains of Administrative Data, please welcome Professor Anna Stewart.

PROFESSOR ANNA STEWART

Thank you Commissioner Stewart for those kind words. My name is Anna Stewart and I am a Professor in the School of Criminology and Criminal Justice at Griffith University. It is a great privilege to be asked to give the 2013 Solomon Lecture. You may ask why did the Office of Information Commissioner ask me to give this lecture. I didn't ask that question when they did ask me, I was just so thrilled to be asked to give the lecture. I think there are probably two reasons why I was asked to give this lecture. The first is that I am a data nerd. I love numbers. But not just for the numbers sake. These numbers tell wonderful stories about peoples' lives and provide us with powerful tools, in order to meet some of society's major challenges. The second reason I was pleased to be invited is that my research over the last 30 years has used government administrative data. These are data that are collected by government, all the various government departments, in order to manage their day to day business. For example, Queensland Police Service collects a whole range of data on who calls for service, what they call for, what offence are committed, and what the outcomes of those offences are. Not only are these important for the operational day to day management and delivery of government services, these also have really important strategic and research value.

So, Gold in Mountains of Data. How much data do we have. When I was preparing for this lecture I discovered that in the last two years 90% of the data in the world was created. We are collecting 2.5 quintillion bytes daily. I don't know what a quintillion byte is, but I think it's a lot of data. We have very sophisticated information systems and we have very powerful analytical techniques that have been assisted by the development of computers.

However these data are expensive. They are expensive to collect, manage and store. They are also expensive to understand, analyse and to use strategically. These government data are very valuable. They're valuable for frontline staff in managing their clients, be they students, offenders or patients. These are valuable for government decision makers, for the effect of an efficient use of their resources. Questions like, where to target services and what the future demand for services might be. These are valuable for non-government organisations for improving the accountability of government, and also for lobbying government for money, for providing services in particular areas. These are important for the community, for understanding what's going on in your community in terms of, for my interest, crime, but also transport, education, etcetera etcetera. They are also important for the community to be able to hold government accountable. These data are important for researches like myself, interested in understanding, preventing and controlling crime.

Three things I want to talk about today. First of all is the impact of the Solomon Report. Second, what I am doing with these government department. And third, gold for all. In 2007 the then Premier, Anna Bligh, announced a review of the Freedom of Information Act to be Chaired by Dr David Solomon. In 2008 this resulted in the release of the Solomon Report. When I was preparing for this talk I discovered that one of my colleagues from Griffith University, Dr Paul Williams, had written an opinion piece in the Courier-Mail where he suggested that this document, the Solomon Report, was the most important report released from Queensland Government since the Fitzgerald Report. It has provided Queensland Government with a framework for moving into the information age, and put Queensland Government at the forefront of the use of government information.

So, what was the Solomon Report about? What did it actually do? What Solomon suggested was that we should move from a pull model to a push model. This was an incredibly innovative idea. Pull model was basically a protectionist idea about how we use government information. This means that government's attitudes towards its information was to protect it and not to let it out into the public. To a push model, whereas unless there were good reasons why not, unless the access was contrary to the public interest, data should be provided to the public. It resulted in two Acts, the *Information Privacy Act*, the *Right to Information Act*. What it did, what has happened since 2008, is we've got

development of the routine proactive release of data into the community, of Queensland government department into the community. One of the major ones recently launched is the Open Data Initiative which you can see on that particular website. The Open Data Initiative now has 372 data sets that are available, government data sets that are available online for the public to look at and download. The Open Data Initiative has also announced the Premier's Awards, $5,000 each for four awards to encourage innovative use of these data, to actually improve public transport, improve service delivery, improve the economic futures of Queensland, and they have what they call a wildcard category for really innovative solutions. The other major release of statistics is from the Queensland Police Service who now have an online crime statistics portal. This is the one that really fascinates me, working with crime statistics, to see these data go out.

The Queensland Police Service has embraced the push model and is proactively releasing much data into the community. They have developed this amazing innovative interactive website, and I'd like to walk you through this, and show you some of the impressive features of this website. If you go into the Queensland Police Service website you go into their webpage, this is what you're looking at at the moment. Across the top you'll find online services, and then you can move down to QPS crime map. If you click onto this you go into this interactive website. You can go into, you can find your region, or any region that you're interested in. Personally, I'm interested in my region. So what I did was I went into Brisbane, I went into South Brisbane, which is the district, and then I went into the Dutton Park division. I could have gone in by postcode, Council or suburb. When you click onto this, it moves you through into this map of my suburb. Well, it's actually the map of the Dutton Park Police division. And what you can see is that there are a number of red spots on here which show you what crimes have been committed within my community. Across the bottom you can see the line that says the crimes are mapped on or near location where they occurred. To protect privacy, individual addresses are not highlighted on the map. What the website tells you is that in the last three months in the Dutton Park division, there has been 778 crimes. And this is how they are distributed across the space. These crimes tend to be fairly minor crimes like theft, but not unlawful entry, good order offences, drug offences and traffic offences. If you go down further, you can see that there were six offences on Annerley Road. It gives you a bit of information about the type of offences, the
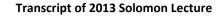
property damage, and the time of offence. Also in the same cluster of offences there's a good order offence. If you go down you can actually move the timeframe from three months to 12 months. When you do that what you come up, first of all it comes up with that data warning again saying that it's not mapping individual addresses, and then it comes up with bigger splotches showing where particular crimes are occurring. You can go into each of these splotches and it will give you a list of the crimes that are occurring in this area. This is really interesting stuff. Well it's the sort of thing I find really interesting.

You can also get what they call a density map, which enables you to look at over time, what crimes have been committed where. This is what a density map looks like, and what you can clearly see from here is that the highest density crime area in this, in the Dutton Park division, is around the Story Bridge Hotel. It's that red spot in the middle. The next highest is the Dutton Park Police Station, however I think this is probably a reporting concern. This is where people go to the Police Station to report, and they can't actually say where the crime occurred, so it's actually getting allocated to the Police Station. Two other areas that are obviously high crime areas are the Princess Alexandria Hospital, down the bottom, and up the Kangaroo Point entertainment area.

This also provides you with interesting data about what day of the week and what time of the day the crimes occur. So what you can see from this, these splotches, is that crime is more likely to occur where the splotches are dark red. So you can see that crime's occurring late in the evening on Friday and Saturday night. That's not surprising. But it is surprising that during the week it's also occurring around lunch time and around 3 or 4 o'clock. What we could interpret from these findings, is that these are when people are not at home. So this is a easier time for people to actually commit offences. So around lunch time when people are at work or around 3 or 4 o'clock when people are on the school run, this is when we actually have higher crime rates. So, for people like me one the really exciting things is that you can actually go into this, and down the side you can see that you can download these data and you can open them up and then you can have all this wonderful data available for you. So what you can see here is, there are all the different types of crimes, the time that they occurred, and where they occurred. Unfortunately you don't get the finer resolution data than suburb.
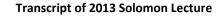
Hopefully you are aware now that there are a number of reasons why there are strategic advantages to the Solomon Report and the push model. It enables us to target service delivery. It enables organisations like Neighbourhood Watch to be able to identify where crime is occurring in their area, and to maybe put in some strategies to prevent crime in those particular areas. It also ables other not for profit organisations to maybe identify welfare needs in their area, and identify areas where people are homeless, and be able to actually target services into those areas. It allows for transparency and accountability of our government services. So websites like myschools and myhospitals allows people to make decisions about which school they use, which hospitals they use, using the best data that's available to them. It provides opportunities for innovative solutions, and I really think that the Premier's awards for $5,000 will get some really interesting ideas about how we can use this data in a more effective way, in a more proactive way. It provides opportunities for the community to participate in government. So when communities want to lobby government for extra services for new traffic lights, for roads in their area, these sort of data enable them to be able to do that lobbying more effectively.

So I've talked a lot about what sort of changes have occurred since the Solomon Report in terms of the publicly available data. My research doesn't use publicly available data, it uses data that is far more finer resolution and therefore has quite serious privacy concerns to it. What I would like to do is talk about how the Solomon Report has changed my access to these data, how I deal with some of these privacy concerns, what data I've collected, what I find out from these data. I'd also like to talk a bit about my colleagues' work and what sort of data they use and what they've found out from these data. All the research that we do coming from a School of Criminology and Criminal Justice, really focuses both on offenders and on crimes, and I'd like to discuss these in more detail.

The research that we carry out in the School of Criminology, myself and my colleagues, needs fine resolution data. We need data about people, about individuals. We need to know how they appear over time, so whether or not they appear once and only once in the criminal justice system, or whether they re-appear. If they do re-appear, how fast they re-appear, do they re-appear for more serious crimes, does their criminal behaviour escalate. So that's individual based data. We also need to know about individuals
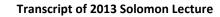
experience across government departments. So, do people who come into contact with the child protection system also come into contact with the criminal justice system? Unfortunately the data is siloed in Queensland government and there is no way that you can actually easily get data linked across the government departments. This is very difficult for my research, but it's also difficult for understanding the flow of people through the service and providing a whole of government service. Also in terms of what are incoming for very, very different processes and very different data collection systems in each of these government departments. So we need to understand all of these things to bring them together to do my research. My colleagues do a lot of work about crime, so this is not about individuals or people or offenders, this is about where crimes occur, what time crimes occur, and where the offenders live and where the crimes occur, so we can look at, you know how far people will travel to commit crimes, whether or not they use public transport systems to travel to crimes, those sorts of questions. So we saw from the Queensland Police maps information about crimes, but it wasn't down to the actual areas in which crimes were occurring, it was fairly broadly defined within suburbs. While there are privacy issues associated with this data we're not interested in identifying individuals. As researchers, what we're interested in doing is understanding the aggregate patterns within these data.

Pre Solomon, it was extraordinarily difficult to access the data at the appropriate level. In Queensland the *Commonwealth Privacy Act 1988* was the one that actually governed the use of data within Queensland, and there was an information standard, a government information standard, IS Standard 42, which prevented the disclosure of government information about individuals to researches except for the exception of some particular health data. Fortunately enough, we worked closely with Gov Stats to get datalink, because this is where we needed data about individuals. Gov Stats works under the *Statistical Returns Act* and the *Statistical Returns Act* can allow each of the government departments to release identifying information to Gov Stats. Each of the government departments release these data to Gov Stats. Gov Stats linked to these data's, provided the numeric identifier and then released the de-identified data but only with the numeric identifier to us at Griffith University for our analysis. We have a whole suite of MOU's between Griffith

University and Gov Stats, between Gov Stats and each of the government departments in order to do all our linking of data.

Post Solomon, we had push model for information release. So the idea is that much of the information is released proactively and routinely. What we've found is that when we get a lot more information out there, when we go in to ask for this level of data that we want, we get a far better response from government departments. On top of that the *Information Privacy Act* that was enacted in 2009 has specific exemptions for, to allow agencies to disclose information to researchers, as long as a number of conditions are met. And these conditions include research will benefit the public, no individual will be identified in any way we ever publish it, and Griffith University will ensure that the data are protected at all times.

So moving on to my research. What do I actually do with all these government data. My research focus really runs around understanding offending over the life course. So what I'm interested in is how do people start offending? Why do people start offending? And how can we prevent people from offending, from starting offending? I'm also interested in the continuation and desistance of offending. So why do some people keep on offending and why do some people stop offending? And how can we prevent people from reoffending? The sort of research questions that I address are, how many people come into contact with the criminal justice system over their life course? Are maltreated children more likely to offend? Who are chronic offenders? Where are these chronic offenders living?

So the data that I use, I use data from a whole range of government departments, which is all linked together in that Gov Stats. Used to be OESR, Office of Economic and Statistical Research, which you can see on this slide. These are all linked together by name, gender and birth date, and then the data are de-identified, a numeric identifier is provided, and they are provided to Griffith University. So the data that I'm working with is child protection data. This is data from the Department of Communities, the Child Safety, Department of Child Safety, and this data includes things like the date that the child was notified, nature of the abuse that was notified, and the outcome of the investigation. I get data on Police cautioning. A diversionary strategy that Queensland Police use with young offenders, that is offenders from 10 to 17 years old. The sorts of information we get from

Queensland Police Service is information on individuals Police diversions, the date that they offended, the type of offence that they had, and the location of those offences. From the Department of Communities again, I get data on Youth Justice conferencing. Youth Justice conferencing is another diversionary project that's used with young offenders. I get, from the Department of Communities, I get information the source of referral, the type of offence, the date of the offence, the date of the conference. Also from Department of Communities, now why I've got three sets of data from Department of Communities these data aren't linked within the Department of Communities. I get information on finalisations going through the Juvenile Justice Court. These are finalised appearances, the location of those offences, the outcomes of those offences, so whether or not the child got a fine, whether or not the child got detention, and everything in between that. I also get information from the Department of Justice and Attorney-General on adult court finalisation. Similar sort of information, date of offence, type of offence, finalise and the outcome of that finalisation. From Queensland Corrective Services, I get information on probation and parole and prison sentences, and how long people are on probation and parole and how long people spent in prison. You can see from this graph that there's a dotted line. Currently we are negotiating a new linkage with Queensland Health, so to link all of these data onto offending into data from Queensland Health. And we're looking at data on accident and emergency data, so who comes in, what sort of accidents they have, whether or not there was alcohol involved. Mental Health data, so trying to understand what offenders have mental health issues and whether or not these mental health issues start before they come into contact with the criminal justice system, or after they come into contact with the criminal justice system. And also Queensland Health will provide us data on drug and alcohol treatment. So we get information on individual's contacts with multiple systems over their life course. Contacts with child protection, youth justice, adult offending, and corrections, and soon, Queensland Health.

So we can answer those sorts of questions. How many people come into contact with the criminal justice system over their life course. What we find is by age 17, which is the age from which they're moved from the youth court system to the adult court system, one in five boys and one in 10 girls have come into contact with the youth justice system for an offence. Most of these are property related offences, things like shoplifting, graffiti,

property damage. By age 25, and that's as far as our data go, by age 25 one in two young men and one in seven young women have come into contact with the criminal justice system. These offences are generally related to drug and alcohol, I think the nightclub type offences, drunk driving, public order and minor offences, minor violence. I was really surprised when I found this level of offending over the life course in our data, so I went to the international literature and I find that these patterns are consistent in other Commonwealth countries, and they're also consistent over time. This is not evidence of a great crime wave. This has been going on for some time.

One of the things that I do when I look at this, is try to look at the different patterns of offending. What you can see from this graph is that the majority of offenders, over 85%, come into contact with the criminal justice system only once or twice. But we have a small group of offenders, which are in these other three groups, that are actually quite chronic offenders. And understanding who these offenders are is really important for preventing crime. So what do we know about these chronic offenders. What we know is 16% of offenders are responsible for almost 70% of the appearances in the criminal justice system. By the age of 25 these 16% of chronic offenders have an average of 70 offences, an average of 25 finalised court appearance, have cost the criminal justice system and society an average of $120,000 per individual, and almost 50% of them are sentenced to prison. These chronic offenders start offending young, offend frequently, and offend seriously, and they come into contact with multiple systems. As I'll show on the next side they come into contact with the child protection system, the youth justice system, the correction system, and I believe we will find that they are heavier users of the health system when we get the health data.

So are maltreated children more likely to offend? Yes. However most maltreated children do not offend. We have to remember this. While they are more likely to offend than other children, most maltreated children do not offend. Maltreated children are more likely to offend if they are maltreated when they are older, or if they suffer from chronic maltreatment that moves into older. So maltreatment is not a on-off thing. For some young people it can occur frequently over their life course. So why does maltreatment in older children lead to offending? I have PhD students at the moment trying to look at this
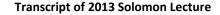
question. What we're finding is, that maltreated children are more likely to leave or be kicked out of home. They leave home because often homes are violent. There's a lot of family violence in the home. Or they get kicked out because their behaviour is becoming so difficult their parents can't manage it. Along with that, you'll also find that older children are more likely to withdraw or be excluded from school. So you can see we're bringing in another government system and then trying to understand the links between child maltreatment, offending, and now the education system.

So in trying to understand these chronic offenders we want to look at where these chronic offenders are living, and how we can identify the communities that they live in in order to target crime prevention. My colleagues and I recently published a report, Dr Troy Allard, April Chrzanowski and myself, called Targeting Crime Prevention to Reduce Offending; Identifying Communities That Generate Chronic and Costly Offenders. What we found in this report is that there are certain communities that are far more likely to have chronic young offenders than other communities. And when we mapped this, using postcodes across Queensland, what we found is that communities that generate chronic young offenders are not distributed evenly across Queensland. What you can see from this figure is, where the dark blue is the communities with high levels of chronic young offenders and the light blue is where there's few chronic young offenders, you can see from this that the chronic young offenders are more likely to be distributed into regional and remote areas. These are areas where it's very difficult to provide good services. This is interesting information for local communities, but also for government service providers.

Implications for policy and practice. What my research has found is that many young people come into contact with the criminal justice system, but only a small number of young people are responsible for a large amount of crime. So to prevent offending and re-offending, we need to target crime prone communities, we need to address intergenerational disadvantage, and we need a whole of government response.

I'd like to talk briefly about my colleagues' work, because where my work looks at individuals, my colleagues look at crime and the distribution of crime. So their focus is not on individual offenders but their focus is on crime. They are interested in when and where these crimes occur, and as you can see from that simple map that we did when we looked

at the Queensland Police, crime is not randomly distributed across time or randomly distributed across space. What they are interested in is more sophisticated questions about how the built environment, that is whether or not you've got supermarkets, where you've got pubs, where you've got transport hubs, how do these influence the distribution of crime, and what does the distribution of crime tell us about both the offenders and victims of crime. The sorts of research questions they look at are, what can information about previous victimisation tell us about future victimisation. Do some locations experience more crime, if so, what distinguishes these locations from other locations, and what neighbourhoods attract burglars. So what can information about previous victimisations tell us about future victimisations. These guys use epidemiological models of disease. So epidemiological models of disease look at how disease can spread out over time and over space. We can use similar modelling techniques to look at how crime spreads out over time and over space. And what we find is that crime clusters in space and time. And that these clusters change over time but are actually predictable. For example, after an initial burglary you, and your neighbours around you, face an elevated risk of future victimisation for a short period of time. Just two weeks. In answering the question do some of those locations experience more crime than other locations, my colleagues have done work on high rise apartments on the Gold Coast. The different types of residential buildings. The one at the bottom is long term residential, where people have either bought or are long term rental. The next one up is short term residential. So these are holiday rentals and short term rental accommodation. And the next one up is mixed residential, so it uses both long term and short term. What you can see from these three graphs, is that most buildings actually experience fairly minor levels of crime. However, the crime differs by the different types of buildings. So those areas that have long term residential have the lowest amount of crime. Those that have mixed residential have the highest amounts of crime. And those that have short term residential fall somewhere in between those two. And these patterns are consistent for all crime types, so not just property crime but also violent crime.

So which neighbourhoods attract burglars? Again, my colleagues are using econometric models to look at neighbourhoods where burglars choose to offend, and where they choose not to offend. And using those sort of modelling what they find is that offenders do not travel very far from home to commit a crime. Young offenders even travel less distances to
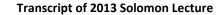
commit a crime than older offenders. So crime tends to cluster around the residence of offenders. And on top of that, the interesting thing that they found out is that offenders have no preference for more or less affluent neighbourhoods, so they will just commit the offences around where they actually reside.

So what are the implications for policy and practice of these findings around crimes? These have important implications for strategic or tactical decision making by the Queensland Police, in terms of where they actually target their resources, how they can proactively target their resources, and the understanding of these patterns also help other agencies, not just the Police but communities and local governments to target crime prevention resources, to make sure that they get efficient and effective delivery of their services.

What you can see from the work that we've been talking about where we've been using data, more finer resolution data than is generally released to the public, these sorts of projects require strong partnerships between government and universities. In these partnerships governments provide the domain knowledge, so for now if we're working with Queensland Police they provide information about policing, policing strategies, changes in policing policy. Similarly if we're working with child protection, they provide us with information about how they go about their daily business. They provide us with data, a lot of data. And they also provide us and working closely with them we get opportunity to influence policy and practice. To use our research to change the way that government actually does work. The universities provide theoretical framework, so a broader understanding of the nature of the business, the cross-disciplinary experience. I work with statisticians, I work with computer sciences, as well as criminologists, psychologists. And we amongst us have advanced analytical skills that are generally not found in government or in the community. So we can do more things with these data. And it's great post Solomon to get more of the data.

So what I'm saying is, there's gold for all. There's gold for us researchers in having this data released to us. The research we do with these data provide broader community benefits by providing an evidence base for policy and practice. However, we still have to be very careful with using these data. Some of the issues and challenges that I have identified is still going back to privacy. These data are data about peoples' lives. These data are data about

some of the worst periods of peoples' lives, and we have to have real respect for these data, and treat them with respect, the data with respect. The data is still siloed. Individuals are having multiple contacts with multiple departments, and there really aren't good ways of finding out how people move through the systems. We need to understand the limitations of the data. When I was talking about the Queensland Police data, I was saying well I don't think that Dutton Park Police Station is a major crime area, it's about how data are being reported. So understanding how those data are collected and what those data mean and what the limitations are associated with this data is really important. And we increasingly need numerican technical literacy. We have numerican technical literacy within universities, but within governments and within the community to make the most of this valuable resource we need people who have good skills in these areas.

However, the future. The future has gold as well. Data quality will continue to improve, especially if we use it. So the more we use these data the more we have, the Premier's awards that are encouraging people to do innovative projects with these data, the better the data will get. The expert of the analysis will grow, both within government, within universities and within the community providing more innovative solutions. And what we're doing is we're re-using expensive data for strategic and research purposes. So we have gold for all. Solomon has provided Queensland with a framework to make the most of the information revolution. This information is a vital resource for creating stronger communities. These data have huge potential for helping myself, my colleagues, government and the community to understand people who offend, to understand crime, to identify crime prevention strategies and to control crime. These are real data involving real people, and have direct application to real decisions. And they also allow us to ask and answer new research questions.

Thank you very much.