# The Digital Transformation of Policing through Mobile Technology

## How to Maximize Police Efficiency with Your Smartphone

ANYLINE

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If you want to speak with someone rather than reading, you can contact Anyline at **hello@anyline.com**. Once we have more details about your use case, a member of our team will be happy to call you to discuss integrating mobile OCR from Anyline. We're happy to hear from you and look forward to helping you optimize your processes.

# 01 Why Digital Transformation?

According to a recent study, 70% of companies have invested in digital technologies to improve their production processes.[1] Today, it's clear to see that companies have embraced digital transformation or plan to do so soon.

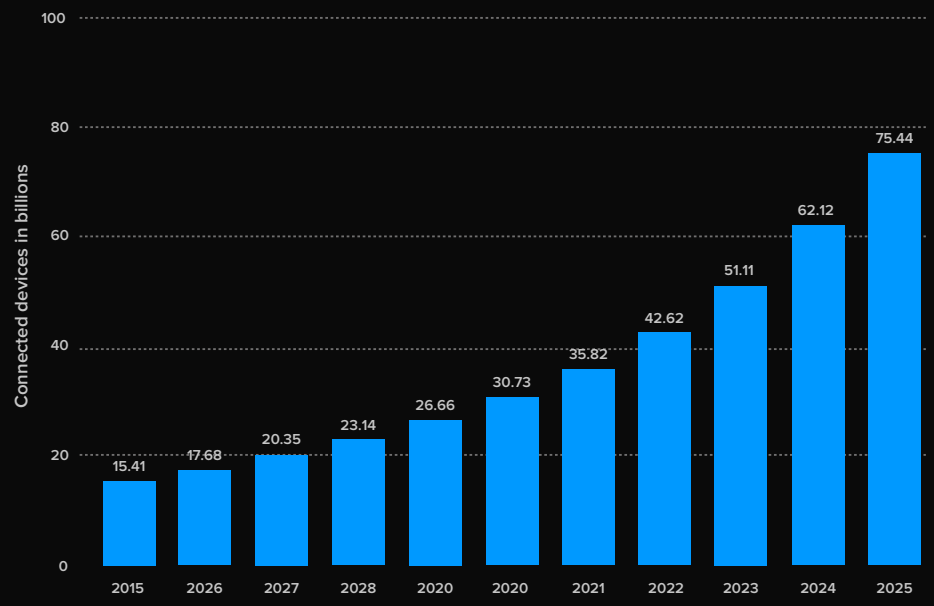
***"When digital transformation is done right, it's like a caterpillar turning into a butterfly, but when done wrong, all you have is a really fast caterpillar."***

George Westerman
Principal Research Scientist with the MIT Sloan Initiative on the Digital Economy[2]

Digital transformation is the application of digital technology in all aspects of human society. It gives governments and businesses the ability to optimize operations. They can achieve this through the digitization and analysis of data. It also introduces new technologies that can replace or update faulty or redundant processes.

Digital transformation offers huge benefits to companies. It's also clear that there are challenges to overcome before benefits and rewards can be realized. Digitization, the process of changing analog data into digital data, is an essential component in digital transformations. However, effective digitization methods don't exist yet for all forms of data. For this reason, certain sectors of business and governments are still preparing to begin their digital transformations.

**Projected Number of IoT Devices by 2025 (in Billions)[3]**




[1] Morgan, B. (2019), Forbes, '100 Stats On Digital Transformation And Customer Experience', *https://www.forbes.com/sites/blakemorgan/2019/12/16/100-stats-on-digital-transformation-and-customer-experience/* (Accessed 27 July 2021)
[2] Westerman, G. (2017) The Enterprisers Project, 'Digital transformation: MIT's Westerman shares new lessons' *https://enterprisersproject.com/article/2017/5/digital-transformation-mits-westerman-shares-new-lessons* (Accessed 27 July 2021)
[3] Statista, (2021) 'Internet of Things (IoT) connected devices installed base worldwide from 2015 to 2025 *https://www.statista.com/statistics/471264/iot-number-of-connected-devices-worldwide/* (Accessed 28 July 2021)

# 02 Have Police Forces Started Their Digital Transformation?

The digital transformation of police forces has yet to begin in many parts of the world. Departments face a number of challenges when considering digitization. One of the most obvious obstacles they face is the fact that the data they collect can be used as evidence. As such, officers must accurately collect and maintain it until it's later needed. They're also required to collect this data from almost any location and in all conditions. With this in mind, we can see that the technology needed by police forces to successfully complete digital transformation will have more robust requirements than the business world.

That's not to say that some police forces haven't made successful starts to their digital transformation efforts. A big step in the right direction for many police forces is the adoption of high-end mobile devices for all police officers. Officers have been using smartphones in the field for years with great effect. Often though, officers were using their own personal devices.[4] Commercial smartphones are perfect for photography or instant messaging. However, the devices and software at an officer's disposal were not designed with police work in mind. Some police forces have been able to combat these issues by equipping officers with department-issue smartphones. Police forces in Austria[5], London[6], New York[7] and Paris[8] have been successful in rolling out high-end mobile devices to officers. Early feedback is extremely positive. Police officers have been happy to adopt technological solutions to streamline tasks such as writing down names and addresses. They also found that this leads to far less desk time in their daily routine.

***"This Sunday (...) NYPD officers used their smartphones to help respond to over 25,000 911 calls; ran 18,000 searches; and viewed 1,080 flyers of missing or wanted persons. Sunday is a slow day."***

Jessica Tisch,
NYPD Deputy Commissionar[9]

This reduced desk time is a result of the data they collect now being uploaded to a police server, rather than manually typed into a system. In addition, instant messaging services, and the ability to digitally transmit data to compare to internal records, have greatly reduced the amount of radio communication officers perform in the field.

[4] Accenture (2021) 'Leading a public sector digital transformation', *https://www.accenture.com/us-en/insights/public-service/technology-trend-2021-public-service* (Accessed 28 July 2021)
[5] BMI (2017) 'Mobile-Polizei-Kommunikation', *https://www.bmi.gv.at/news.aspx?id=56467948786F7A575358553D* (Accessed 28 July 2021)
[6] Hall, K. (2013) 'Met Police to equip officers with 30,000 mobile devices', Computer Weekly, *https://www.computerweekly.com/news/2240176194/Met-police-to-equip-officers-with-30000-mobile-devices* (Accessed 28 July 2021)
[7] Schlossberg, T. (2014) 'New York City Police to Be Equipped With Smartphones and Tablets' New York Times, *https://www.nytimes.com/2014/10/24/nyregion/new-york-city-police-to-be-equipped-with-smartphones-and-tablets.html* (Accessed 28 July 2021)
[8] Journal du Geek (2018) 'Sony équipe la Gendarmerie et la Police nationale en smartphones' *https://www.journaldugeek.com/2018/01/24/sony-equipera-bientot-la-gendarmerie-et-la-police-nationale-en-smartphones/* (Accessed 28 July 2021)
[9] Tisch, J. 'Jessica Tisch defends NYPD cell phone program', NY Post, *https://nypost.com/2017/09/08/jessica-tisch-defends-nypd-cell-phone-program/* (Accessed 28 July 2021)

# 03 Why Have Police Forces Begun Their Digital Transformation?

Digital transformation allows police officers and departments to better manage the resources at their disposal. This has led to growing demand from officers everywhere for modern solutions, similar to those they use in their private lives. In addition, they also need to combat the growing threats of online and technological crime.

Online crime is the driving force behind the digital transformation of police forces. However, national police forces tend to have dedicated units to deal with online crime. These units focus particularly on these types of crimes. They have little use for the technology carried by your average police officer.

Another force driving the digital transformation of police is the large quantities of data that they have been able to collect over the past few years. This data was used in turn to fuel the predictive policing of departments like the NYPD [10]. Predictive policing was able to help departments curb crime in trouble spots. However it wasn't until this information was made available to officers via their devices that the real benefit of predictive policing was seen.

Police officers on patrol will benefit most from digital transformation. They can find better ways to manage their time and more accurate ways to collect the data they need. While online and technologic crime will be fought from desktop computers, it's mobile devices that will impact the traditional world of policing.

***"A typical police department will eliminate unproductive working time with a value of 5000 EUR a year per police officer, when they give them smartphones."***

Alexander Loidolt
Government Leader, Anyline

***"The smartphones, tablets and apps that the police now use bring benefits for citizens, officers and the Austrian Police as a whole. The bottom line is there are more police on our streets, they're having more success in the fight against crime and we've made considerable time savings for our civil servants and citizens."***

Wolfgang Sobotka, Minister of Interior, Austria



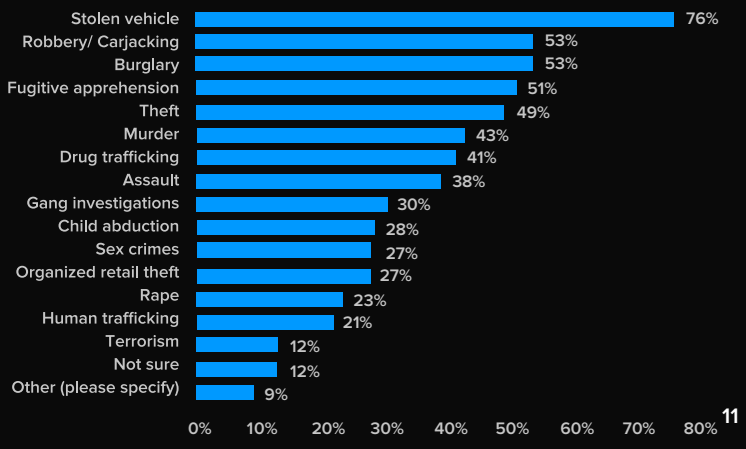
[10] Vigilant Solutions (2018) 'Support for License Plate Recognition Technology Among Law Enforcement to Generate Leads and More Quickly Close Cases', *https://www.multivu.com/players/English/8366951-vigilant-solutions-license-plate-recognition-technology-survey/* (Accessed 28 July 2021)

# The Beginning of Digital Transformations for Police: Automated License Plate Recognition

Automated license plate recognition or ALPR has been used by police to enforce speed limits on highways for years. Stationary cameras can capture the license plate details of offending vehicles in an instant. This functionality has been more recently added to police vehicles in the form of mounted units. It allows them to gather info on vehicles during traffic stops before they need to approach drivers, that may be crime suspects and potentially dangerous. And the use of this technology continues to evolve in law enforcement activities. While it was originally intended to help monitor highways or spot stolen vehicles, ALPR is now helping to solve all kinds of crime. This can be seen in Vigilant Solutions' 2018 survey of sworn law enforcement. It shows that ALPR technology has assisted law enforcement to solve more than 15 different types of crime, from auto theft to murder, child abduction and even terrorism. In fact, 80% of law enforcement surveyed indicated that ALPR data has assisted them in some way to find leads and close cases.

***"This research is concrete evidence of what we have known for a long time – that ALPR data is vital to helping law enforcement agencies to investigate, solve and reduce crime."***

Shawn Smith, Founder and President of Vigilant Solutions



[11]

With such a wide scope of investigation possible from a simple license plate scan, this technology is sure to become ubiquitous among police forces in the near future. And while it makes perfect sense to add mounted ALPR units to police vehicles, there are drawbacks such as high installation and maintenance costs.
In addition, they're limited in urban environments where streets are narrow, short or winding and can't be used in areas patrolled by foot, on a bike or on horseback.
Mobile OCR requires less initial investment and has minimal running costs.
It can be quickly rolled out to provide officers with the power of ALPR technology, wherever they go.



[11] Police and Security News, (2018) 'Automated License Plate Recognition Technology Evolves' *https://policeandsecuritynews.com/2018/09/10/automated-license-plate-recognition-technology-evolves/* (Accessed 28 July 2021)

# 04 Why Should Police Forces Choose Mobile Devices?

Once police officers have a mobile device to document their activities, they'll have much less manual reporting to do. Not only will this improve data quality, it also frees up police officers to spend more time in the field. Digital transformation will increase the number of work hours that a police sergeant can choose to have his officers on patrol. This is a huge cost saving incentive for police forces all over the world to embrace digital transformation. Police resources are stretched at the best of times nowadays. Mobile policing offers a way to save resources while improving current activities.

Another reason to roll out mobile devices to police is the fact that many of them are already using them in their daily work routines. Police surveyed have admitted as much with communication being the main reason they carry their mobile device on the job.[12] Letting officers use their personal devices may seem like an ideal quick-fix in the short to medium term. However, this will lead to technological issues in the long run.

***"We must understand the wide-ranging concerns of citizens and be able to communicate across all forms of public contact, including new technologies and social media, which will require significant analytical and forecasting capabilities, which must be reflected within the workforce."***

National Police Chiefs Council UK

## National Police Chiefs Council UK [13]

When officers work with non-issue devices in the field, there will be multiple different models and different brands in use. This means that the integrity of certain data types may not be guaranteed throughout your department. Police forces would also need officers to regularly update and buy new devices as technological solutions improve.

A final issue is the fact that these devices are not secure. This may be one of the biggest threats right now to the digital transformation of police forces. Allowing officers to use unsecure personal devices for daily police work is an accident waiting to happen. Loss of police data and intrusion will both occur while police officers operate with commercial devices.

[12] Motorola Solutions (2016) 'Improving C ommunity Policing 2016 Law Enforcement Survey Report Through Real-time Data Intelligence' *https://www.motorolasolutions.com/content/dam/msi/docs/solutions/law-enforcement/law_enforcement_survey_white_paper.pdf* (Accessed 28 July 2021)
[13] Evenststad, L. (2016) 'National Police Chiefs' Council sets out strategy for digital policing' *https://www.computerweekly.com/news/450403037/National-Police-Chiefs-Council-sets-out-strategy-for-digital-policing* (Accessed 28 July 2021)

# The True Cost of Cybercrime[14]

**Annual Global Cost of Cybercrime**

**$1 Trillion**

**Average Operational Interruption from Cyber Attacks**

**18 Hours**

**Report Having Suffered a Cyber Attack**

**2/3 of Companies**

Departments need to equip their officers with secure mobile devices to overcome this issue. This is the only way to ensure police forces maintain control of the digital transformations within their departments. Unfortunately for police, technology is moving faster than any government or business can manage. And for every breakthrough that helps the police, there is an untold number of advancements on the opposite side of the law. Criminals are finding new ways to profit from the illegal use of technology every day.

Police forces are in danger of falling behind the times in comparison to 21st century criminals. The secure collection and management of data via mobile and desktop solutions is one of their best bets to combat these activities.



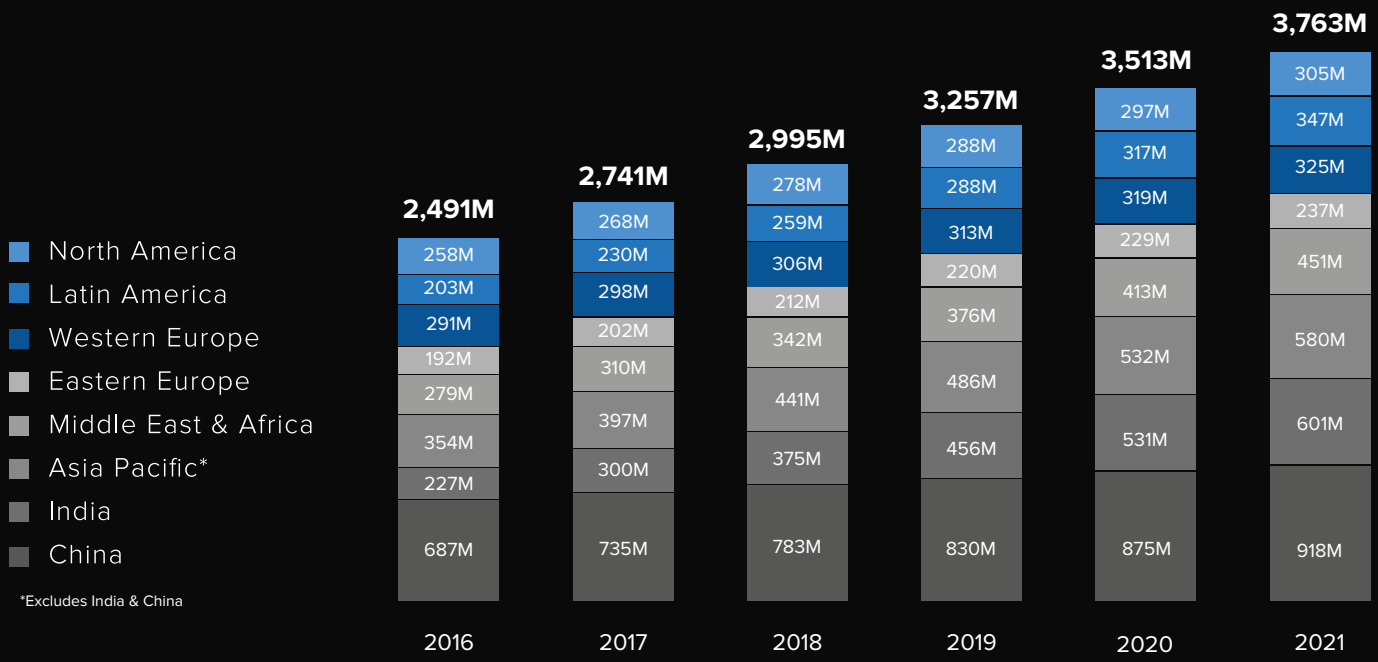
[14] McAfee (2020) 'New McAfee Report Estimates Global Cybercrime Losses to Exceed $1 Trillion' *https://www.mcafee.com/enterprise/en-us/about/newsroom/press-releases/press-release.html* (Accessed 28 July 2021)

# 05 How to Successfully Roll Out Mobile Devices to Police Officers?

## Millennials, Digital Natives and Digital Immigrants

The digital transformation of police forces will require officers from different training and personal backgrounds to converge and find workflows that empower everyone. This will require senior and junior officers to have the same level of knowledge regarding mobile policing. Finding a common structure that works for millennials, digital natives and digital immigrants is a challenge of digital transformation and should be kept in mind.

### Global Smartphone Users Per Region
(2016-2021) [15]




Luckily, most of your officers should find it easy to adapt given their personal experience with mobile devices. But they'll need to know how to securely transfer data and how to recall it once it has entered police databases. These tasks don't require extensive IT skills but they do represent a knowledge gap. Police departments will need to tackle this to overcome the challenges of digital transformation.



[15] Koolistra, J. (2018) 'Newzoo's 2018 Global Mobile Market Report: Insights into the World's 3 Billion Smartphone Users' *https://newzoo.com/insights/articles/newzoos-2018-global-mobile-market-report-insights-into-the-worlds-3-billion-smartphone-users/* (Accessed 28 July 2021)

## App Design & Device Choice

Thanks to user-friendly mobile devices, your police force will have performed a data transfer of some kind before. And because of the personal nature of mobile devices, they've probably learned how to perform these tasks from scratch. Most mobile apps these days feature built-in tutorials to guide users in new tasks. So while there is a knowledge gap, mobile devices may also be the solution to the problem.

***"The number of cellular IoT connections is expected to reach 4.1 billion in 2024 – increasing with an annual growth rate of 27 percent."***

Ericsson Mobility Report, June 2018 [16]

Your police officers should have some familiarity with the major mobile operating systems, Android, iOS and Windows. A market leader for mobile policing is yet to emerge and for the time being, each of these platforms have their advantages.

While Android and iOS share and trade benefits on smartphones, Windows remains the primary choice for in-vehicle solutions. It's important to understand the role each one can play in your digital transformation. Your officers will need to be made aware of these distinctions but they can also be enabled through the use of cross-platform technology that provides a native look and feel.

Native look and feel replicate the design flows of the major mobile platforms and make it simpler to perform mobile operations. Your officers are used to using similar user flows across most of their mobile apps. If you design your police app with these platforms in mind, training can become much simpler for officers. It can even become an intuitive process with less emphasis on formal training.



[16] Ericsson Mobility Report (2018) *https://www.ericsson.com/assets/local/mobility-report/documents/2018/ericsson-mobility-report-november-2018.pdf* (Accessed 28 July 2021)

# 06 How Can Police Benefit from Mobile Policing?

There are multiple benefits to carrying a dedicated mobile device for police. Agile communication, instant messaging and notifications can all benefit officers.

However, there are benefits to mobile policing that are far less obvious. Modern mobile devices are capable of providing technological solutions for almost any use case.

***"Big Data analytics help the criminal-justice system move further towards being data driven and prevention focused. With clear guidance underpinning its use, legitimacy and security, public-safety agencies can use Big Data to emerge from disruption stronger and be better able to protect those they serve."***

James Slessor – Managing Director, Public Safety, Global Accenture [17]

## Mobile License Plate Scanning

License plate scanning has been a staple of effective policing for close to 25 years, despite first being invented in the 1970s. Automatic number-plate recognition uses stationary cameras to measure the speed of automobiles. They can then scan the vehicle's license plates to identify the driver. This practice is widespread and is something that civilian populations have learned to expect on busy motorways. While this is a perfectly valid use of license plate scanning, it's not the only way to scan license plates. And speeding drivers on the motorway aren't the only people that need their license plates scanned.

Recording license plate details is a standard procedure all over the world when a police officer needs to stop a vehicle. Checking a license plate can help officers to discover if a car has been stolen or if it's been flagged for other traffic offences. Cars and other vehicles are involved in an enormous amount of crime. Everyone from transnational organized crime groups to terrorists to your local car thief depend on vehicles to facilitate their activities.[18] Giving your officers an accurate method to track vehicle ownership and registration can help to significantly reduce these activities.

Several police organisations today use car-mounted LPR systems. These specialized devices can read license plates automatically.



[17] Reform (2017) 'Big Data in government: challenges and opportunities' https://reform.uk/sites/default/files/2018-11/Big%20Data%20conference%20brochure.pdf (Accessed 28 July 2021)
[18] Interpol (2021) 'Vehicle crime' https://www.interpol.int/en/Crimes/Vehicle-crime (Accessed 28 July 2021)

However, they're expensive and need specialized infrastructure and maintenance in comparison to most police equipment. In most cases, an officer will write down or photograph the license plate number. They can then check it against their police database for insight into potential violations. This is normally done by radio communication or with an in-car computer. The issue with these checks is that they require time to complete and require perfect recall accuracy from the officer on patrol. In the majority of cases, these factors aren't critical. They can become crucial to effective policing in situations with a heightened security risk however. Whether there's a potential terrorist risk or a crime in progress, completing a successful license plate check is sure to help police officers to contextualize the situation. Mobile license plate scanning offers an instant solution to the problem by eliminating the need for accurate recall in radio and mobile computer terminal communications. The mobile license plate scanning that Anyline provides has a scan accuracy of +99% and works in any location. This technology even works offline so you can check a license plate against a database synchronised to your smartphone without a network connection. This can be critical in remote or rural environments. Low-light conditions are also accounted for with an automatic torch activation feature. It's a ready-made solution that takes real world environments into account and anticipates the challenges of policing in modern urban and rural settings. It also removes the need for manual data entry of license plate data at a later stage. The results of all scans can be uploaded to your police backend in an instant. Officers just need to ensure that they have a secure connection. This means police have more time to operate in the field and don't need to waste time sitting at a desk. With more officers in the field, police departments can expect a more active police patrol without needing to increase department numbers. On top of that, their data gathering efforts will be improved with the removal of human error and time intensive manual data entry from their processes. The digital transformation of gathering license plate details is possible now and has already been adopted in Germany and Austria. As outlined, digital transformation is changing everyday methods of policing and creating a number of benefits for departments.

***"These new devices will mean officers spend more time in the community, and less time stuck behind a desk. We're helping Victoria Police build a smarter, more modern force. We're investing in technology, recruiting more officers and making sure our police can spend more time doing what they do best – protecting Victorians."*** [19]

Lisa Neville, Victoria Minister for Police



[19] Neville, L. (2017) 'New Technology To Give Police The Edge' *https://www.premier.vic.gov.au/new-technology-give-police-edge* (Accessed 28 July 2021)

## Case Study: Parking Management in Munich

Parking management is a hot topic in every large city. Not only does it contribute to making traffic management simpler and reducing carbon emissions, it also affects domestic security. That's why local government authorities often collaborate with police to handle parking administration. In many European cities, parking management is performed by city authorities in cooperation or alignment with local police. These cities employ mobile enforcement staff to ensure vehicles are parked in a safe and correct manner.

Munich, the capital city of Bavaria, with more than 1.5M inhabitants, equipped their staff with smartphones. However, they had to type in the license plate numbers to check whether a vehicle had the correct authorization for parking. For ensured accuracy, agents would type the number once forwards and once backwards. This was until recently, when Stadtwerke Munich rolled out the Anyline license plate scanner to their workforce. Not only does this reduce the time spent processing every vehicle, it also reduces errors and increases the efficiency and morale of SWM's personnel.

***"We're very happy with the mobile scanning solution from Anyline. Performing parking controls has become a lot more intuitive for our parking attendants. For us, that means that we can improve efficiency and as a result, improve the overall performance of parking control within Munich."***

Gerald Vogt, Project Manager
for Stadtwerke Munich

## Instant Messaging

In a way, instant messaging has become the de facto mobile activity. Some of the most downloaded and used mobile apps today are instant messengers. They can be used to send messages, including files and contacts, locally and internationally and enable real-time contact. You can also use instant messaging services to send a single message to a large group.

These simple features of instant messaging seem like a perfect fit for a police department. Stations can send out alerts and messages regarding ongoing investigations or emergency alerts in the case of natural disaster or terrorist attack. One of the biggest advantages of instant messaging is that it's a clear and documented form of communication, unlike radio communication. With a secure device and connection, you can also be sure that communications remain private. Instant messaging provides a closed channel for communication.

The biggest bonus of supplying your police force with a private instant messaging service is the fact they will require almost no training to learn how it works. Instant messaging is such a ubiquitous smartphone feature that your officers should already be used to communicating in this way.

***"If they are able to fill out reports in the field, if they are able to take witness statements out in the field and get all those records uploaded to where they need them uploaded – they are out in the field and staying out where they belong."***

Dave Gaucher, Federal Law Enforcement Lead,
Accenture North America Police Services [20]

[20] Gaucher, D. (2013) 'Next Generation Mobility; For More Effective Policing', Accenture, *https://www.accenture.com/t20171222T035448Z__w__/us-en/_acnmedia/Accenture/Conversion-Assets/DotCom/Documents/Global/PDF/Technology_6/Accenture-Next-Generation-Mobility-Transcript.pdf* (Accessed 28 July 2021)

## Mobile ID Scanning

In almost all modern police interactions, ID details are requested by officers. Today, almost all adults around the world carry some form of state-issued identification document. These documents are most often official state ID's, passports, driver's licenses or a form of residency card. With that in mind, it's also important to realize that police have an ever increasing amount of ID types to become familiar with. Not only do they need to be familiar with these ID types, they also need to be able to spot fake IDs or IDs that have been tampered with. And once they're certain that an ID is authentic, they still need to record the relevant information for their case by hand. The processing of ID details has similar problems to license plates. Currently, officers record the results by hand or type them into their in-car computer. In both situations, officers are required to perform the data entry step manually. Manual data entry is a time consuming and mundane task. Even worse than that, it's a second stage of police processes where info can be miscommunicated by human error. It only takes one typing mistake in the initial data gathering phase or the data entry phase for ID data to be corrupted.

Humans are far from perfect at data gathering and entry. There are many causes of typing mistakes such as stress, fatigue and distraction. And police officers have more exposure to these factors than most people. With this in mind, it's hard to believe that they should be able to perform perfect data gathering in every situation. The matter of the fact is that they often find themselves in situations where accurate typing or writing is their lowest priority.

***"Digital disruption is too great for any one organisation. Today's complex policing challenges can't be solved by the police alone."***

James Slessor, Managing Director, Public Safety, Global Accenture [21]



[21] Slessor, J. (2018) 'Police embrace digital disruption but need training to reach full potential' Consultancy.com.au, *https://www.consultancy.com.au/news/510/police-embrace-digital-disruption-but-need-training-to-reach-full-potential* (Accessed 28 July 2021)

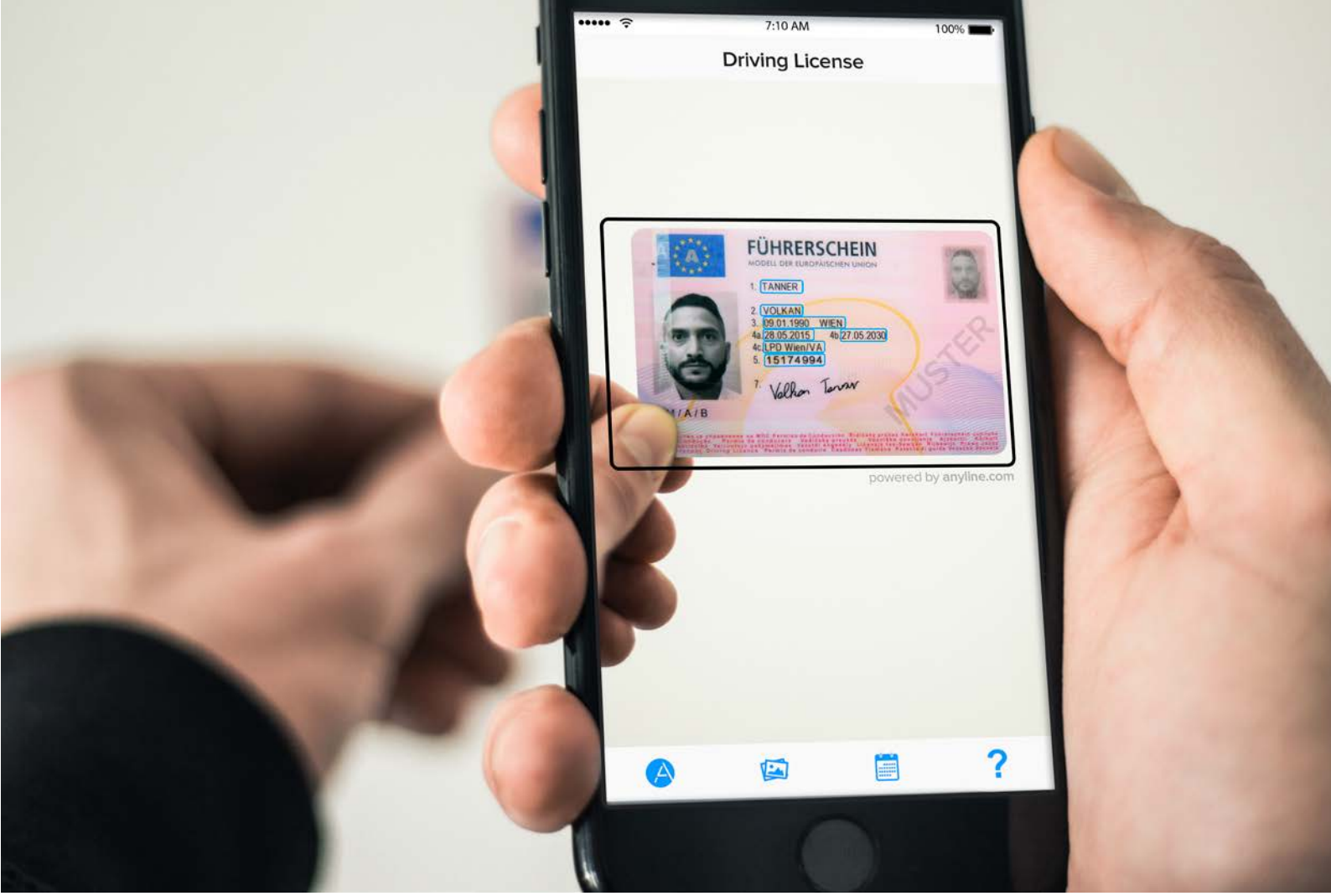
For this reason, using a mobile tool to do the boring work makes much more sense. Not only can police officers remain alert to their surroundings, mobile ID scanning is more accurate at collecting ID data. In one instant, Anyline's mobile ID scanner can read the data on the front and back of an ID, and collect all of the data it contains. This includes the name of the individual, their date of birth, address and much more.

As with license plate scanning, mobile ID scanning not only improves the quality of gathered data, it removes the need to perform manual data entry on a regular basis. This frees up time for your police force to spend in the field performing active police duties rather than at their desk.

# 07 Mobile Policing in Action Case Studies

## Ministry of Interior Brings the Power of Mobile Scanning to the Austrian Police

The Austrian Police now use Anyline's mobile OCR technology to identify people and vehicles with their smartphones. They can do this by scanning IDs, such as passports, ID cards and driver's licenses, as well as vehicle license plates. The police integrated Anyline as they recently equipped officers with iPhones. Anyline lets you input data up to 20 times faster than writing or typing. The results are more accurate reporting of license plate and ID details, real time feedback, and less time spent on manual data entry and radio communication.




The BM.I (Ministry of Interior) wanted to explore all possible ways to optimize police time. They also wanted to remove redundant processes from their workflows. They also wanted to include real time communication in their technical solutions. One of the first steps they took was to add mobile scanning from Anyline as a standard feature on all police-issue iPhones. Mobile scanning is the solution to the time and labour intensive processes that police encounter on a daily basis. These processes, such as manual data entry, take up hours of a police officer's normal work day. This time is better spent serving communities or responding to emergency calls. Anyline allows the ministry to work within a budget to make the most of limited resources in the most effective way possible.

Mobile OCR lets every police officer leverage 21st century technology throughout their work day. Mobile ID and license plate scanning removes writing and typing from reporting processes. This eliminates mistakes and typing errors. In addition, police can securely upload all scan data to their database. This eliminates the need for manual data entry later on.

## Saarland Police: Mobile Policing – Mobile Road Accident Reports

The Saarland police force are using HybridForms Police as part of the Mobile Road Accident Report pilot project. DFKI [22] (the German Research Center for Artificial Intelligence) evaluations show time-savings in the double-digit percentage range, depending on the case in question.

### HybridForms and the Digitization of Police Work

The Saarlouis police force are recording traffic accident data digitally on tablets and smartphones. This lets police use the HybridForms Police system rather than handwritten forms. The benefits include fewer errors when entering information and the immediate electronic availability and evaluation of all recorded data – and police officers have more time to look after local people.

***"The use of mobile devices to record accident protocols not only facilitates on-the-spot data acquisition, it also allows better integration of the entire administrative process. This step towards digitization can significantly reduce current processing costs."***

Professor Peter Loos,
Institute for Business Informatics of the DFKI,
German Research Center for AI and the University of Saarland

***"Testing HybridForms for traffic accident recording (VU app) at the Saarland Police has shown us that there is a considerable potential for us to exploit. We gain time and quality through the immediate, simple and intuitive recording on site using tablets and smartphones. We can avoid multiple entries, and our colleagues are inspired by the technology. In short: HybridForms is flexible, simple, and reliable!"***

Ralf Stoll, Executive Chief of Police,
Ministry of Interior, Infrastructure
and Sports, Saarland



[22] Hybridforms (2016) 'Pilot project HybridForms Police with Saarland Police at the National IT Summit' *https://www.hybridforms.net/en/hybridforms-police-national-summit/* (Accessed 28 July 2021)

## Use Photos, Notes and Sketches to Your Advantage

- Photos are taken using tablet or smartphone – no uploading needed
- Colored annotations can be added to images and maps
- Sketches can be created with the digital drawing function
- Multimedia content: Added value through photos, sketches, voice memos

## Enjoy An Optimized Workflow

- Required fields are highlighted in color to help complete the forms
- Background lookup lists and completion aids save valuable time
- OCR text recognition instead of typing in data from ID cards
- Built-in features: Faster data entry with fewer errors

## Make Use of Authentic Signatures

- Parties involved in the accident sign the forms by hand
- Signatures are written directly onto the tablet with digital stylus
- Recording biometric criteria such as pressure level and velocity

- Legally-admissible protocols: Authentic dataThe project is examining the optimization potential offered by the use of mobile devices to record traffic accident data in Saarland. They're working with a view to relieving the emergency services of administrative work.

***"76% of citizens want more online engagement with the police."*** [23]

The Proof of Concept (PoC) was conducted in cooperation with the German Federal Ministry of the Interior and Sports, the Saarland Regional Police Authority, the Saarlouis Police Station, the German Research Center for Artificial Intelligence (DFKI), Microsoft Germany, Avanade/ Accenture, LDI and IT-DLZ Saarland and icomedias.



[23] Accenture (2016) 'Tech on the beat: digital cops', The Telegraph, *https://www.telegraph.co.uk/business/leaders-of-transformation/horizons/2016-digital-police/* (Accessed 28 July 2021)

## Dorset Police in England Adopt Mobile Devices

Dorset Police introduced smartphones and tablets to the frontline of policing in their area in 2017.[24] They rolled out devices to officers to help them perform tasks quickly and with more efficiency.

They introduced laptop hybrids for officers so they can set up mobile police stations, or work in their vehicles. Officers can perform all in-office actions on their mobile device. This includes heavy data entry tasks such as producing intelligence forms. The tablets are also fully integrated with police software and systems meaning an officer or staff member can transition back and forth between tablet and computers smoothly.

While these laptop hybrids are supposed to remain in police vehicles, the smartphones officers were given can be taken into the field. They have a vast array of functions, allowing officers to take electronic witness statements and perform instant address and vehicle searches all at the same time as having live updates on current tasks. This functionality is included within a specifically tailored application, allowing seamless usage.

**The mobile initiative will drive specific benefits for Dorset policing and communities:**

• There will be less need for officers to be in stations to enter/retrieve information, increasing their time in communities.

• Direct entry of information from officers eliminates the need to double key data, increasing efficiency and allowing cost savings.

• Officers will be able to have direct access to critical information, in real time, allowing better decision making and therefore keeping both the public and officers safer.

In summary the new technology is about making policing more flexible and therefore effective, whilst also improving the quality of policing. Using smarter technologies is both cost effective to the force and will allow officers to remain out on patrol and help members of the public for longer.



[24] Dorset Police and Crime Commissioner (2017) 'Police and Crime Plan: 2017-2021' *https://www.dorset.police.uk/media/53589/pcp-2017-2021.pdf* (Accessed 28 July 2021)

## New York City - Equipping Every Police Officer with Mobile Technology

This $160 million initiative will upgrade the NYPD's mobile technology platform and fund it over the next three years, allowing the Department to outfit up to 6,000 police cars with ruggedized tablet computers, as well as provide 35,000 handheld devices to every police officer. These modern, handheld devices will provide police officers with a variety of tools, including state-of-the-art terror and crime-fighting technologies that have been developed in the last decade.

**The new NYPD Mobility technology will also include:**

**Enhanced Patrol Efficiencies** – Patrol officers will have expanded search capabilities, including access to the majority of NYPD databases, and will be able to conduct various record checks from the field in a timelier manner. The tablets and handheld devices will also have the capability of directly receiving information pertaining to 911 emergency calls, often prior to radio dispatch, enabling swift response to crimes in progress and requests for service.

**Officer Safety Features** – Real-time 911 data, including call-taker notes, the past history of 911 calls, complaints and police actions at dispatched locations will be available to responding officers. These features will help to provide potentially relevant and critical information about the location to which they are responding. Additional features, including GPS applications, are being explored.

**Detective Support** – Detectives working active cases in the field will have access to the full range of investigative databases, creating a virtual portable Real Time Crime Center. The detectives will be tied into the Department's Enterprise Case Management System, allowing them to review and update case information from the field.

**Direct and Decentralized Communications** – Wanted posters, Amber Alerts and missing persons photos can be sent to field officers immediately, thus enhancing the potential for a more timely arrest, victim recovery or rescue.

**Enhanced Communication** – Email addresses will be established for all officers to improve Department communications across the board.

**Counterterrorism Force Multiplier** – The ability to promptly alert field officers will have particular benefits for possible counter-terrorism issues. Alerts will be transmitted directly to officers in the field through their electronic devices, thus providing critical information and updates in a timely and coordinated manner.

In addition to the critical upgrades to the NYPD's in-field law enforcement capabilities, the platform will have a major impact on New York City's criminal justice system by providing real-time data and increasing the accuracy and efficiency of information sharing between the police department, local prosecutors, and other law enforcement agencies. By giving police officers in the field tools generally only available at the precinct, they will have as much information as possible to make the most informed decisions.

***"This technology funding will significantly help to advance the NYPD's move into 21st Century policing. The timely access to critical information is key to effective policing and enhanced public safety. This initiative will clearly result in more efficient crime-fighting, counter-terrorism measures, and service to the people of New York City."***

William J. Bratton,
former NYC Police Commissioner [25]

**Cost of NYPD mobile technology platform**

**$160M**

**Police cars with ruggedized tablet computers**

**6000**

**State of the art handheld devices for police officers**

**35k**



[25] NYC Government (2014) 'Mayor de Blasio, Commissioner Bratton, and District Attorney Vance Announce Major Initiative to Enhance NYPD Mobile Communications' *https://www1.nyc.gov/office-of-the-mayor/news/490-14/mayor-de-blasio-commissioner-bratton-district-attorney-vance-major-initiative-to#/* (Accessed 28 July 2021)

# 08 More information

If you're interested in learning more about managing digital transformations with mobile technology, you can contact Anyline with your questions or feedback.

## About Anyline

Anyline is a Mobile OCR solution that you can use to scan codes and text. You can add it to apps on Android, iOS and some Windows devices in just a few hours. It has predefined modules for scanning use cases such as passports, IDs, driving licenses and license plates. This means you can make an immediate start at testing it for your use case. Anyline was named as a Gartner Cool Vendor for Supply Chain Execution in 2018 for their market leading mobile OCR solutions.

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