FROM PAPER TO PIXELS

TRANSFORMING FIELD DATA COLLECTION WITH DIGITAL MAPS

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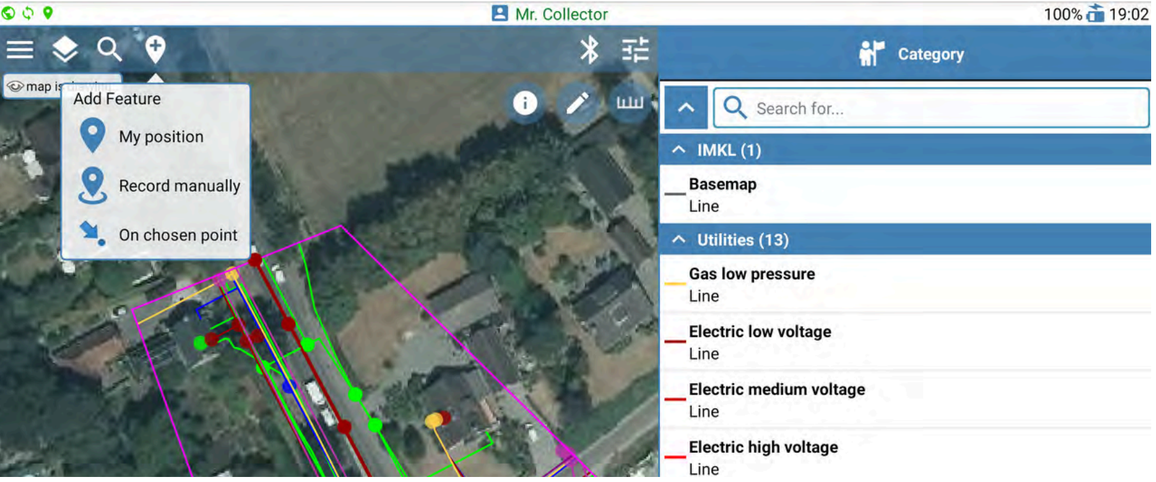
PelicanCorp *DIGITISING THE UTILITY INDUSTRY*

SUMARY

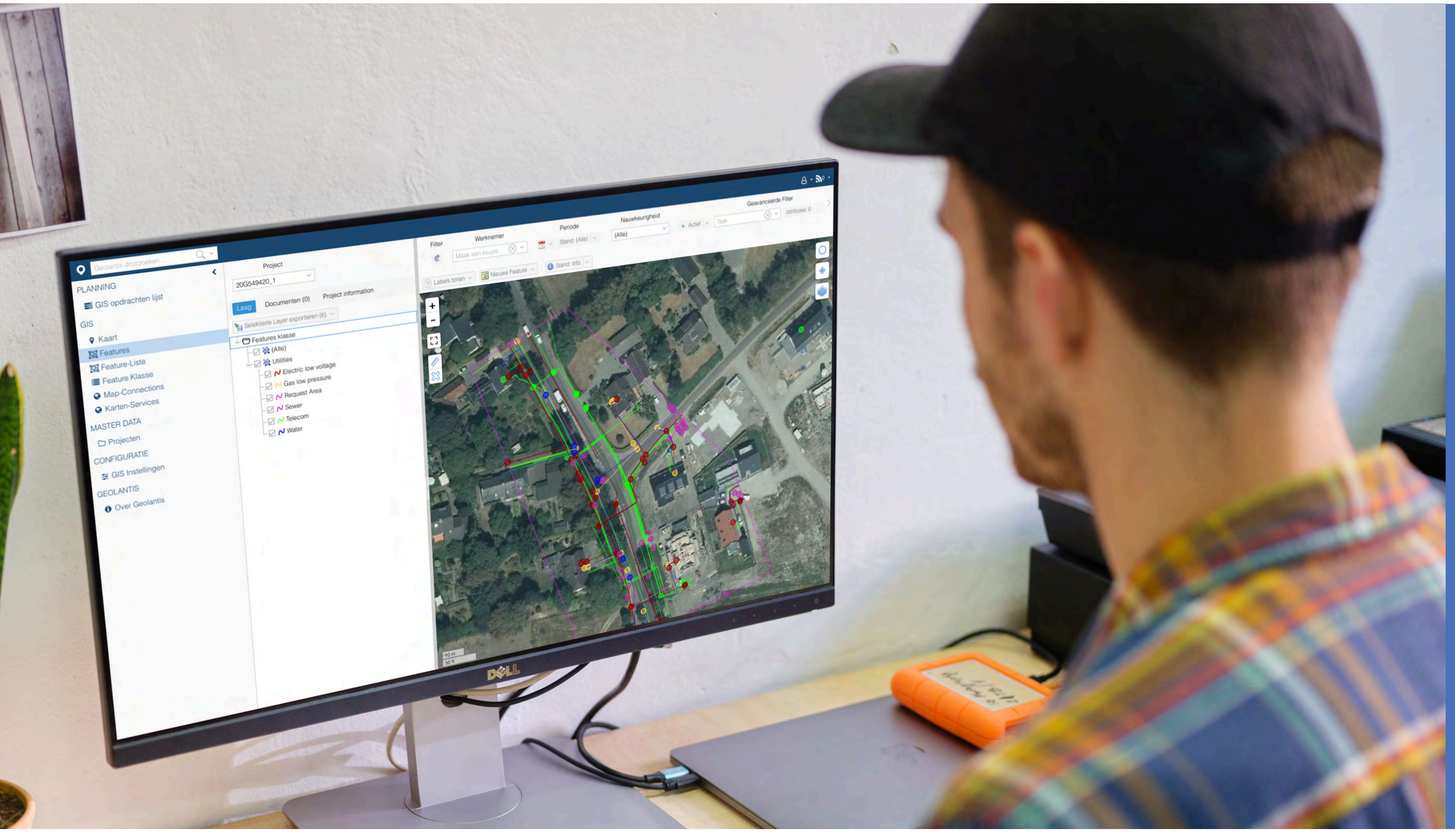
In recent years, the digitalisation of the utility industry has accelerated. Many companies invest in equipment and software to map & document their assets and make their internal workflows leaner. There is a strong demand for more accurate, efficient methods to stream data into asset management systems.

Even as more companies use digital methods to capture data, there remains a significant challenge in efficiently exchanging data between the office and the field.



Still, the majority of utility network operators and their contractors use a series of manual steps to transfer data to and from the field. In many cases, a paper-based workflow is in place. This is a painstakingly slow and error-prone workflow.

COVID-19 has been a catalyst for further acceleration of digitalisation in the industry. Digital communication and data exchange have become a must. This article shows how the utility industry can utilize digital platforms to manage and streamline its documentation workflows.



DIGITAL ONE-WAY

Utilities rely heavily on their GIS systems to keep their asset records up to date.

In recent years, they have started investing in mobile GIS or mapping tools. Most of them stop at the 'geographic levels' (low resolution), and they do not integrate CAD or engineering precision, which most of their contractors use.

Cloud-based

Accurate

Fast

User friendly

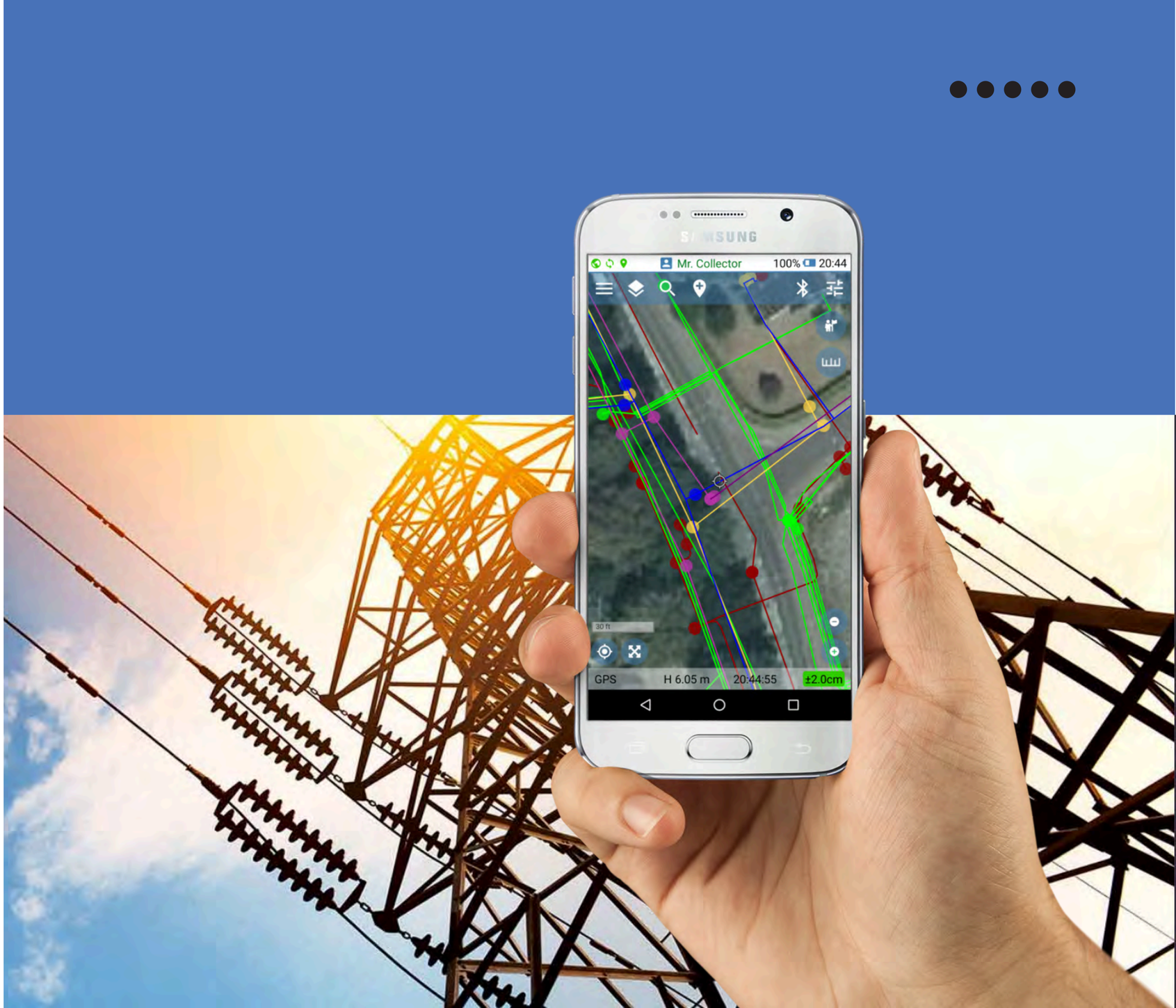
Secure

Affordable

Currently, these tools are adopted only sparingly across enterprises. However, the widespread use of high-precision GPS is on the rise as the technology becomes more affordable, making it increasingly accessible for field workers. Equipping more staff with this innovation marks a step toward digital transformation.

That said, many third-party or legacy vendor data collection tools operate as one-way digital solutions. They often lack integration with field notes or media-rich documentation, such as photos, which limits their functionality.

Surprisingly, over 75% of enterprises still rely on paper forms and standalone digital cameras to document fieldwork. Meanwhile, tasks and instructions are often delivered through separate enterprise systems, emails, or, in some cases, outdated paper copies. These practices create inefficiencies, leaving gaps between office and field operations and between utilities and contractors. Instead of fostering a seamless, interconnected workflow, many organizations find themselves stuck in a digital one-way street rather than navigating an actual digital roundabout.



Understanding

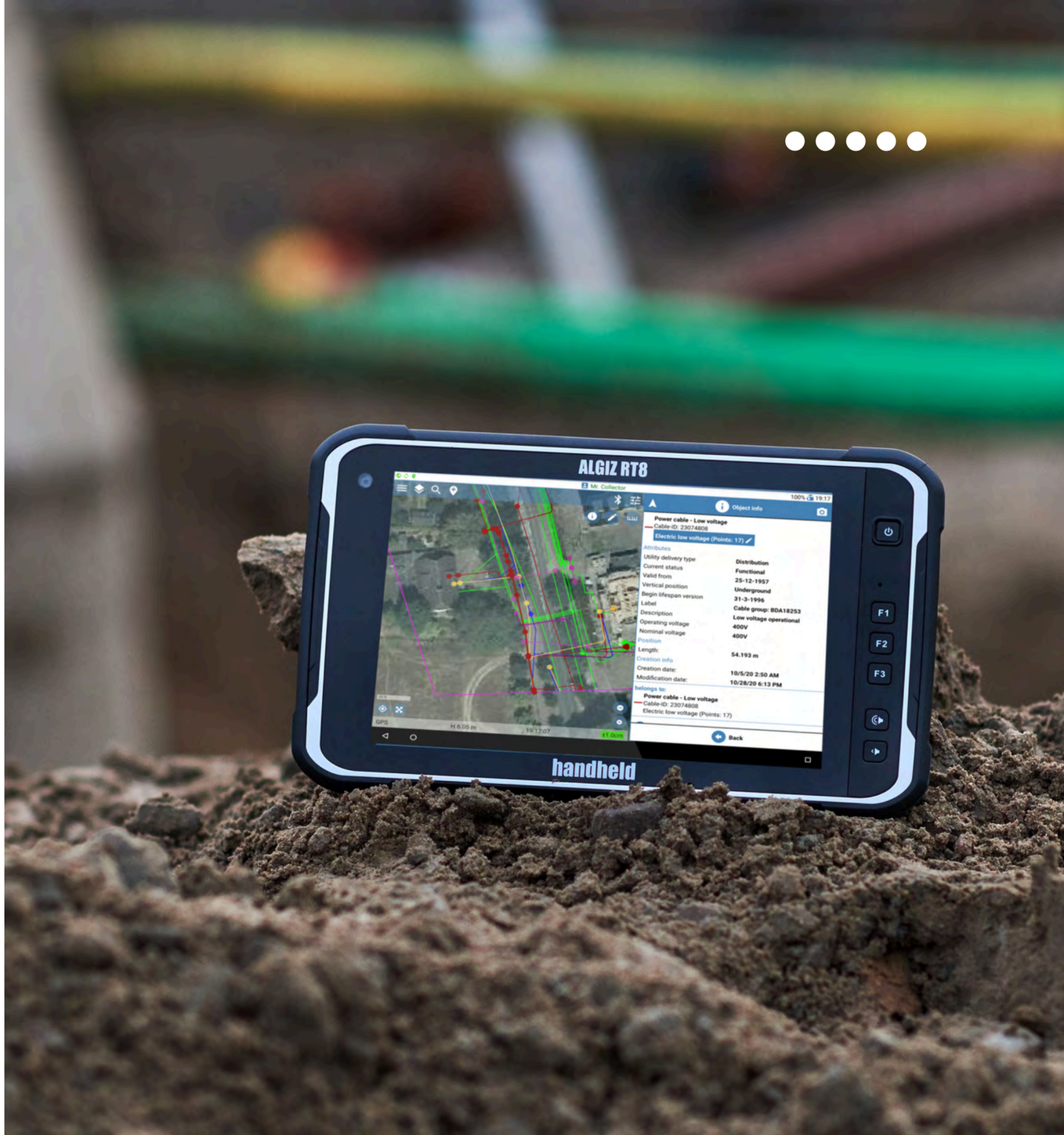
INDUSTRY CHALLENGES

Having access to accurate maps, project details, and clear instructions is essential for completing daily tasks safely.

Accurately identifying the location of assets, especially those buried underground, is an increasingly critical task for utility companies. While some countries require precise documentation of underground infrastructure, most countries still primarily rely on locating and spray-painting as the standard method.

Traditionally, the process for locating assets involves field crews using utility service locators to detect underground assets. They then mark the positions with spray paint and record key measurements, such as frequency, signal strength, and depth, often on paper. A surveyor is then separately tasked with precisely plotting the point location. Later, these two sets of data are combined in the office and integrated into the asset owner's GIS.

As the industry shifts toward digital data capture, whether driven by cost-efficiency pressures or new legislative requirements, utilities and their contractors face several obstacles. These challenges, which can be technical, personal, or organizational, must be addressed to ensure a smooth transition to modern practices.



THE CHALLENGES

Current workflows for asset documentation are inefficient, error-prone, and costly. Riddled with manual steps and involving multiple parties, these processes create communication overhead and require constant clarification. As a result, compiling the final as-built documentation can take 20 to 90 days, and the final product is often inaccurate.

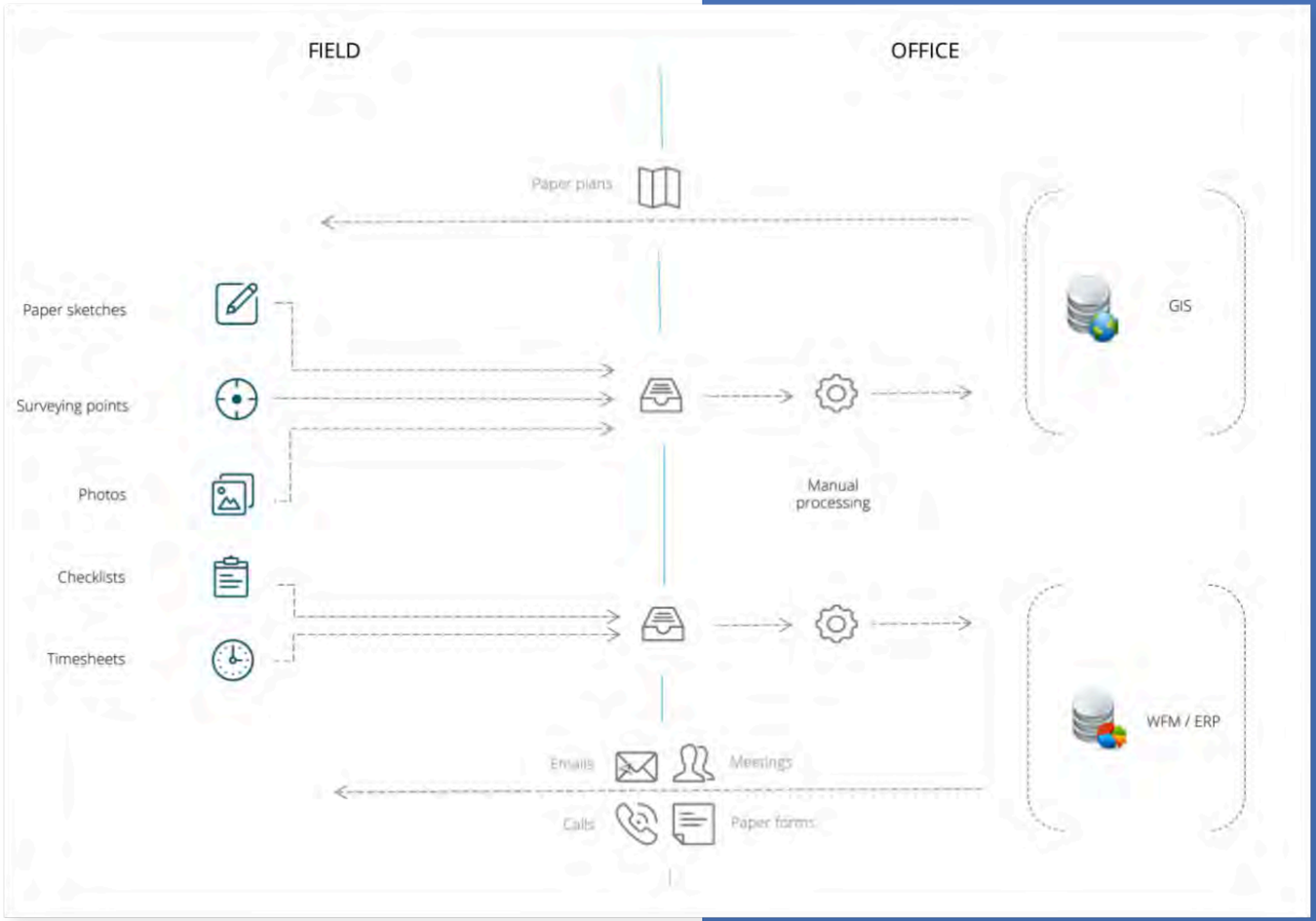
Even when digital tools and mapping equipment are used, legacy applications are poorly suited for the enterprise environment. These are often bulky, stand-alone tools that demand expert knowledge and extensive training. Furthermore, field crews can frequently adjust the data capture catalogue, resulting in time-consuming data re-adjustments in the back office.

There is an urgent need for a solution that empowers utilities and their contractors to document assets quickly, accurately, and efficiently.

LEGACY WORKFLOWS

Another often overlooked issue is the communication gap between utility owners and their contractors. Most utility operators use GIS, while their contractors primarily use CAD, a discrepancy that contributes to inefficient, manual workflows.

Furthermore, many utility operators and contractors have invested in locating and mapping hardware from various vendors. These legacy vendors often promote their proprietary software packages, locking customers into purchasing equipment from a single provider.



Understanding

UTILITY MAPPING REDEFINED

The Geolantis solution is a leading utility mapping application that supports thousands of projects worldwide. It streamlines collaboration with geospatial data and simplifies field crew management, offering a unified workflow for your entire mobile workforce.

The app seamlessly connects to high-precision GNSS and locating hardware. Being vendor-agnostic, it even supports mixed equipment setups, ensuring flexibility and compatibility across devices.

Designed for maximum productivity and user experience, the mobile app also prioritizes data quality and accuracy. By integrating processes and digitally capturing all information in real time, this powerful solution significantly accelerates workflows, enriches data, and eliminates many errors common to traditional methods.

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LOCATE & MAP

Geolantis connects with GNSS and locating equipment, allowing you to document utility assets in a single step.

Our powerful compression technology enables all service-territory data to be stored directly on a mobile device. This eliminates the need for network connectivity to perform work.

Geolantis also includes all map viewing and navigation capabilities. It hides the complexity of GIS and CAD systems while providing the same level of detail to mobile users.

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UTILITY MAPPING ACCELERATOR

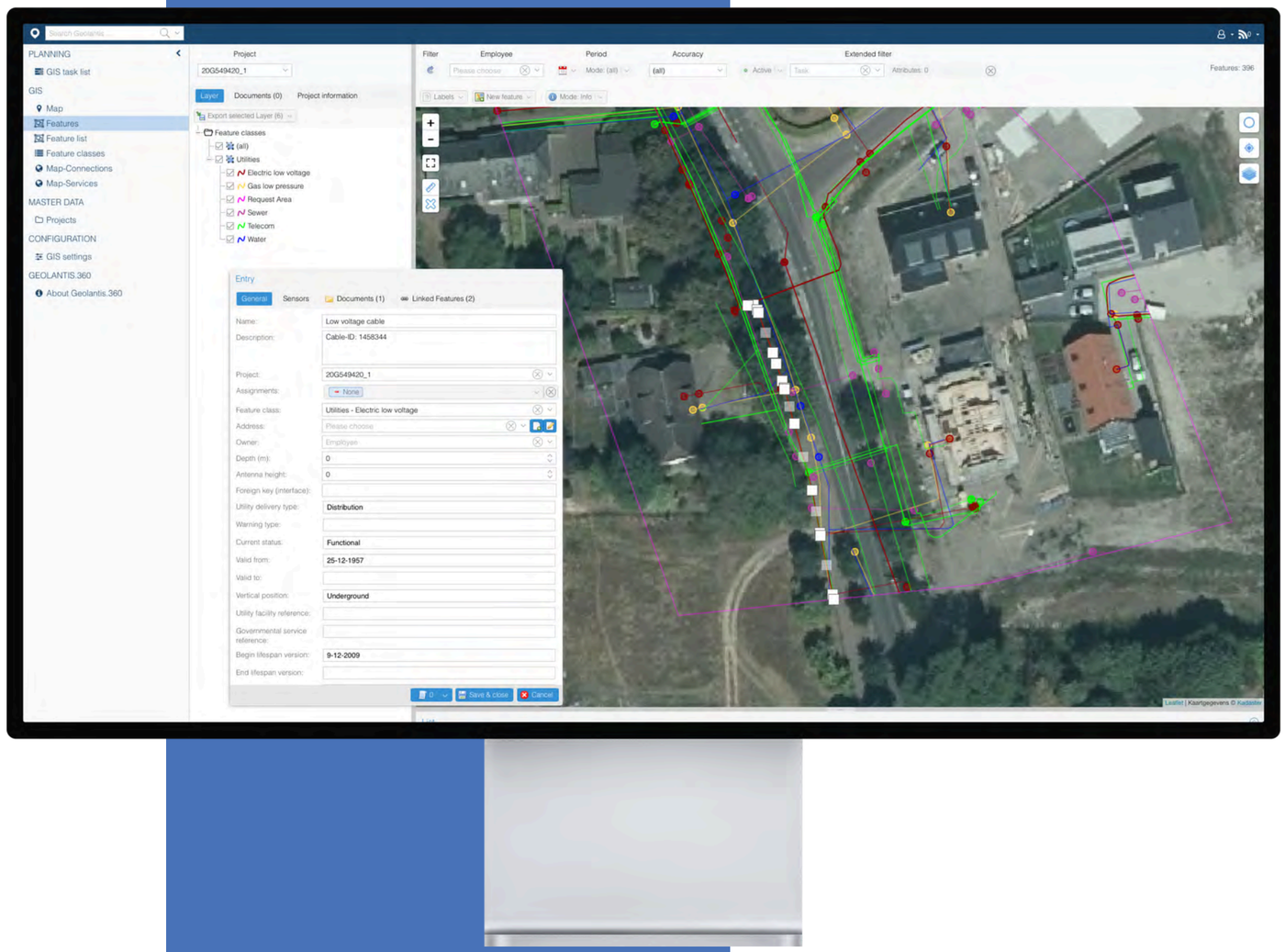
- UTILITY MAPPING
- MAPPING & SURVEYING
- LOCATE MARK-OUTS
- DEPTH OF COVER SURVEYS
- CENTERLINE SURVEYS
- STAKE-OUTS
- AS-BUILT DRAWING CORRECTIONS
- INCIDENT REPORTS
- PHOTOS & SKETCHES

REVIEW & SHARE

Geolantis' central, cloud-powered management portal streamlines how you manage projects, spatial data, and field operations. Say goodbye to waiting days, weeks, or even months for updates. With real-time data synchronization whenever a connection is available, office managers and field teams can stay on the same page and see updates as they happen.

The platform features a highly interactive map that allows detailed queries of map objects, including customer-uploaded data like design plans or as-built drawings. This provides a clear, comprehensive view of both above-ground and underground assets.

Seamless information sharing across your organization and beyond is made effortless with Geolantis. Its open Application Programming Interface (API) ensures smooth integration into enterprise environments, enabling automated workflows and continuous process optimisation.



CONCLUSION

Despite utilities spending millions on digital solutions such as GIS and mapping tools, a significant gap persists in their digital workflows. Legacy applications often fail to integrate with enterprise tools, leading to media breaks and a heavy reliance on paper forms—a time-consuming and expensive process.

Utilities urgently need a more efficient and reliable way to update their GIS datasets. The ideal tools must integrate not only with their existing legacy systems but also with their contractors' systems. As regulations tighten, adopting industry best practices is crucial for organizations to stay ahead and build a strong foundation for the future.

Geolantis customers experience huge efficiency gains, time savings, and cost reductions by using a digital, end-to-end workflow. Developed and refined by PelicanCorp over a decade, these tools and services represent the industry's best practices.

By integrating processes and digitising all data, Geolantis provides a highly accurate, data-rich, and streamlined solution. This approach is substantially quicker and less costly than traditional methods, and, most importantly, it eliminates many of the inherent errors in older methodologies.

THANK YOU

Geolantis is a division of PelicanCorp, which provides software and services to utilities, asset owners and the "Before You Dig" industry for the protection of essential infrastructure.

Scan me to request a demo!

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