Safe City System = Comfort or Con?

Private Security & The Public Interest

This information is gathered from independent sources and academic research and reporting conducted by Professor Tim Prenzler and others.

Ipswich City Council advocates that the Safe City System has reduced crime in the camera coverage areas since their installation in 1994.

But the data says the Safe City camera system is having no such effect on crime at all.

Based on all the available data and first-hand accounts of the operation of the Safe City Camera Control Room, it is completely reasonable to conclude that the Safe City Camera System is a farce, a con and currently a waste of public money as it provides no real public benefit when it comes to crime reduction in Ipswich City Council.

The real cost of the Safe City system from inception prior to the 1994 installation through to the current system upgrades, expansions and operational costs must be questioned as significant public funds from mixed sources have been ploughed into this very expensive comfort/con.

There are also numerous direct witness statements and media reports of the failure of the systems at strategic times through ‘unfortunate’ events including but not limited to:- loss of data (recordings), malfunctioning cameras, inoperable cameras, and stolen cameras.
Copied below is the original summary from a big security industry study published in 2011.
(The extract below is on pp. 101-102 of the full report. Link https://www.asial.com.au/documents/item/12)

Also attached are the same data including other data from the 90s for the Ipswich District and then the smaller Ipswich Division for the 2000s. The Ipswich Division is more directly related geographically to the Safe City camera coverage area.

Also attached are the latest numbers for the Ipswich District from the QPS for 2015-16 and selected comparison areas. You'll see there's no favourable pattern. With such a large investment in cameras and manpower, and such a wider coverage of locations, Ipswich should stand out as having much lower crime rates and much larger clearance rates but this is not the case.

But there's more! Also attached are Professor Prenzlers letter to the ICC mayor (ex Mayor Paul Pisasale) in 2017 and the reply. Of note is that ICC has been absolutely no assistance in providing researchers with any data at all.

Also attached, some media sources stating various claims about large reductions in crime due to the Safe City program. These Safe City claims are NOT supported by the data.

Oversight of SafeCity system:

The Ipswich City Council Safe City program is run by Larry Waite: Ipswich City Council Safe City Security Coordinator.

It is oversighted by the Council's Safe City Steering Committee and a Safe City Working Group. It is believed that the committee is chaired by Cr Antoniolli however Council website does not provide any verification. Members of the Safe City Steering committee include the following Councillors

Div 2  Paul Tully (Acting Mayor)
Div 6  Cheryl Bromage
Div 7  Andrew Antoniolli
Div 10 David Pahlke

Cr Andrew Antoniolli is also listed as a member of the Working Group.
CASE STUDY ELEVEN

IPSWICH SAFE CITY PROGRAM

The Ipswich (Queensland) Safe City Program was established in 1994 in response to an upsurge in alcohol-related crime and disorder, mainly in the city centre (City of Ipswich 2010). The program is centred on a CCTV system managed 24-7 by a contracted security firm. The monitoring facility is linked by radio to security officers and police on the beat — as well as connecting with other security firms, the police operations centre and other services. By 2010 the program had a network of 181 cameras extending beyond the city centre to neighbouring suburbs and potential hotspots for crime such as bikeways and bus stops. The program invests heavily in the latest technology with pan, tilt and zoom camera functions, high picture definition and full digital recording and archiving. Live feeds can be transmitted to the main police radio room. The program includes a CPTED (Crime Prevention Through Environmental Design) advisory service for businesses. Apart from law enforcement interventions, the program also provides welfare referrals, including for young people, drug affected persons and missing persons.

The Ipswich Safe City Program is widely recognised as one of the best private/police partnership anywhere in Australia’ (ASIAL, 2010). It has also been described as the benchmark for a fully integrated crime prevention program that is not solely reliant on cameras and utilises a co-ordinated approach of all agencies’ (City of Ipswich 2010). It receives numerous visits from interested parties across Australia and overseas. Over the years a number of dramatic claims have been made for the benefits of the program, including directly leading to 5,475 arrests from 1994 to 2008’ (Ipswich News, 2009). A 2010 magazine article reported that Safe City had reduced crime by 78% over the last 15 years, and in some cases ... by 90%’ (cited in Cowan 2010 p 23). Despite such claims, there are no formal evaluations on the public record. Inquiries by the chapter authors to the Queensland Police Service also revealed there are no historic, nor contemporary, crime data available for the areas covered by the cameras. Figure 1 shows recorded crimes against property and the person from 1990-91 in the police district of Ipswich — an area that goes well beyond the inner city. The data clearly show that there is no correlation between the roll out of the camera program in 1994 and offences at this level. A closer examination was made of specific relevant offences — such as good order offences, assault, theft, burglary, property damage and motor vehicle theft — again with no evidence of a positive effect from the camera program over the long-term. More detailed data are available from 2001 for the smaller police division of Ipswich, which more closely approximates the city centre where the majority of cameras are located. These data also show no appreciable benefits from the Safe City Program. The rates of reported property and violent crimes are well above those for Queensland and neighbouring police divisions.
Ipswich District Comparative Crime Rates 2015-16
From Queensland Police Service Statistical Report 2015-16

<table>
<thead>
<tr>
<th>Category</th>
<th>Ipswich</th>
<th>Brisbane</th>
<th>Queensland</th>
<th>Logan</th>
<th>Gold Coast</th>
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<tr>
<td><strong>Offences per 100,000 population</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assault</td>
<td>373</td>
<td>264</td>
<td>417</td>
<td>405</td>
<td>410</td>
</tr>
<tr>
<td>Murder</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
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<td>31</td>
<td>28</td>
<td>28</td>
<td>50</td>
<td>36</td>
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<tr>
<td>All offences against the person</td>
<td>655</td>
<td>421</td>
<td>641</td>
<td>643</td>
<td>593</td>
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<tr>
<td>Unlawful entry</td>
<td>696</td>
<td>577</td>
<td>673</td>
<td>884</td>
<td>635</td>
</tr>
<tr>
<td>(Other) Theft</td>
<td>2250</td>
<td>1875</td>
<td>2120</td>
<td>2568</td>
<td>2922</td>
</tr>
<tr>
<td>Arson</td>
<td>35</td>
<td>12</td>
<td>23</td>
<td>44</td>
<td>25</td>
</tr>
<tr>
<td>(Other) Property damage</td>
<td>826</td>
<td>504</td>
<td>694</td>
<td>822</td>
<td>678</td>
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<tr>
<td>Unlawful use of a motor vehicle</td>
<td>208</td>
<td>171</td>
<td>208</td>
<td>330</td>
<td>324</td>
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<tr>
<td><strong>All offences against property</strong></td>
<td>4474</td>
<td>3711</td>
<td>4286</td>
<td>5394</td>
<td>5322</td>
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<tr>
<td>Public nuisance</td>
<td>350</td>
<td>420</td>
<td>562</td>
<td>285</td>
<td>538</td>
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<td><strong>Clearance rate:</strong></td>
<td>84</td>
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<tr>
<td>Assault</td>
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<td>80</td>
<td>78</td>
<td>80</td>
<td>74</td>
<td>82</td>
</tr>
<tr>
<td>All offences against the person</td>
<td>40</td>
<td>41</td>
<td>40</td>
<td>36</td>
<td>37</td>
</tr>
</tbody>
</table>

*Note* distorting effect for all Queensland of high crime rates in the Northern Region, especially violent crime.

![Graph of Offences Against the Person](image1)

![Graph of Offences Against Property](image2)
Date: 11 May 2017

To: Mr Paul Pisasale
   Mayor of Ipswich
   PO Box 191, Ipswich QLD 4305

Research Project: Evaluation of Ipswich Safe City Program

Dear Mayor Pisasale

I am a researcher in the School of Law at the University of the Sunshine Coast.

I teach and research in the area of applied crime prevention.

Over the years I have read with interest about the Ipswich Safe City Program. Some impressive claims have been made. For example, in 2009 the *Ipswich News* reported that the program had led directly to ‘5.475 arrests from 1994 to 2008’. Also in 2009, *The Queensland Times* reported that the program generated a ‘78 per cent reduction in crime in the camera coverage areas’. A 2010 *Security Magazine* article reported that Safe City had ‘reduced crime by 78 per cent over the last 15 years, and in some cases ... by 90 per cent’.

In 2010-2011, I attempted to access process and impact data about the program. I was given a tour of the facilities by the then Coordinator, Mr Stacey Kirmos. Unfortunately, however, Mr Kirmos was unable to provide any data to support the claims outlined above. Nor was he able to provide any financial data, such as the costs of the program and cost-benefit data.

I was able to access some Queensland Police data covering the period of several year before the program began in 1994, and subsequently. Figure 1 shows recorded crimes against property and the person from 1990-91 in the Police District of Ipswich – an area that goes well beyond the inner city. The indicate that there was no correlation between the roll out of the camera program from 1994 and offences at this level. A closer examination was made of specific relevant offences – such as good order offences, assault, theft, burglary, property damage and motor vehicle theft – again with no evidence of a positive effect from the camera program over the long-term.

Figure 1: Offences Recorded by Police, Ipswich Division, Rate per 100,000 Population

![Graph showing recorded crimes](source: Queensland Police Service (1990/91-2000/01).)
More detailed data were accessed from 2001 for the smaller Police Division of Ipswich, which more closely approximates the city centre where the majority of cameras are located. These data also showed no appreciable benefits from the Safe City Program. The rates of reported property and violent crimes were above those for Queensland and neighbouring police divisions.

I am currently updating these data and developing a more detailed assessment of the Safe City Program, using public source material.

I am wondering if it is possible to access in-house data, in the form – say – of security incident data, that might support the claims about reduced crime.

I am also interested in accessing any other relevant information, such as financial costs, arrest and conviction data, and any official reviews or reports.

I am very hopeful that you can assist with this project, and I would greatly appreciate any guidance.

Thank you for considering this request.

Yours sincerely.

Professor Tim Prenzler
Professor of Criminology & Justice
15 May 2017

Professor Tim Prenzler
Professor of Criminology and Justice
School of Law

Dear Professor Prenzler

Thank you for your letter requesting data and supporting information in relation to the Ipswich Safe City Program.

Ipswich City Council has been a pioneer and leader in this field since the first cameras were installed in 1994 and now manages more than 200 cameras from a state-of-the-art control room staffed 24 hours a day. The Safe City Program brings together Council and other agencies to discuss and coordinate responses to community safety within the City of Ipswich.

I have forwarded your request onto the relevant Council department for their actioning and an officer will be in touch with you to discuss.

Yours sincerely

Mayor Paul Pisasale
City of Ipswich

NOTE: despite this 'co-operative' intent being expressed by the Mayor, ICC has provided NO assistance whatsoever to researchers.

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Ipswich City Council has upgraded its Safe City public surveillance solution to Genetec Security Center and added Briefcam. The integration was undertaken by Elbex Access and Security.

IPSWICH City Council owns and manages one of the oldest and best known public surveillance systems in Australia. It was installed in 1994 and represented the best video surveillance technology of the day, including extremely capable Elbex EX2000 motorised PTZs, and multiple Elbex PTZ pendant domes.

The original system was installed by Council in response to rising street crime and the designers and operators of the Safe City solution were tasked with making Ipswich safer for its citizens. In partnership with Ipswich Police, and with unqualified long term support from Ipswich City Council, that goal has been well and truly realised for more than 2 decades.

Around 3 years ago it was decided that to open the Safe City solution to IP camera technology, as well as to bring Council’s adjacent security surveillance system into the Safe City control room, a new video management system was needed. After a 2-year testing period, Council chose to install Genetec Security Centre, a VMS designed from the ground up to be hardware agnostic. The Genetec Security Center solution was in the process of being upgraded to Version 5.2 SR9 when I visited, and will be upgraded to 5.3 shortly.

I took a tour of the Ipswich system with Larry Waite, Safe City security coordinator at Ipswich City Council and David Keidar, CTO of integrator, Elbex Access and Security. Both Waite and Keidar have an association with the site that stretches all the way back to that original installation and they express the same seamless ownership of its history and operation.

Waite first began working on the system as a supervising contractor in 1994, became contract manager for the site, then joined Council as an employee in 2011. His breadth of experience makes him an excellent guide. Managing a test bed as challenging and diverse as Safe City has rendered Waite a pure empiricist when it comes to claims about camera technology, and he has an holistic sense of technology and procedure. Nothing that fails to enhance the objective operational performance of the system will be integrated into the Safe City solution.

“We have 2 different systems, a Safe City system and Council’s 270 static security cameras, which monitor Ipswich Council’s infrastructure,” Waite tells me. “There are about 240 cameras in the Safe City system and the video signals come back to the Safe City control room on Council’s intranet, which is now mostly fibre and supports all Council’s network requirements.

“While we share a fibre for Council’s security camera video streams, for Safe City cameras we use our own dedicated Safe City fibre, which ensures we have no issues with bandwidth. The Safe City cameras are mainly PTZs and about 35 fixed cameras.
Fit for purpose
While Council's static security cameras simply monitor council assets and infrastructure, the Safe City surveillance solution installed in public spaces is designed solely for public safety, for protecting the public and public property.

"Ipswich City Council owns and runs the Safe City system and the Safe City team is responsible to the committee of council – including the CEO and mayor," explains Waite. "Also governing the system are a number of procedures that cover operations, and the retention and release of video.” Footage from Safe City's cameras can be viewed by police live or supplied in support of investigations and prosecutions. The symbiotic relationship between Safe City and Queensland Police Service goes back to the early days when the 2 shared an operations centre in Ipswich Mall. As well as assisting with investigations, the Safe City team also works in real time with police officers when required.

As part of this relationship there’s a memorandum of agreement between the City of Ipswich and Queensland Police Service in which each agrees to work to increase effectiveness of community policing, to identify long term preventative measures that reduce crime and improve safety, to recognize roles and accountabilities of individuals groups and agencies to provide a safer environment for all, and exchange information freely to address common concerns.

The Safe City upgrade
Safe City's VMS upgrade and the integration of Council's formerly separate security cameras into the Safe City control room is built around Council's unprecedented fibre intranet, which stretches for tens of kilometres across the council area. The upgrade from the former video management solution to Genetec Security Center is designed to make Council device agnostic – not just to video surveillance cameras, but to any other devices Council may choose to incorporate into its solution in the future.

With the new VMS, changes on the perimeter of the system – new cameras or any other devices in the future – have no impact on the functionality of Genetec Security Center in the control room. Important, too, the new system means that as well as installing the latest IP cameras, Council can continue to leverage its existing analogue cameras, and deploy medium-term solutions such as HD-SDI technology, that use existing coaxial infrastructure.

"We are in the process of phasing out all the analogue cameras – we must be getting close to 50 per cent," Waite says. "There are more cameras arriving all the time to allow us to swap out the old cameras and move to IP. Currently, however, we have IP and legacy analogue. We run a bit of everything, including Panasonic, Pelco, Samsung, Bosch, Axis and the Elbex analogue cameras - I think we might even have some Ikegami cameras still in the system." Waite says a key part of preparing the system for the future involved selecting the right VMS.

"We spent 2 years trialling VMS solutions before deciding on Genetec – we set up a mini control room and tested different solutions over that time. It was an important decision. As well as an open solution, you obviously need a VMS that delivers more than just an image stream – it needs to access all the capabilities of your cameras.”

Given Safe City is a mature application comprising legacy technologies, it seems only natural there be a large number of analogue cameras working together with new HD PTZ cameras. As we
chat my immediate thought is that Council is careful with budget but as Waite and Keidar discuss
the system and, later on when I see applications of cutting edge technologies, I realise there's
something else at work here.

Same as all public surveillance solutions, Ipswich Council is a 24-hour site and the size and scope
of its camera installation, the variability of light sources in Ipswich Mall, along major roads, and
in backstreets, covered walkways and parklands, means that low light performance is not merely
paramount but utterly central to core system functionality.

*Elbex analogue PTZ*

"Part of the reason it has taken so long for Ipswich City Council to undertake this process of
upgrade is the strong low light performance of Elbex analogue PTZ cameras," Keidar explains.
"The cameras have a 1/2-inch sensor, good quality glass optics and a slow speed shutter, a
combination which makes them very sensitive to low light.
"Over the years we have been constantly trying new cameras and we just could not find anything
that performed as well throughout a 24-hour operational cycle as the existing Elbex cameras," he
says.
"The first HD camera that managed to break into the system was the Axis Q6044 720p HD PTZ.
We are using 720p simply because in the real world it's more sensitive in low light – we would
love the higher resolution of 1080p HD but for our needs low light performance is paramount.
"The next HD camera we brought in was a Pelco PTZ, which you simply take out of the box, bolt
to a wall and it runs, so in that sense it's a very easy camera to use for an upgrade like this one,"
Waite explains. "Pretty much every camera we could find we have tried in a 24-hour real time
application and the process never ends because this system is large and always growing."

Because of the demanding nature of the site and its local and international reputation, Waite
says there are plenty of quality manufacturers eager to supply cameras for the Safe City system.
"When it comes to technology, we never dive into anything – we've always sat back and waited
to see what was available and to trial before we buy," says Waite. "When things are applied in the
real world, they may not work as well as they do on a stand at a trade show.
"Every salesperson says they have the best camera – no matter who you speak to they always
have the best camera. Rather than getting in a debate with them, we ask for a sample, install it in
the field and then tell manufacturers or suppliers how good their camera is from the perspective
of our own application."

Touring the system
While we talk, we're driving around the streets of Ipswich and some things really stick out. The
first is the huge geographical size of the application and second is the number of cameras – there
are a lot of them, mostly PTZs.
Underlying both these parameters is the hidden power of that enormous fibre infrastructure. In
other applications side-boring or wireless links might consume significant chunks of budget and
demand intense planning but Council's fibre foresight dissembles all those agonies into irrelevance.
As part of our tour, we hop out of the car and check out a number of camera pole installations. Some have an analogue PTZ and an IP fixed camera, another has a pair of analogue domes, one Bosch and one Elbex. They are ported into a nearby pit for power and comms, just as all the cameras are on this system.

Custom camera poles

"There's a pattern to the trenching for the cameras – the furthest camera is Rosewood, about 30km from here on the fibre LAN. That distance shows how extensive this solution actually is," Waite tells me.
On Brisbane St we cruise past 11 camera and pole installations along a 2km stretch. Many of the dedicated camera poles have a Bosch static camera covering a nearby taxi rank or bus stop, as well as a PTZ, allowing 360-degree views for hundreds of metres in all directions. Cameras are thoughtfully located in areas of perceived public risk that are informed by experience and in cooperation with Queensland Police Service, which has been engaged with the project since its inception.

Later when we walk the CBD mall and adjacent side streets I'm doubly surprised by the number of cameras here and the fact many of them are Elbex analogue PTZs. Clearly, Safe City has had comprehensive coverage of the Ipswich CBD for many years. As well as the main mall and multiple key streets, locations like walking tracks and pathways over bridge are covered by multiple camera views. The bridge walkway is further supported by Help Points and a PA, which directly communicates with the Safe City Control Room.

The control room
The Safe City control room is accessed through a car park in a Council-owned building in the town centre. The site also supports security officers who patrol the city and the adjacent car park makes the location very convenient for this combined purpose.
While the control room was not built as a dedicated control room, it's a very workable space – secure and large enough to contain administrative offices, the control room with its video wall and workstations, a large meeting room and a network room containing the decoders, switches and servers that support the system. The control room itself is large laterally and the video wall is enormous. This may not be the largest video wall in Australia but it's big – I've not seen anything as big recently.
Walking into the Safe City control room you feel it's a warm and friendly working environment and this opinion is only confirmed after spending a couple of hours with the team. You can also see it's a working space - there are 2 operators on duty when we arrive and they go through what look to me to be a series of set procedures with quiet efficiency. Each of the workstations is set up with Genetec Security Center software and the viewer is familiar Genetec, everything is in easy reach of an operator's mouse click.

It's a measure of the capability of a VMS that it blends into the functionality of a control room's operation and Security Center achieves this slick invisibility. Throughout my visit there's not a single instance in which the management system sticks an awkward elbow into the face of the operators. Everything just works.

Having recently sat down with the latest version of this software, I'm acutely aware we are viewing the tip of an iceberg. Ipswich City Council's future is now set up across CCTV, access control, intrusion and global integration of sub systems and business systems. Something else with Genetec is that there's no annual per-channel license fee. Instead there's a non-compulsory software maintenance agreement that entitles a user to direct support from Genetec and ongoing upgrades to the latest version. Nice.

As part of Safe City's policy of actively engaging with cameras, Waite says operators are always using VMS functionality to actively search for incidents. This way of working the system is informed by long experience and is in part predicated on system size.

"If we had 250 image streams all touring at once it would drive operators crazy," Waite explains. "We need to be more systematic than that. We found many years ago that once the system grew past a certain point the automatic tours were no longer working for us."

"Instead what we do is target hotspots based on our experience. At a given time of a certain day we will move cameras and park them to view particular locations where events have occurred in the past. We can do this in part because of the nature of Ipswich. In a major city, hotspots are not so predictable or easy to ascertain.

"From an operational point of view, I think of the cameras as a fishing net we throw over the city," Waite says, narrowing his eyes thoughtfully.

"Every knot in the net is a camera - take cameras away and you create holes in the net, while strategically placing a camera will capture everything that moves in and out of a particular area. It's a philosophy we've developed over many years based on observation.

"Do police have access to Safe City video feeds or do your operators steer them to events in real time?" I ask.

"A little of both," explains Waite. "You see those 2 large monitors in the centre of the display - those images can be sent through to the shift supervisor at the police station about 1km away, as well as to the police communication room about 5km away.

"We can also communicate over police radio and inform police of an event on screen and assist them in real time - but if they want to review or get copies of that footage then they need to
come to us and follow one of 2 separate documentation processes. Certainly police appreciate
the system and the courts love it because when faced with clear video evidence most
perpetrators plead guilty, so cases are not dragged through the courts."

With the upgrade to Genetec Security Center has come the capability to work more effectively
with police officers when they are on patrol.

“We now have tablets that we can give to police so they have mobile footage of events in real
time,” says Waite. “For instance, police can see all the cameras in the mall in a 9-screen split on a
tablet. This allows police to see what’s going on in the next street over during the process of an
operation.

“Using police radio, police officers can tell us who they are looking for and we can say – ‘they are
on such and such street’. Police can then zoom in using the tablets to identify individuals and
then take appropriate action to apprehend offenders. This new mobile component of the Genetec
system is very flexible. We’ve only used it in the CBD with police so far, but it can be used in
parks by our rangers, too.”

That’s Briefcam in the middle, displaying only this morning’s red cars (and jumpers)...

Smack in the middle of the video wall is something I’ve never seen in the wild – an application of
Briefcam. For the uninitiated, BriefCam VS Forensics is a PC-based software solution that takes
large video streams covering many hours of events and compresses them into seconds.

It goes without saying that for security teams on large sites with hundreds of cameras, the
process of mining video streams searching for reported events can be a full-time job. Essentially,
BriefCam’s VS Forensics solution synthesises events from real time video streams, presenting
them as compact, overlaid progressions of events, which each event time-tagged.

Operationally, what this means is that an entire morning’s events can be compressed into 5
minutes of video, with events overlayed not quite on top of each other so the eye can see
multiple persons and/or vehicles moving across the screen, each tagged with an event time.
Operators simply select video clips based on time and appearance to play in real time. While
Briefcam can be installed as a task in Genetec Security Center, at Safe City the solution runs
independently, with operators pulling video streams into Briefcam whenever required.

According to Waite, Briefcam allows the team to ask it to only show green cars that have passed
a camera, if that’s what they are looking for, or the red cars, based on the direction of travel and
other parameters. As Waite explains, operator Justin processes a video stream of morning traffic
through Briefcam to demonstrate and it’s flat-out amazing. Without any more than a minute’s
delay, Briefcam serves up time-stamped footage of every red car that has passed the camera that
morning, all overlaid on one composite image stream. It’s just awesome.

“ Basically you set up the parameters and BriefCam goes to work compiling the footage using
metadata and metatags,” says Waite. “You give BriefCam the camera and say ‘look for a
particular thing over 12 hours’ and you go away and work on something else for 10 minutes and
when you come back, the task has been completed. Briefcam sorts through the metadata and
finds the footage on our servers and collects it on its own server. We can find the answers very
fast – a stolen car or a missing child just using details like the colour of a shirt or hat.”
Waite says Safe City's installation of Briefcam is part of a policy of applying technology that allows the control room operators to work at maximum efficiency.

"A key to our thinking with BriefCam is that we can't keep adding more staff as the system grows each year - operators will be tripping over each other," says Waite. "We need to start looking at smarter ways to do time consuming things and Briefcam really meets that demand. It certainly takes the time out of searching.

"We've only had the system for a couple of weeks so we are still getting used to it. Operationally, we installed it to allow us to keep an eye on events in some of the quiet areas we typically don't have to monitor in real time but want to keep an eye on as efficiently as possible. We also plan to use Briefcam to help us manage our new waterpark. We think it will be a great help locating lost children - we can search for shirt colour, as well as searching on the basis of time."

Waite can't help revealing the experimental nature of the Safe City team. Even though the system has only just been installed, he's already thinking about using it to empower more of the system. "Briefcam is designed for use with static cameras not speed domes but I think if we leave a PTZ stationary then we think we can use it to run through all the events viewed by the PTZ for the period of time it's parked," he says with a grin. "It's certainly our intention to find out if that's the case."

According to Keidar, the installation of Briefcam at Safe City has been as big a deal for the distributor as it is for the end user.

"When we went through the process of installing Briefcam it was an exciting first for them as well," he says. "It's an expensive solution but for an application that suits it, there's nothing that fits this requirement as effectively."

Waite agrees.

"Same as everything we install here, there was a long process of consideration with Briefcam," he says. "We had previewed it in multiple ways. We looked at all the footage on Youtube, we read all the literature and then we got Hills in and they talked about what Briefcam could do for us.

"Within minutes of Briefcam being powered up and set to processing a video stream from one of our SafeCity cameras we all realised this solution was even more capable than we had thought. It's just going to save a lot of time and that was the whole point of using it."

While I'm in the control room I can't help but ask the operators what they think of the new Genetec system. Both nod in agreement that it's very good and Justin points out that the learning process has been relatively simple. It's hard not to go sideways from there. In their experience, is HD better than analogue?

"In the daylight conditions, HD is great," the boys tell me.
On the split screens of the video wall it's hard to see higher resolution and what I find immediately interesting is how well the Elbex cameras are doing in terms of colour rendition and contrast. Then Justin calls up an Elbex camera on one of the big centre screens for comparison. We are all agreeing the image is nice when he pulls across an HD feed and oh yeah, there's a big difference in resolution, colour, contrast.

Of course, these are the latest HD cameras, while the Elbex cameras are nearly 10 years old. And image quality during the day is only half the story. As we are viewing the cameras, operator Jeff surprises me by announcing quite unprompted: "You still can't beat the Elbex cameras at night time."

He's not alone in his opinion. Justin agrees with alacrity.

"That's true," he says. "With that camera Elbex really got it right."

"Would illumination levels be under 10 lux at night system-wide?" I ask.

"Yes – it's definitely under 10 lux in many places at night," Waite says. "But the video wall really does look spectacular at night – that's the best time to see the screens. The performance of the cameras in this system after dark is fantastic. We do have a couple of parks where the scene is dull and other security camera locations where we turn lights off. But globally, performance is very good."

"I have to ask on behalf of SEN readers - what's your favourite camera in the system in terms of all round performance?" I ask.

According to Waite, that's a tricky question to answer.

"Certain cameras give us strong performance in different ways," he says. "The 720p Axis PTZ camera gives us the best images through a 24-hour period, while the Pelco PTZ is very good out of the box when it comes to easy installation. When it comes to the analogue and IP, the performance gap in favour of analogue at night has definitely closed over the last 18 months and it's now going the other way."

Waite also has some astute observations about the network demands of IP cameras in real world applications.

"There's no doubt that bandwidth is an issue with digital," he says. "We find that while analogue cameras might need 3-3.5Mbps, an IP camera will need 5-25Mbps, depending on how much movement is going on in the scene. Obviously, you can limit bandwidth demand but if you strip away the quality you lose the reason for the choosing HD in the first place."

"We also want 25ips in our application. People say you can't see the difference between 12.5 and 25 with the naked eye but you definitely can. Given these conflicting needs, an IP video system is a competition for resources."

"As I explain it, all the resources of the system go into creating the best possible recordings and what resources are left over go to the video wall we are looking at," Waite says. "This means that at times of system stress you get a flicker on the video wall that you don't see on the real time recordings. It's a balancing act but we are close to getting what we need. A resolution of 1080p HD is all we need here if the low light performance is good."

It's now late in the afternoon and looking at the video wall as the sun is sinking and the light is softening, images are definitely looking better. We're losing hard shadows ISO is retreating to sensible levels and peace has been declared in the exposure wars which can impact on image quality as cameras struggle to balance areas of shadow and intense sunlight. This said, we're now seeing some lens and dome bubble flare as the sun gets closer to the horizon.
Next, Waite shows me the server room. It's a good space for the job, long and with enough access front and rear of the racks. Everything in the room relates to the Safe City solution – encoders, switches and servers. Fibres from the dedicated Council intranet come into the building’s riser, go into decoders in the server rack, through switches and flow to recording servers first, then via PCs (soon to be upgraded) to the video wall. Recording is at 25ips per channel in high definition with a 14-day retention time.

Because of the maturity of the Safe City application, there's new and old hardware in the server room but it's all now running the latest Genetec software.

"Something Genetec Security Centre does that's extremely important to us is scale," says Waite. "There is no limit in terms of growth and that's excellent from our perspective. Every time we add more cameras we can just add more hard drives and expand the system."

And the switches...

"What were the challenges the Safe City team needed to overcome during the process of upgrade?" I ask.

"There were some challenges," Waite explains. "It can be challenging to configure a video wall so there’s no latency."

Training was another area that needed careful attention.

"There were also some training challenges – some people embrace changes in technology better than others, it takes them less time to re-learn," Waite explains. "It can take people a while to learn to think outside the box they are comfortable in, in this case to realise Genetec can do more than they are used to being able to do with another VMS."

"There have been instances where old procedures have been used – for instance, burning of footage to disk using third party software instead of dragging and dropping a video stream within Security Center itself. At the same time team has found and shared new ways to handle procedures that are much more efficient than the old ways."

Success of the system

Given the longevity of this system and its mission to provide safety to the people of Ipswich, it’s not surprising Waite and the Safe City team have a strong sense it has made a difference to the community by modifying behaviour.

"This is system absolutely has had an impact," Waite says. "There are a number of reasons for this, in my opinion. In Ipswich, while we have some tourism, most the people here are local so we know most of our offenders. Ipswich is not a capital city where there are unknown people coming in from all over Australia and all around the world, it's more like a big country town.

It does feel just like a big country town...

"For these reasons the Safe City system has led to what is touted as a 78 per cent reduction in crime compared to the year before the system was installed, despite a much larger population. Crimes we used to get in Ipswich like bag snatches, car thefts, armed robbery and thefts at ATM machines – we simply don't see those types of offenses anymore," Waite says. "Instead the
offenses we see are far less severe. They are alcohol related, opportunistic, school holiday muck-ups, mostly quite minor.

"Police are able to deal with recidivist offenders very quickly and more effectively, compared to a large city. If we see something occur, we may not know a person’s name but you can bet the police will, because it’s a small community."

According to Waite, when it comes to a sense of safety, a lot of it is about perception.

"The public perception of danger might not reflect reality. For instance, we have groups who gather in the mall and are sometimes perceived as threatening. But the people who live and work in Ipswich know that while there may be certain groups who have the odd argument, they are socialising in the mall, not harassing the public. So part of the process is to focus on changing public perception into something more positive."

**Conclusion**

The process of upgrading to Genetec Security Center has been about prepared for the future. What does that future hold? Waite believes that uncertainty about the future is the entire point of the upgrade.

"Who knows what’s going to happen in the next 12-18 months?" he asks. "At the moment our goal is to continue the process of going digital. Eventually we’ll take Council’s static camera system digital over a 5-10 year period, funds allowing. For instance, we added Genetec license plate recognition last week and we have it monitoring one street in Ipswich just to see how well it works.

"At this stage it seems to have some strong capabilities – especially from a police point of view in terms of helping to identify stolen cars and the like. It’s something we look at. Because we have the facilities and the fibre network, we can play with technologies and then get back to suppliers with honest feedback.

"Within our Safe City brief, we will continue to experiment with what technology is out there. We recently looked at a camera with a focusing long distance laser light, which we decided was not really suitable for what we do and we are currently testing some 360-degree 5MP cameras for Council retail applications. In some of our facilities we might have 7-8 cameras watching a retail counter, where a single 360-degree camera could handle the same task.

"Once you start going IP you can apply it to any number of devices, so we’ll be looking at ways to integrate other subsystems and devices into the system to increase functionality and efficiency," Waite says. "We will never stop seeking clever new solutions that will make the Safe City system more efficient for staff and Ipswich safer for the public." ♦

*By John Adams*
Redbank Plains Reserve to get Safe City cameras

REDBANK Plains Recreation Reserve will get some CCTV protection after Ipswich City Council decided to install Safe City cameras there.

Councillor Victor Attwood, whose division covers the reserve, said the decision followed recent arson attacks on sporting facilities.

In August, Redbank Plains Rugby League Club’s canteen at the reserve was destroyed by fire.

Witnesses claimed seeing a group of high school students running from the scene of the blaze.

"The reserve is a very popular community facility and is well utilised by a variety of sporting groups who have their club houses there," Cr Attwood said.

"It is only natural that they want such a valuable community asset protected and the installation of Safe City cameras would go a long way to achieving that aim.

"My first choice is it wouldn’t be needed but the vandalism has gotten out of hand lately."

Cr Attwood said council staff would conduct a survey of the reserve to identify the best locations for Safe City cameras.

A final decision on the scope of the project and a timetable for installation would then be made, he said.

Ipswich Mayor Paul Pisasale said council was committed to exploring the expansion of the successful surveillance program to improve safety in public areas.

"There are currently 185 cameras across the city including Ipswich Central, Goodna, Redbank, Booval, North Ipswich, West Ipswich, Bundamba, Brassall and Rosewood," Cr Pisasale said.

"Since its establishment in 1994 with just 22 cameras, the Safe City Program is now regarded as the best and most technically advanced system of its kind in Australia.

"We are always interested in expanding the program where we can and it is intended Redbank Plains Recreation Reserve will be the next cab off the rank."

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IPSWICH’S Safe City program has been praised as the most advanced surveillance operation in Australia.

Queensland Police Commissioner Bob Atkinson visited Ipswich yesterday to view the system for himself in light of the program being rolled out to other Australian cities.

“This is just brilliant,” Mr Atkinson said.

“The quality is superb and I doubt there’s any better in Australia.”

Safe City links 185 cameras across Ipswich to a control hub where security officers view the images on more than a dozen large monitors.

The first Safe City CCTV cameras were installed in Ipswich’s CBD in 1994 and the public safety program has since expanded throughout the city.

The cameras can rotate 360 degrees and capture images one kilometre away.

Council statistics reveal Safe City has led to more than 5000 arrests since it began.

Ipswich Mayor Paul Pisasale said Commissioner Atkinson was one of many people interested in adapting the program to other locations.

“Everyone wants a piece of this program,” Cr Pisasale said.

“Safe City has helped reduce drug, alcohol and volatile substance abuse in Ipswich’s CBD by 49 per cent.”

Last year Ipswich City Council spent $746,000 on Safe City.

Cr Pisasale said if Ipswich was to build Safe City from scratch today, it would cost $5 million.

Commissioner Atkinson was in town for the inaugural K9 Service Dog Conference, being held at Ipswich Civic Hall until Friday.

The conference is for service dog specialists from the RAAF, army, all police departments, corrective services, quarantine and customs.
We've got you in our sights City upgrades its crime-deterring CCTV

Mayor's warning to crooks after CCTV revamp:

IPSWICH criminals have nowhere to hide after its Safe City camera system was upgraded to become Australia’s most advanced public surveillance system.

The number of cameras across the city has been increased by 20 to 185 and a new monitoring system has been installed at the centre’s HQ allowing security staff to watch all of the council’s 185 cameras.

Safe City bosses say the flat screen system is a huge advance in technology – with its 100 terabyte storage system capable of recording five days of high-resolution images from each camera.

The first Safe City CCTV cameras were installed in Ipswich’s CBD in 1994 and the public safety program has since expanded throughout the city.

The cameras can rotate 360 degrees and capture images one kilometre away.

Ipswich Mayor Paul Pisasale gave The Queensland Times an exclusive peak at the system’s upgrade yesterday.

“This is the most advanced system in Australia, probably the world,” Cr Pisasale said.

“Scotland Yard have even come here to look at how we operate.

“This is a pioneering system – it’s state of the art – everyone wants to copy it.”

Council statistics reveal Safe City has led to more than 5000 arrests in the 14 years since it began.

Cr Pisasale said the system has helped reduce drug, alcohol and volatile substance abuse in Ipswich’s CBD by 49 per cent.

“The cameras have lead to a dramatic 78 per cent reduction in crime in the camera coverage areas,” he said.

“The biggest impact has been a 73 per cent reduction in assaults, many of them alcohol related.”
Ipswich police welcomed the upgrades and said the cameras were an important tool in fighting crime.

“Any upgrades will assist police to deter, to detect and be able to prosecute criminal offences,” Sgt Nadine Webster said.

Last year Ipswich City Council spent $746,000 on Safe City. Cr Pisasale said if Ipswich was to build Safe City from scratch today, it would cost $5 million.
New strategy to cut crime in CBD is already yielding results

IN SAFE HANDS: Queensland Police and Ipswich City Council are working together to reduce crime in Ipswich Central. Pictured (from left) are Gary Ellacott and Larry Waite from Ipswich City Council and Sergeant Leon Margetts and Acting Inspector Laurie Shevlin. David Nielsen

LAWBREAKERS will want to rethink committing offences around the Ipswich City Mall.

Police and security presence in the area has been stepped up in a bid to reduce crime and antisocial behaviour.

The increase in security is part of a new public safety strategy that was rolled out yesterday.

As part of the initiative, police have been ordered to take a zero tolerance approach to offenders.

Superintendent Mark Kelly said the plan was to improve the overall ambiance and safety in the area.

"There are people who are coming to the mall and making others feel uncomfortable," he said.

"It might be because they are breaching local laws or committing offences such as public nuisance.

"With this zero tolerance policy now in effect, if you're found breaking the law, you're going to be apprehended."

To make the strategy work, Ipswich City Council and Queensland Police have combined resources.

The initiative involves police officers using iPads to view live footage from council's Safe City camera network.
"Seeing an offence is better than hearing about it on the radio," Cr Antoniolli said.

"The radio will still tell police what's going on, but they will also be relayed images of the incident.

"As a result, as soon as police arrive on the scene, they will already know who they need to talk to."

The new strategy already seems to be working with police arresting a person within hours of it being rolled out.

Police at the mall found a 16-year-old in possession of "housebreaking implements" and stolen keys and bank cards about 11.30am yesterday.

It was later revealed that the teen was wanted in relation to a number of stealing offences.

The new strategy will remain in place well into 2015 with possible plans for expansion.

***ENDS***
Ipswich Security Camera Study

Study 1 Graphs: District Level
Assaults (excluding sexual)

Homicide
Other Property Damage

Drug Offences
Study 2 Graphs: Division Level

**Offences Against the Person**

- **Booval**
- **Ipswich**
- **Toowoomba**
- **Yamanto**
- **Queensland**

**Offences Against Property**

- **Booval**
- **Ipswich**
- **Toowoomba**
- **Yamanto**
- **Queensland**
Robbery

Unlawful Entry