



ARE YOU DATA DRIVEN?

WHAT'S AROUND THE CORNER?

PROTECTING DATA IN THE AUTONOMOUS AND CONNECTED
VEHICLE INDUSTRY.

MAY 2016





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ABOUT UK AUTODRIVE

UK Autodrive is the largest of three UK consortia launched to support the introduction of self-driving vehicles into the UK. The aim of the consortium is to establish the UK as a global hub for the development of autonomous vehicle technologies and to integrate driverless vehicles into urban environments.

UK Autodrive brings together leading technology and automotive businesses, forward-thinking local authorities and academic institutions to deliver a major three-year UK trial of autonomous and connected vehicle technologies.

Consortium members are Arup, AXA, Coventry City Council, Ford, Gowling WLG, Jaguar Land Rover, Milton Keynes Council, Horiba Mira, Oxbotica, RDM Group, Tata, Thales, The Open University, Transport Systems Catapult, the University of Cambridge and the University of Oxford.

ABOUT GOWLING WLG

Gowling WLG is a Global 100 legal practice, with over 1,400 legal professionals across 18 cities in the UK, Canada, Europe, Asia and the Middle East. Focused on key global sectors including energy, infrastructure, real estate, tech and automotive they are able to provide clients with deep sector expertise.

Led by Stuart Young, the award winning automotive industry group brings together technical excellence in regulatory, corporate, employment, dispute resolution, real estate, commercial and competition.

It is the only law firm playing a significant role in the UK Autodrive consortium, part of the UK government's £19 million driverless cars initiative.

METHODOLOGY AND OBJECTIVES

Are you data driven? This white paper was commissioned by Gowling WLG on behalf of UK Autodrive to get a clearer view on how data protection regulation developments will affect innovations in the development of driverless vehicles.

The UK is fast becoming a global hub for the development of autonomous and connected vehicle technologies with testing of driverless vehicles in the urban environment due to start later this year.

But is the industry being helped or hindered by data protection regulation? And how will the General Data Protection Regulation influence the sector's progress?

The research was conducted by BizWord Ltd (www.bizword.co.uk), an independent business consultancy.

Specific sources have been listed in the body of the report. We also undertook in-depth interviews with key stakeholders from the UK Autodrive consortium during March and April 2016.

To compile the report, we conducted desktop research and analysis of publicly available information, industry studies and forecasts.

We are grateful to everyone who participated for giving their time and sharing their views.

DEFINITIONS

AUTONOMOUS VEHICLE

A vehicle which is capable of fulfilling the operational functions of a traditional vehicle without a human operator.

CONNECTED VEHICLE

An automobile that connects to other vehicles and or devices, networks and services outside the car including the internet, other cars, home, office or infrastructure.

GDPR - GENERAL DATA PROTECTION REGULATION

The GDPR is a regulation by which the European Commission intends to strengthen and unify data protection for individuals in Europe.

INTERNET OF THINGS

The network of physical objects—vehicles and devices for example—embedded with electronics, software, sensors, and network connectivity that enables them to collect and exchange data.



“Apollo 11, the spaceship that took humans to the moon, had 145,000 lines of computer code. The Large Hadron Collider has 50 million. The Android operating system has 12 million. A modern car has about 100 million lines of code.”

INTRODUCTION

Autonomous and connected vehicles are just around the corner – and they run on data. Data about the road, the weather, other traffic, the car's performance, the user's location, destination and so on.

The technology already in vehicles optimises the operational driving functions. The technology in autonomous and connected vehicles will connect with the outside world to improve driving and enhance the on-board experience for drivers and passengers.

The advantages are clear to many. **Christos Tsotskas, Technical Manager at Transport Systems Catapult, told us:**

“Autonomous vehicles can unlock new markets and be an economic driver. They give people who can't travel the opportunity to do so.”

These intelligent transport systems are part of the Internet of Things and will not only increase road safety, but also help reduce congestion, improve fuel efficiency, and provide broader access to mobility.

For instance, connections from vehicle-to-vehicle will make it possible to avoid congestion, while on-board sensors and parking cameras could find you an empty parking spot. This information can then be distributed via the internet, to give a real-time overview of city parking spaces.

But the deployment of these vehicles also raises numerous questions. A report called 'Automated Vehicles in the EU' published by the European Parliament Research Service at the start of this year found that:

“Policy makers, in particular, face challenges in designing the appropriate legal and regulatory framework so that new technologies are used properly and for the benefit of society.”

Our report explores this point from a data protection perspective, particularly examining the proposed legal changes embodied in the new European General Data Protection Regulation (GDPR).

Gowling WLG, as part of the UK Autodrive consortium, wants to help the industry thrive while ensuring the regulatory environment both enables the development of connected and autonomous vehicles and keeps all our personal data secure.

We hope you find the following pages thought provoking and that they are a useful addition to the current debate.

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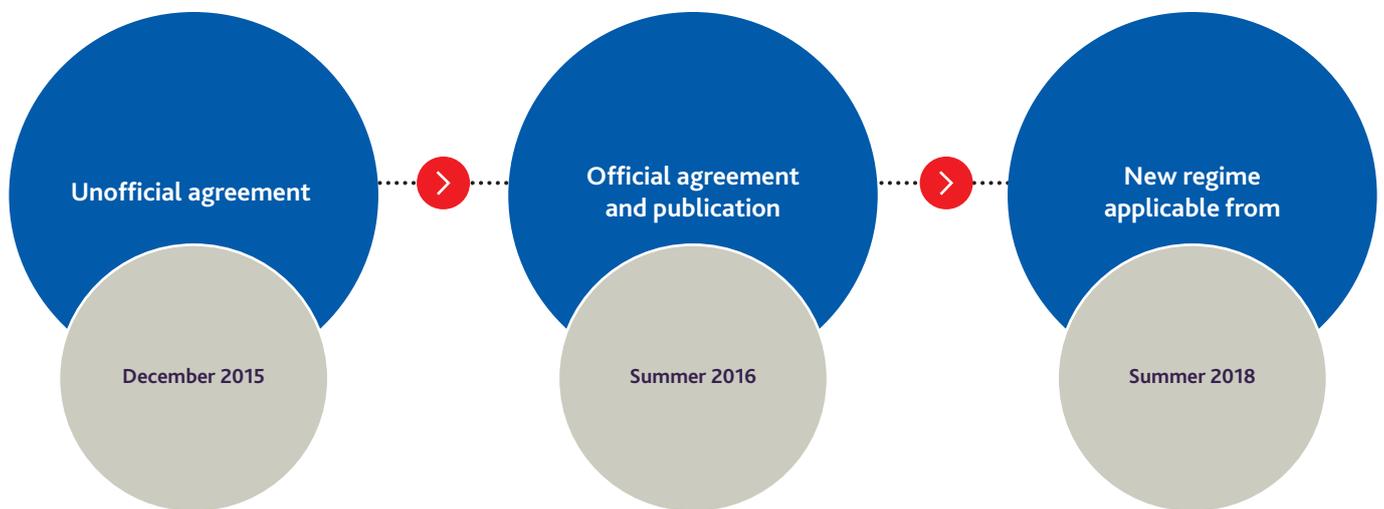
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SUMMARY

The General Data Protection Regulation (GDPR) was published on the 4 May 2016. We had seen the 'politically agreed' draft (published on the European Commission website in April 2016) and our comments below are based on this draft.



But is business ready for it, and more importantly for UK Autodrive, how will it affect the development of autonomous and connected vehicles?

The UK wants to establish itself as a global centre of excellence in the development of autonomous and connected vehicles. But the requirements of GDPR could put several roadblocks in the way.

OUR RESEARCH HAS FOUND THAT:

- While GDPR is an improvement on existing data protection regulation and certainly more fit-for-purpose in this digital age, there is still a level of ambiguity in the draft wording which may cause problems for innovative services and products like those provided by the members of UK Autodrive.
- Some of the key changes proposed in GDPR both tighten control and impose accountability on organisations which collect, store and use personal data, but there is a question mark about how practical these changes will be and how quickly businesses will be able to adopt them.
- There is concern that GDPR may come as a shock to business. The increased level of proof of consent required, for example, could mean wholesale changes to business process, with some current customer databases rendered defunct.
- GDPR makes personal data breach notification compulsory and massively increases the financial penalties for non-compliance. The large fines associated with a breach are of obvious concern, particularly if there is still ambiguity in the wording of the GDPR.
- GDPR tightens the rules on consent and privacy notices. For any data-reliant industry, like autonomous and connected vehicles, this presents both a problem and a solution. Our research shows that industry representatives want legal clarity to help them design their products, but their businesses will need to realign their processes to ensure they comply with the GDPR.
- The GDPR will usher in tougher compliance obligations combined with the potential for eye-watering fines for those that get it wrong. It is conceivable that this could suppress the appetite for research and development or any connected car related services which involve processing personal data in Europe or about European data subjects.

Mike Hawes, Chief Executive of the Society of Motor Manufacturers & Traders (SMMT) said:

“The journey is only just beginning. We must be ambitious in our vision. We must ensure the UK becomes a centre of excellence for the research, development and demonstration of connected and autonomous vehicles.”

Regulators must consider how their actions may affect the development of industries like autonomous and connected vehicles and the industry itself should be preparing now to achieve compliance.

IS THE COMPLIANCE MAP CLEAR?

Our research shows that the need for regulatory clarity is vital. Businesses in the autonomous and connected vehicle industry need to know the exact boundaries of data protection regulations in order to build technologies that are ground-breaking, practical and compliant.

According to the European Commission, the GDPR has two key objectives:

1. Ensure that data protection rules work in the digital age, putting consumers in charge of their personal data.
2. Simplify the regulatory environment for business.

So will it deliver? The answer seems to be both yes and no.

The GDPR builds on the principles of the European Data Protection Directive – but with some significant amendments and additions, **several of the most relevant changes are listed below:**



Consent is at the forefront of the changes to the regulations. The burden of proof falls firmly on the data controller to demonstrate to the regulator that consent was given. There must be no ambiguity in this consent – only fully informed and explicit consent will do.



The rules on **privacy notices** have been tightened. They must be transparent and more detailed, as well as clear, plain and intelligible. The GDPR lists a raft of additional information that must be included within privacy notices – including data retention periods.



The **right to be forgotten** (also known as Data Erasure) has been added. It will not apply in every situation but when it applies data must be purged from systems at the request of the data subject.



The GDPR applies to **data processors**, as well as data controllers. The current Data Protection directive applies only to data controllers. Under the new GDPR a processor will be directly liable. This means a huge risk shift for processors and possible consequences for service provider contracts and fees. Connected car manufacturers as well as others that collect, hold and/or access personal data could well find themselves subject to both data controller and data processor obligations of the GDPR depending on the purpose for which they collect and use personal data.



Massively increased maximum **fin**es. For example, a breach of the core principles of the GDPR could result in a fine of €20 million or 4% of total worldwide annual turnover of the preceding financial year, whichever is the higher. For any organisation, big or small, that could have a huge impact on the bottom line, not to mention reputation.

— Kirsten Whitfield, Director at Gowling WLG, thinks the new legislation may not provide this clarity:

“The new regulations are very complicated, and there is a lot of ambiguity in the wording of the GDPR. For example, you are required to notify a breach if there is a ‘risk of harm’ to the individual. There is no indication given of the threshold for this risk. You also have to notify the individual themselves if there is ‘high risk’ of harm. Again there is no indication given of the difference between the two ‘levels’ of risk.”



The definition of **personal data** has been augmented. If a person can be ‘identified directly or indirectly in particular by reference to an identifier such as name, identification number, location data, online identifier, factors specific to physical, physiological, genetic, mental, economic, cultural or social identity’ then the data in question will be counted as personal data.



Data controllers must notify their regulator of a **breach** ‘without undue delay’ or within 72 hours if there is a risk of harm to individuals. If this time limit isn’t feasible then a ‘reasoned justification’ must be provided. And processors are obligated to inform controllers of any breaches and assist the controllers with breach notifications. Contracts with data processors must contain minimum security requirements. So, for a service provider, pointing out a breach could well mean pointing out your own breach of contract to your customer.



The **jurisdiction** is significantly extended. The GDPR will apply to all organisations outside of Europe if they are targeting goods and/or services at people living in Europe and/or profiling their data. To make it easier for European regulators to come after them they are also required to have a representative in the country where the data subjects live.

Anyone who works with the Data Protection Act 1998 will realise from these points that the GDPR is a significant regulatory development.

Martin Hill, Chief Technologist for Information Exploitation at Transport Systems Catapult, believes there will have to be further legal clarity to help his work:

“The current legislation uses words like ‘reasonable’ and this ambiguity can cause problems. What is reasonable as far as protecting people’s data is concerned? We need to know exactly what the legislation wants so we can protect the data we use.”

A very real threat associated with this ambiguity is that businesses could face a substantial fine. Particularly at risk are businesses such as those in the UK Autodrive consortium who not only need to be compliant themselves, but also need to be assured of their partners’ compliance.

Kirsten’s advice is:

“Every business needs to have the GDPR flagged as a material risk at Board level. Appoint someone senior and experienced to do the data protection thinking for the business and always build it into new product development.”

IS THE REGULATORY ROUTE PRACTICAL?

There is universal agreement that current data protection regulations are out of date. Digital technology has developed dramatically since 1998 and the arrival of social media has made protecting our personal data vitally important to us all. So there is no question that data protection regulation needs to change.

But how easy are the changes proposed by GDPR going to be for businesses, particularly those involved in the development of autonomous and connected vehicles? Some of the key points are discussed opposite.

CONSENT

The European Commission's Eurobarometer on data protection published last year showed that of the 28,000 people surveyed, more than 19,000 thought their unequivocal approval should be required in all cases before their data is collected and processed. The GDPR has responded to this by tightening up consent requirements – when consent is needed it must be explicit, specific, informed and unambiguous consent.

Any journey to/from home in a connected vehicle will enable identification and tracking of individuals and so will involve collection and use of personal data. The route is important for journey planning and may be used by:



And so on

In some cases, requiring consent to use the data and in others not – dependent on who is using what data and for what purpose.

For example – the police might want to use location data to track a getaway car – they might need a warrant but they don't need consent from the getaway driver.

On the other hand, a commercial partner who has 'purchased' access to the data would most likely need consent to be able to send marketing directed at individuals into the vehicle. "Hello driver. We noticed you are coming up to our 'grab lunch and go' drive-through and it's lunchtime!" might well become a common in-vehicle 'pop up' message.

The operation of the GDPR (and current data protection laws for that matter) combined with European electronic direct marketing laws will mean that in many European countries the 'marketer' would need to have obtained consent to send this message and according to the GDPR it will need to be freely given and absolutely explicit, informed (ie long privacy notice) and unambiguous.

Not every use of personal data under the GDPR will need consent. Some will. For example, profiling that will have a significant impact on the profiled individual will require the individual's consent. Could increased insurance costs therefore be a significant impact – yes very possibly. In which case, consent to this profiling would be needed and getting this could be impractical.

The impact of this on the autonomous and connected vehicles industry could be far-reaching. Imagine you had just got into your driverless vehicle to go to the shops. In theory data protection consent requirements could mean you spend the first ten minutes of every journey going nowhere, because you're ticking consent boxes.

Delizia Diaz, Legal Counsel and Data Protection Officer at Jaguar Land Rover, said:

“Relying on consent as the sole “legal justification” for all data use cases would be extremely difficult and un-user friendly for autonomous vehicles. Other legal justifications for handling personal data are available and may, in certain circumstances be more adequate in an autonomous vehicle environment. In our view, there needs to be some level of mandatory data sharing for autonomous vehicle infrastructures to operate.”

This view was supported by other parties who were interviewed.

But how easy will it be for the industry to mandate the amount of data they need legally? They will need to make a case that stresses both a functional and safety requirement.

“The manufacturers would have to provide very clear justification for regulators to consider legally mandating personal data sharing,”

said Kirsten Whitfield at Gowling WLG.

Soon both self-drive cars and self-driving pods will be tested in Milton Keynes. Once the scheme is up and running, members of the public will be able to phone and book a pod.

A representative for the local authority, told us:

“Under the old Act the fact that you had phoned and said you would like to book a vehicle would be regarded as consent.

The new regulation requires much more than this. I will be busy up to 2018 if for no other reason than recording consent to prove it has been given.

We will need new systems to do this and have to store a lot more data. With new legislation it is always a problem to marry up what is written with what happens practically.”

PRIVACY NOTICES

Privacy notice fatigue is a clear problem for data protection regulators – and Eurobarometer found that...

80%
of people don't read them.

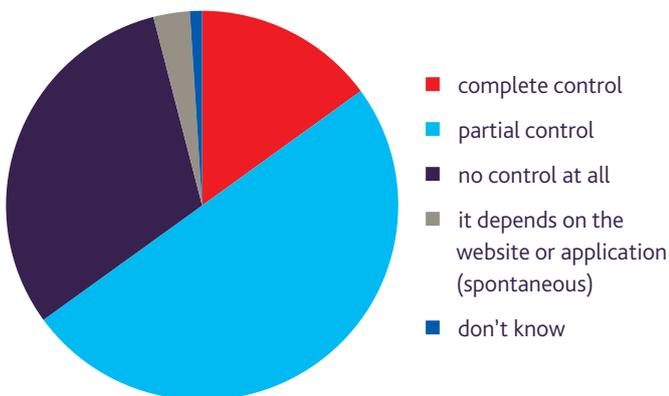
These notices are becoming too long and complicated for people to follow. In the context of autonomous and connected vehicles you might have 20 organisations involved who may get to see your data, but you don't want 20 privacy notices.

— Kirsten Whitfield at Gowling WLG adds:

“This is why our UK data protection regulator, the Information Commissioner's Office (ICO), is consulting on this topic. One possible solution is to use standardised icons to represent the different parts of the privacy notice. So perhaps those working in the connected car sector should be thinking about how they can represent their safety features and other connected car uses of personal data using symbols, and then how to get these internationally recognised.”

PERSONAL DATA

All interviewees believe that personal data has to be collected for autonomous and connected vehicles to work properly. But there is a significant level of consumer uncertainty surrounding the use of this sort of information. The Eurobarometer asked respondents how much control they felt they had over the personal data they provided online and the results were stark, with only 15% of the public saying they felt in complete control.



This nervousness is acknowledged by those developing autonomous and connected vehicles.

Mark Cund, System Engineer at Jaguar Land Rover said:

“Any data collected on behalf of the customer is used strictly for purposes which has been notified and consented by our customers. Looking forward, we will be completely clear with our customers on what information we will collect and how it will be used.”

REGULATOR ATTITUDE

The GDPR is a Europewide regulation, but it has a built-in capacity for local variation and it is likely that there will continue to be differences in the way local regulators approach compliance.

The ICO in the UK is widely regarded as highly pragmatic in its approach to regulatory enforcement.

Kirsten Whitfield comments:

“Regulators across Europe will be used to their way of doing things. It will be hard to take a strictly uniform approach to enforcement and interpretation of the GDPR by regulators. The GDPR introduces the ‘one stop shop’ mechanism (ie where a lead regulator makes enforcement decisions). Introduction of a data protection Board made up of European data protection regulators will help with harmonising application of the GDPR.”

So the approach for those developing autonomous and connected vehicles needs to be cautious rather than complacent.

Stuart Young, partner at Gowling WLG, summed it up by saying:

“Vehicle manufacturers are going to have to start thinking like social media providers – like the Googles and Facebooks of this world. They will need to employ all the tools they use, like privacy notices and location-based consents, and be very aware that data protection compliance should not be taken lightly.”

INNOVATION ROADBLOCK?

UK Autodrive aims to establish the United Kingdom as a global hub for the research, development and integration of autonomous and connected vehicles into society. The government's innovation agency, Innovate UK, has provided £9.2 million towards the UK Autodrive programme, with other significant contributions from consortium members bringing the total investment to more than £18 million.

— Christos Tsotskas at Transport Systems Catapult said:

“Innovation is about trying to make the rules work better for you, while being legal at all times. The best innovations are the ones that can translate the law. Every year in Formula One the rules change. But every time the manufacturers produce better vehicles. Organisations have to be dynamic while making sure they are operating legally.”

But do the data protection laws as they currently stand, and the new GDPR, help or hinder the development of new products like autonomous and connected vehicles?

Our research has found that a well-defined legal framework helps innovative industries work smarter.

Mark Cund at Jaguar Land Rover commented that:

“Our aim is to deliver new connected and autonomous car features to our customers safely and securely. Cyber-security and privacy are top priorities and Jaguar Land Rover engineers incorporate security solutions into our vehicles from the first stages of design and production.”

There are, however, two apparent hurdles for those developing these vehicles that could stifle innovation.

1. How to ensure that everyone involved in the “data supply chain” is equally compliant.

Martin Hill at Transport Systems Catapult commented: “As the Internet of Things appears in the transport industry, so our world gets more complicated. This links organisations together from a data perspective, but do those two businesses really know what the other one’s privacy controls are like? It could take a while for organisations to trust each other.”

This brings us back to a basic problem with data protection compliance i.e. a lack of clarity in the rules. “Data protection compliance currently and under the GDPR is not an exact

science. After 20 years of the Data Protection Directive, organisations have found practical, tried and tested ways to work with data protection laws. There is bound to be a lot of ‘trial and error’ to comply with new provisions introduced by the GDPR,” Kirsten Whitfield at Gowling WLG believes.

So it may be difficult for individual businesses within a data supply chain to know if other members of that chain are compliant.

2. How to get the level of mandatory data sharing that technologists and manufacturers believe is necessary to make the vehicles work.

From the industry’s point of view, there is a real case for making it a legal requirement to share some personal data. So, if you buy an autonomous vehicle, or hire a pod from a local provider, for example, then you have agreed to allow them to access your location data.

The question is whether the regulators will help the industry out by making it into law? The process would be difficult, but there is precedent to help them in this area – namely eCall.

This is a European initiative that brings rapid assistance to motorists involved in a collision anywhere in the European Union. A year ago, the European Parliament voted in favour of installing the technology in all new cars from April 2018. In the event of a serious accident, eCall automatically dials 112, Europe’s single emergency number. It can also be triggered manually by pushing a button in the vehicle. eCall, however, carries strict limitations – it will only transmit the data that is absolutely necessary and information only leaves the car in the event of a severe accident and is not stored any longer than necessary.

Those developing autonomous and connected vehicles will have to specify their exact needs and back-up every demand with hard facts in order to have anything akin to eCall in their armoury.

A recent report by KPMG titled: ‘Connected and Autonomous Vehicles – the UK Economic Opportunity’ concluded that the automated and connected vehicle industry represents an important opportunity for our economy, but that there is substantial effort needed to really make it work. One of the key areas requiring attention is regulation.

John Leech, UK Head of Automotive at KPMG, commented: “Policy makers need to develop regulatory frameworks to allow the industry to flourish. The UK benefits from its legal framework and tradition. Privacy, liability, cyber security and telecommunications standards nevertheless need to be developed and the UK’s continued membership of the EU is helpful in this regard.”

THE WAY AHEAD

The long-term benefits of automated transport systems are expected to be considerable.

Human error is estimated to be a factor in...

90%

of today's road accidents, so autonomous and connected vehicles should significantly improve safety.

Fully automated systems are also expected to reduce the numbers of vehicles on the roads and result in increased fuel efficiency, leading to both environmental and societal benefits.

But even when the technology is ready there are roads to navigate to make them a reality and data protection regulation is one of these.

Our research shows that those working at the "coal face" of this industry require clarity from the regulators. Data and how it is shared, is at the heart of autonomous and connected vehicles so the changes proposed in the GDPR could have a significant impact on the work of organisations like UK Autodrive. Those making and enforcing the GDPR must consider how their actions impact innovation.

The wording of the GDPR responds to these statistics by tightening the rules on consent. Those developing autonomous and connected vehicles must be mindful of the public's anxiety about losing control of their personal data, and be realistic in their approach to mandatory data sharing.

Brexit could also introduce a few potholes. The work of UK Autodrive will continue whether the UK is in, or out of, the European Union, but a no vote may have a negative long-term effect on the industry and the development of appropriate regulations.

— Kirsten Whitfield at Gowling WLG explains:

“A no vote will probably mean we'll behave similarly to countries like Switzerland and implement equivalent laws, like the GDPR, when they come out. But we won't have any say in the making of the laws.”

The industry itself needs to work hard to allay the public's fears over how its personal data will be used.

Eurobarometer found that more than...

70%

of people thought that providing personal information is an increasing part of modern life and accepted that there is no alternative if they want to use products and services.

But...

2/3

of respondents were concerned about not having complete control over the information they provide.

So where does this leave those developing autonomous and connected vehicles and in fact, any business that uses data? What do they need to do to make sure they are prepared for the GDPR when it is finally published this summer?

Firstly, they need to make sure they have a Data Protection Officer and are closely monitoring the progress of the GDPR. And secondly, they need to have a full understanding of the personal data they currently process, and their existing compliance levels. As a result of this, they may need to update existing policies, training, privacy notices and consent forms.

Once the basics for current compliance are in place, organisations need to turn their attention to updating policies and privacy notices and consent forms for the GDPR and putting in place new policies, documentation and training for new requirements introduced by the GDPR.

— Stuart Young at Gowling WLG adds:

“Data is the fuel of connectivity. Automotive technology significantly outpaces our regulation and we must all work hard to ensure that the legal environment responds to our needs for innovation just as much as it responds to society's need for privacy. If vehicles cannot share data with other vehicles and the infrastructure then we will miss a great opportunity to improve mobility for all and reduce the environmental impact.”

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