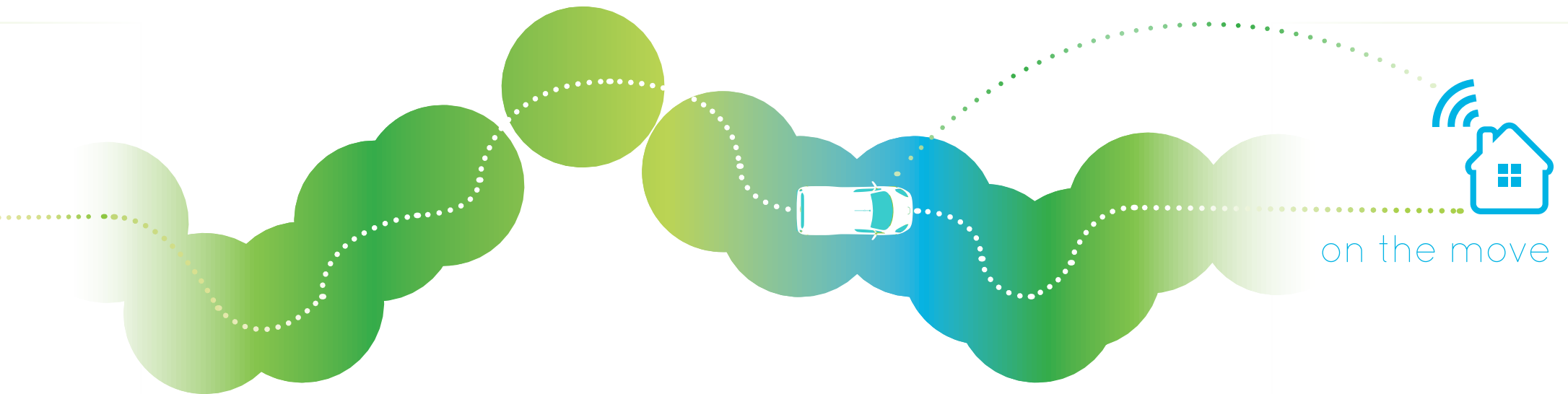


GEO SPATIAL INTELLIGENCE



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ABOUT
Quocirca

Further Information:

Ebook title: Geospatial
Intelligence On The Move.

Author: Clive Longbottom,
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GEOSPATIAL INTELLIGENCE

on the move

Your engineer is all tooled up. In their van is a massive toolbox, stuffed full of everything they need to fix whatever they come up against. They have a location that they are going to and a satnav in the van to get them there. They have a copy of all plans of every model of every item that your company has ever used. What could possibly go wrong?



Nothing much apart from the engineer getting to the right place – but then not being able to find the thing they are meant to be fixing because they do not have the right information in the right form to find that exact item. Maybe they should be fixing a valve on a pipe – the trouble is, there are 3 valves all looking identical. Maybe they need to fix a street light – but all the identifiers on the lights are so old that they are illegible.

Maybe it's a different kind of field force. Maybe it's social workers who need to make sure that they are dealing with the right people; maybe it's first responders who need to have access to contextually meaningful information.

Whatever it is, access to data that has the right geospatial context is becoming far more important.

By having access to a centralised geographic information system (GIS), valuable context can be added to an organisation's existing data assets which can be accessed by any mobile worker, including the field force. On top of all the basic things, such as providing visual mapping of where something is and instructions on the most time effective means to get there, more important information can also be made clearer and less open to being misused.

For example, where there are multiple identical assets, many of these could be at different 3-D coordinates. In the above example of the three valves, the valves may be on three different pipes at three different depths – geospatial data enables that to be made clear. Tying in other identifier information, such as bar codes or serial numbers held with the asset can then make this all multi-layered to prevent accidental work on the wrong assets.

CASE STUDY

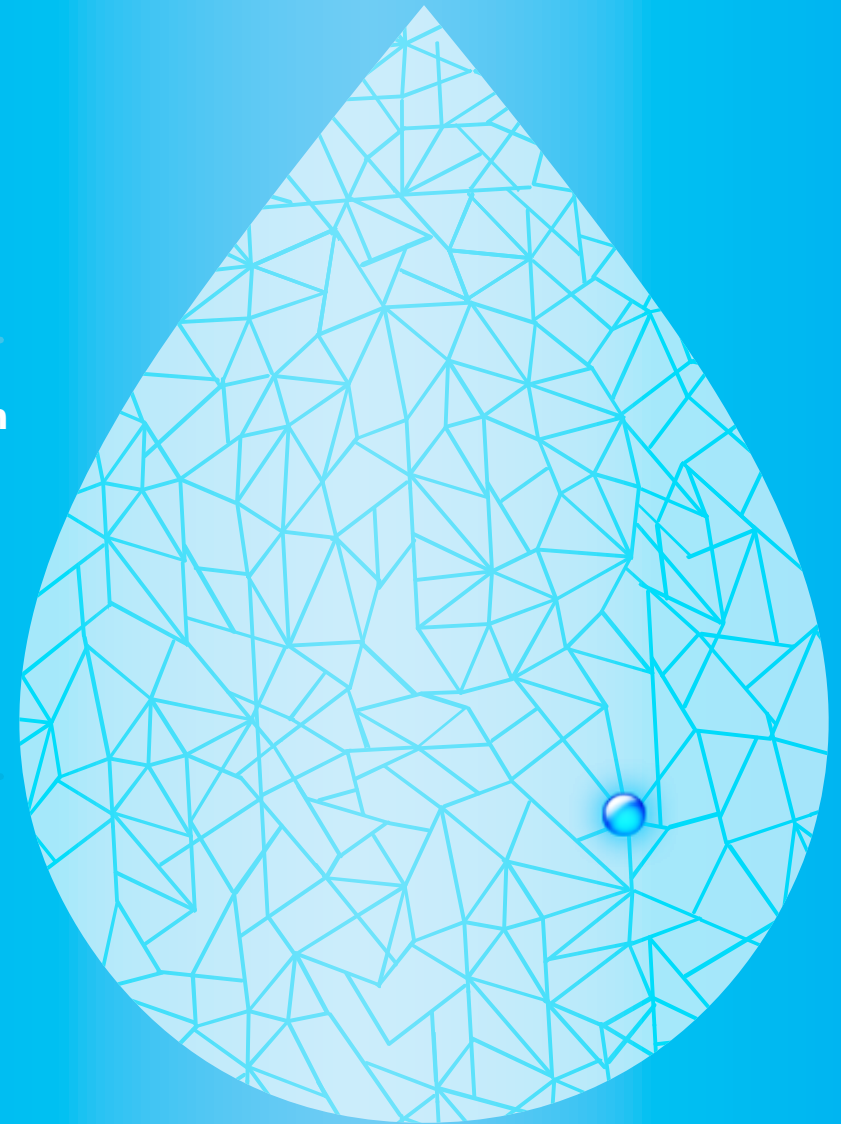


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One of Thames Water's new GIS developments is the integration of Esri's ArcGIS into the organisation's SAP customer relationship management (CRM) system. Now, for the first time, when customers contact Thames Water, call centre agents can locate the caller, identify assets in relation to that customer's address and easily see any outstanding maintenance activities. This information makes diagnosing customer issues easier.

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In addition, Thames Water has used the ArcGIS platform to exchange accurate asset and location information with its mobile engineers, surveyors and field workers. When they launch their ruggedised laptops, ArcGIS Mobile automatically opens at their location and enables them to enter information about the job in hand. Any asset updates recorded in the field are automatically audited and transferred to the central asset database, where they are visible to everyone in the company.



MOBILE GIS BENEFITS

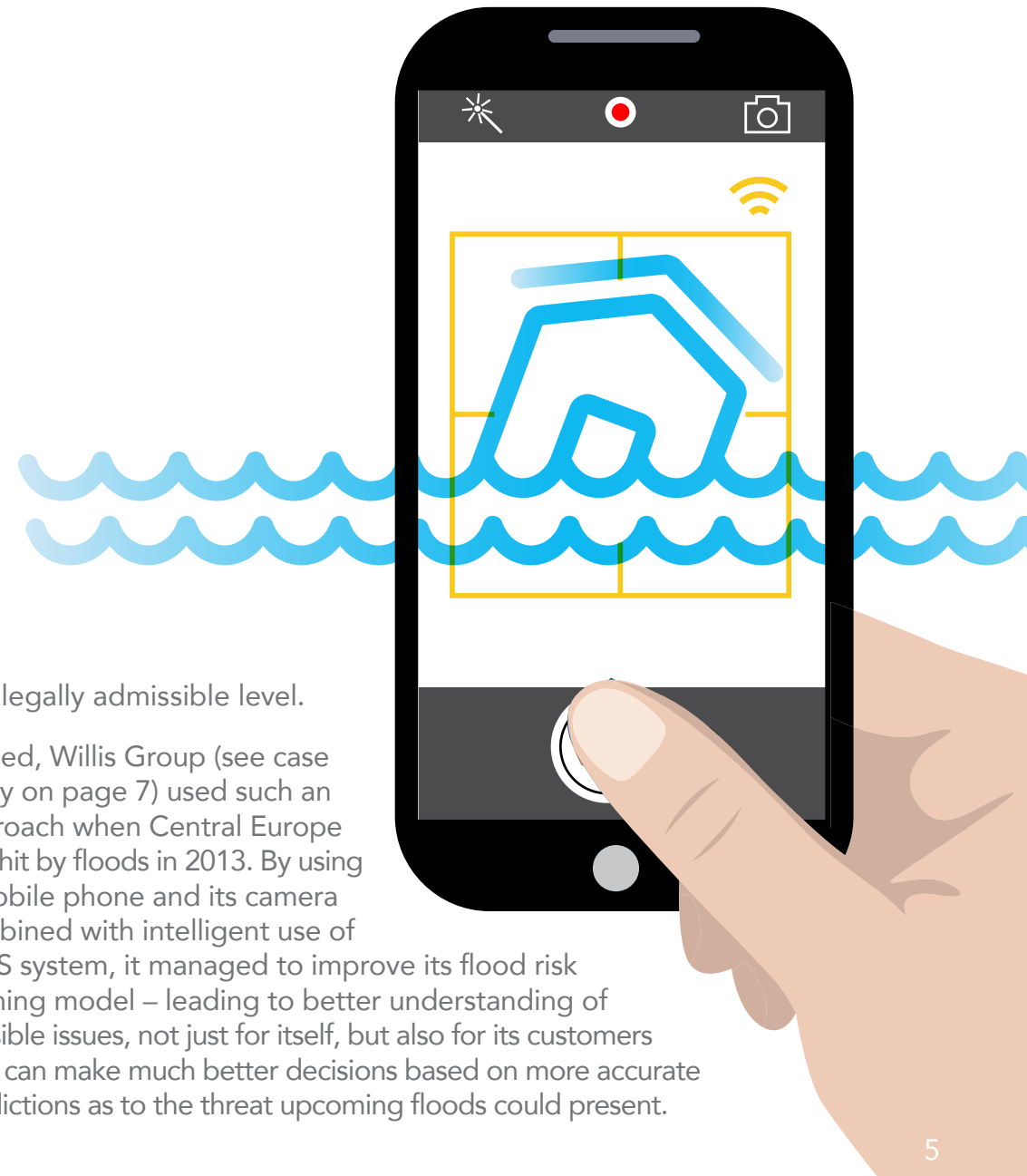
What is clear is that nearly all workers now have mobile devices. Even where the employers are not kitting out mobile workers with special, hardened and ruggedised field systems, they will have a business or personal smartphone, a tablet or a laptop. So much value can be added to how these employees work that it would be crazy not to do so.

The benefits are two-way: for example, with the Westminster City Council case study (following page), by the simple use of drag and drop symbols, information is updated to the central systems, so that office-based staff can run reports and see exactly what is happening and what the progress of any particular job is.

Mobile users can use the cameras on their devices to add information – for example, insurance investigators can take photos of flood damage with all the data being logged with exact location in three dimensions. First responders can take photographs of accident sites with the context of each photograph being maintained – even at a forensic

and legally admissible level.

Indeed, Willis Group (see case study on page 7) used such an approach when Central Europe was hit by floods in 2013. By using a mobile phone and its camera combined with intelligent use of a GIS system, it managed to improve its flood risk warning model – leading to better understanding of possible issues, not just for itself, but also for its customers who can make much better decisions based on more accurate predictions as to the threat upcoming floods could present.



CASE STUDY



City of Westminster

PLANNING & CITY DEVELOPMENT

Westminster City Council has been using a geographic information system (GIS) from Esri UK for many years. Using the council's existing licence for Esri's ArcGIS platform, the team was able to take advantage of Esri's ArcGIS Online and ArcGIS Collector App to create a new mobile data collection service. It then borrowed tablet computers from other council departments, enabling it to get up and running for almost no capital cost.

The new mobile surveying solution was introduced in the summer of 2015, allowing surveyors to plan their routes around London and complete their surveys electronically for the first time.

At each site visited, surveyors selected from a range of symbols, such as green flags, to indicate if projects were progressing as anticipated. When the tablets were connected to Wi-Fi, the survey data was transferred almost instantaneously to ArcGIS Online, allowing colleagues in the office to monitor the surveyors' progress.

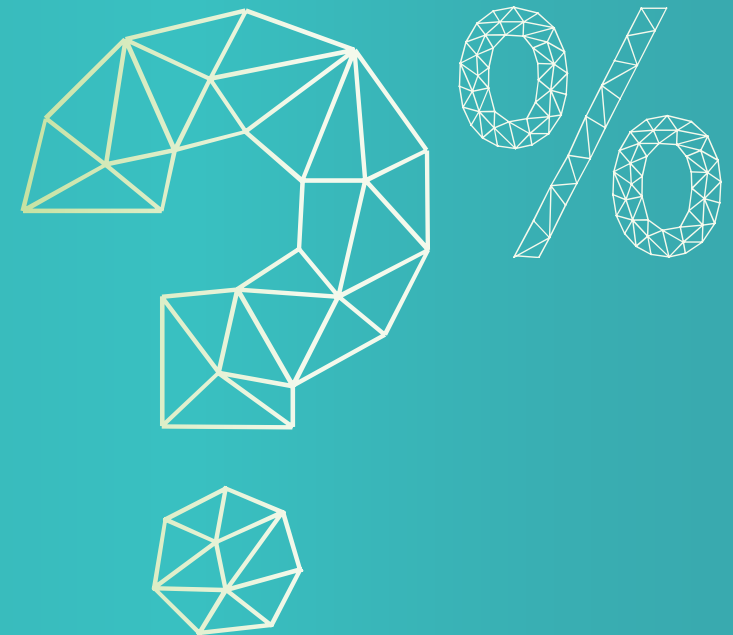


CASE STUDY Willis Group

The use of Esri's ArcGIS Collector App enables Willis to collect accurate information about flooding and make it accessible almost immediately to its analysts in offices around the world. Timothy Fewtrell, Divisional Director for Catastrophe Risk, believes that this ability to share real-time insight is incredibly valuable to the business. He says:



WHEN OUR ANALYSTS CAN GAIN RAPID VISIBILITY INTO WHAT IS ACTUALLY HAPPENING ON THE GROUND, THEY CAN MONITOR RISK VERY CLOSELY AND PROVIDE WELL-INFORMED ADVICE TO CUSTOMERS.



Using the information gathered during the 2013 ground survey, Willis was able to develop detailed reports about the natural disaster, which were valued by customers. "We were able to show our customers that we really understood

the dynamics of that particular flood incident," Fewtrell recalls. "We could give them the detailed information they needed to help them assess damage claims more appropriately and make future policy decisions."

OUT OF THE BOX

MOBILITY INTELLIGENCE

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Colas, a road maintenance company, is also using mobile GIS to its benefit. It has a need to survey sites before any project is started – and then to monitor and report on progress as the project progresses. A field survey is carried out using ArcGIS on an iPad tablet, in real time. Data accuracy has been much enhanced as it takes fewer steps to get the data to where it is needed and therefore manual transcriptions from paper to electronic systems are avoided.

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Another aspect of how Colas works is in repairing damage after an accident. This is, however, far more complex than it may seem. Certain parts of the accident scene will be owned by the body that has contracted Colas, whereas other parts may be covered by a different body and contractor.

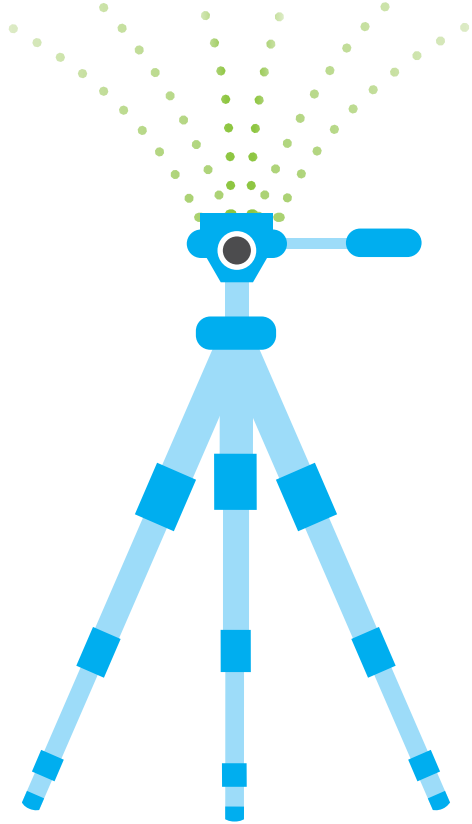
As such, Colas must ensure that it only works on what it has responsibility for. Working on areas that fall under another company's remit could not only lead to not being paid for the work, but it may also find that should any issues arise, it does not have the requisite insurances.

By having all the right information available on site in real time – and being able to send site information back to a central location in real time – Colas field workers are far more productive and effective than they have been in the past.

The keys to such effective geospatial intelligence are really rather simple:

- The system chosen must be able to support mobility out of the box. Having to write code systems makes it all far too laborious and the costs for support increase.
- Must be able to support rapid deployment of both web and native mobile apps out of the box with no coding – which means that the system has to have a sufficient commitment to on-going support for existing and future devices and upgrades. Rapid deployment and straight-forward configuration enable low-risk enhancements to the system to ensure it becomes optimised quickly, delivers a strong ROI and remains optimised in the longer term.

Mobile geospatial intelligence can add distinct, direct value to a business. As well as hard value in the form of more effective and efficient services, there are softer benefits in higher levels of customer and employee satisfaction.



GEO SPATIAL INTELLIGENCE on the move

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About Quocirca

Quocirca is a research and analysis company with a primary focus on the European market. Quocirca produces free to market content aimed at IT decision makers and those that influence them in business of all sizes and public sector organisations. For more information, please contact:

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