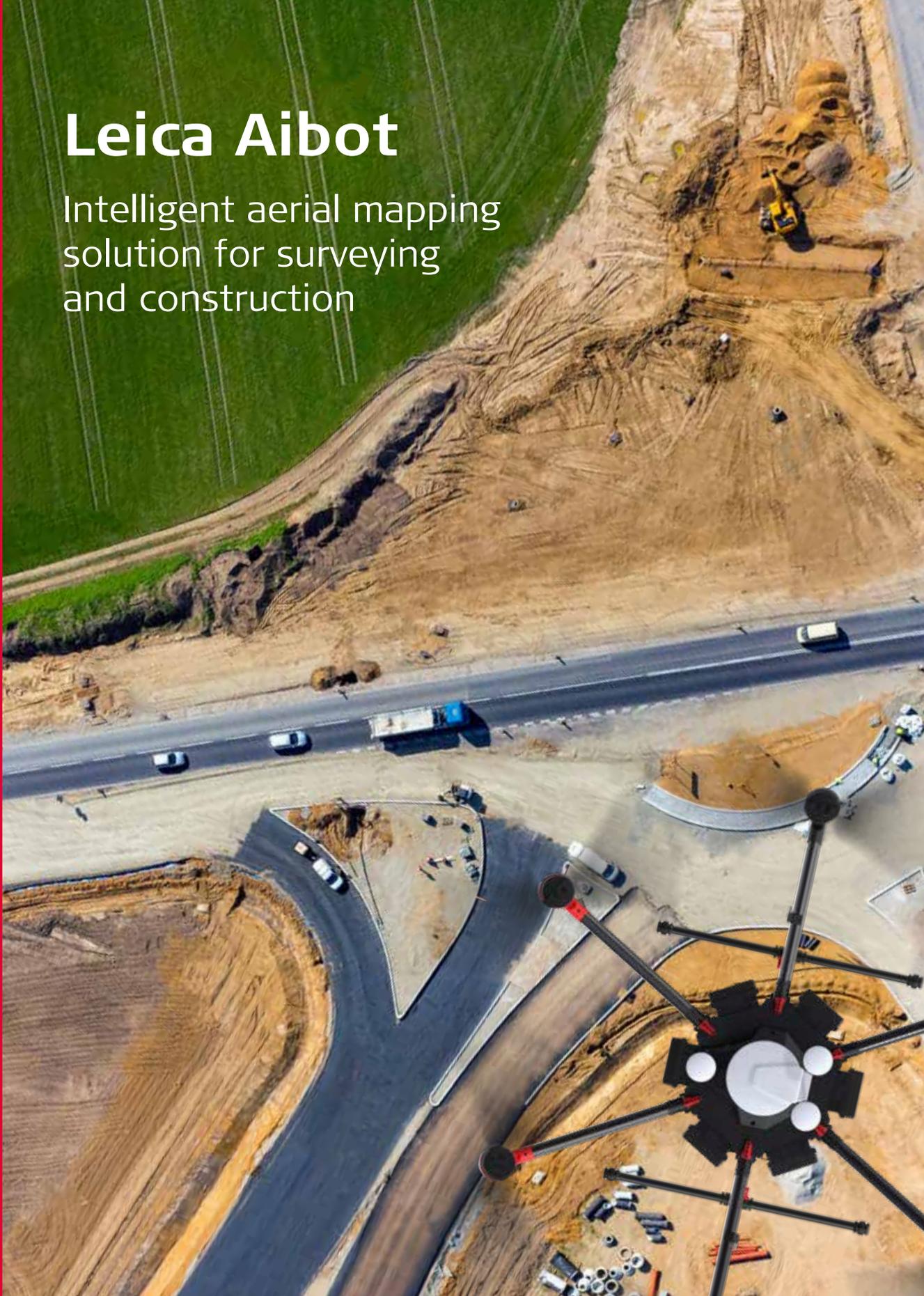




# Leica Aibot

Intelligent aerial mapping  
solution for surveying  
and construction



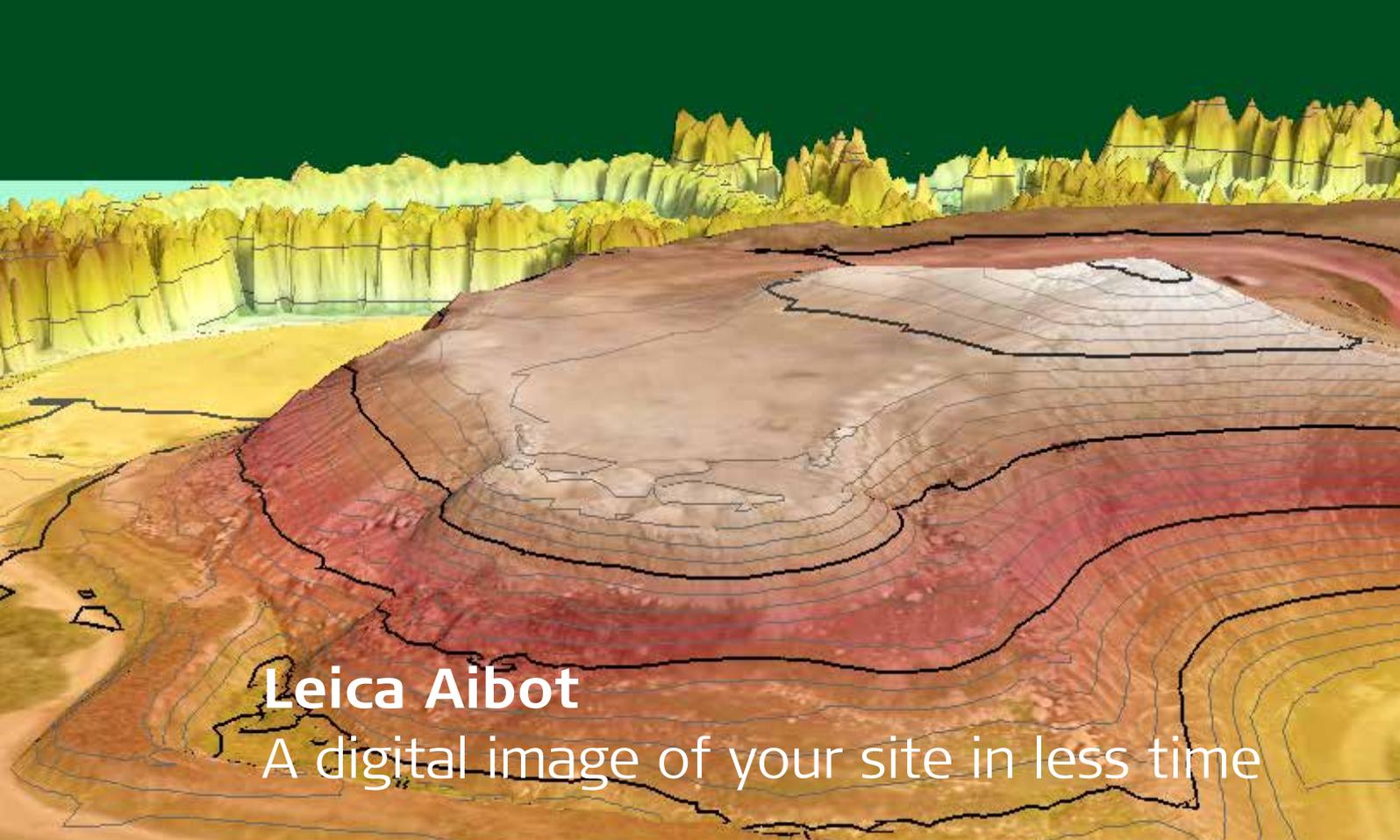
[leica-geosystems.com](http://leica-geosystems.com)



- when it has to be **right**

**Leica**  
Geosystems





# Leica Aibot

A digital image of your site in less time



Leica Aibot, the complete UAV solution for surveying, mapping and construction enables fast and flexible data collection. An easy workflow integrated into the Leica Geosystems ecosystem guides you through your project lifecycle, providing you quick access to critical information to perform your day-to-day work.

[uav.leica-geosystems.com](http://uav.leica-geosystems.com)



## Surveying

The Leica Aibot SX intelligent aerial surveying solution captures a digital data set in less time by adding a fully integrated UAV solution into your existing Leica Geosystems surveying and engineering workflows. This opens new business opportunities in addition to your traditional surveying projects.



## Construction

The Leica Aibot CX aerial digitisation solution for construction supports easier comparisons of as-designed and as-built for a transparent view of site progression monitoring and volume calculations throughout a project lifecycle of planning, design, construction and hand-over.



## Workflow

The Leica Aibot workflow is based on Leica Geosystem's trusted product portfolio and seamlessly integrates with Leica Infinity software suite to capture, process, merge, store and analyse data. Leica Aibot skyCAPP is the professional flight execution software supporting all your missions.

# Intelligent information for intelligent decision making

Introducing commercial UAVs into the surveying and construction landscape, brought the industry a step closer to the digitalisation of day-to-day tasks and processes.

The Leica Aibot provides a complete UAV workflow solution that supports planning, capture, processing and analysis of millions of data points. Visualisation of the data provides actionable and accurate information that depicts the reality and improves decision making.

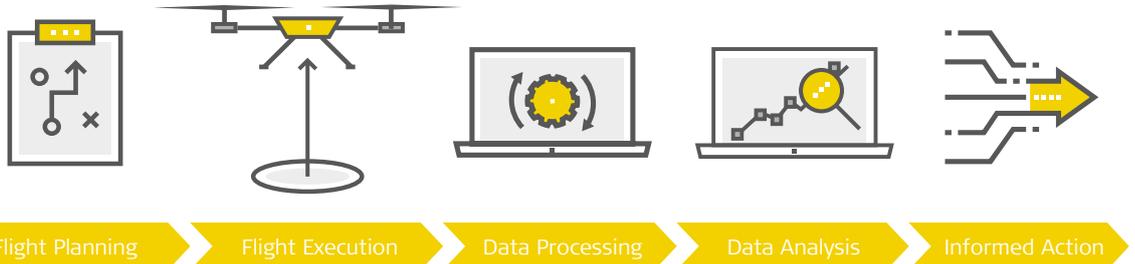
UAV technology supplements existing survey equipment such as TPS, GPS and laser scanning to provide a complete view of the project site.

Taking only minutes to map a site makes Leica Aibot a cost-effective solution while keeping staff at a safe distance and bringing the surveying tasks from the field to the office.

Easy set-up and flight planning helps record data autonomously according to planned waypoints, generating precise orthophotos, point clouds and 3D models. The built-in Leica Geosystems GNSS technology geo-references data for most accurate surveying and mapping.

Leica Aibot is fully integrated into the powerful Leica Infinity workflow, guiding you smoothly throughout the entire project lifecycle.

Leica Aibot is seamlessly integrated with trusted Leica Geosystems surveying and construction workflows allowing you to unify a UAV solution with your existing equipment.





# Leica Aibot SX

## Capturing reality from the air

Professional surveying, geo mapping and asset inspection are dynamic processes, and the base for many engineering projects. The Leica Aibot SX solution brings improvements to the surveying industry by capturing data faster to generate accurate orthophotos, 3D models and point clouds in high density.

Efficient flight planning simplifies parameters essential for professional photogrammetry. UAV surveying has been proven to be faster, safer and more cost effective than traditional surveying methods, making it the perfect addition to the traditional surveying equipment portfolio.

Leica Aibot SX flying parameters can be optimised for each application from identifying property boundary lines over topographic mapping to insurance value assessments and classification.

### Leica Aibot SX improves efficiency

- Faster completion of project thanks to lesser set-ups
- High resolution and accuracy
- Brings survey from the site to the office
- Captures and stores information of a place at a specific time



### 3D mapping

With the millions of points recorded, operators, contractors and surveyors can generate precise 3D point clouds with Leica Infinity using easy-to-use software like Hexagon's 3D Reshaper for analysis, assessment and to provide a digital image of the reality.



### Asset inspection

Traditional inspection of remote assets like bridges, transmission lines and railway networks is an unsafe and tedious undertaking. UAVs can reach and inspect assets remotely keeping staff safe and increase deployment efficiency to avoid expensive safety shut-downs.



### Cadastral survey

Land and cadastral survey of local areas such as new urban developments and suburbs are ideal projects for UAV data capture. Accurate, high-resolution orthophotos provide the base map to mark boundary lines, assess properties and identify encroachments.



# Leica Aibot CX

## Digitising the construction site

Requirements and expectations from engineers, site manager, construction companies, regulators and public administrations keep increasing. When more material needs to be moved quicker and operating margins get tighter, the bar for new technologies is raised.

To get a clear and up-to-date view over construction progress and earthmovings, the Leica Aibot CX solution allows to capture accurate data to monitor and survey the construction site. It opens opportunities for daily progress documentation, stockpile monitoring and resource tracking to increase efficiency.

Leica Aibot CX is an additional solution within the Leica Geosystems offering bringing the construction site into the digital age and turning data into intelligent information to improve decision making processes.

### Leica Aibot CX improves performance

- Current data of the construction site used as basis for progress reporting, stock pile management, and more
- Centimetre accuracy data to trust
- Enhanced safety with remote data capture
- Efficiency increased by no need to interrupt construction work during data capture
- Share one data set with all stakeholders



### Volume calculations

Calculating volumes of stockpiles becomes an easy task when executed with a UAV compared to traditional surveying methods. The Leica Aibot CX captures thousands of points from the air in a fraction of the time. The data is used to create a 3D model for more accurate volume calculations.



### Progress reporting

Flying and capturing data regularly according to a pre-defined flight plan provides a transparent view of the site progression throughout the project lifecycle and allows to document and compare the as-built status with the design while tracking resources.



### Topographic survey

Accurate and recent topographic data and orthophotos of the area are the base for the planning and design phases of construction projects. UAVs can provide recent and regularly updated images and point clouds for highest accuracy topographic information.

# Leica Aibot AX20

## Highest flying performance and safety



This flying platform is specifically designed for professional industrial applications. The modular design makes this system easy to set-up and ready to use in just minutes. The Leica AX20 includes intelligent data asset management and trusted Leica Geosystems GNSS technology for highly accurate data. The platform can be completed with various sensor payloads.



### Sony α7R II

The world's first back-illuminated full-frame sensor offers higher resolution, sensitivity, and readout speed. This 42.4-megapixel CMOS sensor enhances light collection efficiency while minimising image noise to reveal fine details in every picture. The Sony α7R II is the preferred sensor for high resolution imagery to achieve the highest density point clouds.



### Sony α6300

This APS-C mirrorless camera takes autofocus (AF), imaging speed and performance to new heights. With superior response and quality in a compact body this sensor delivers images with less noise within a wide sensitivity range. The Sony α6300 is the preferred choice for entry level UAV capture projects that don't require the highest density of point clouds.

# Leica Aibot skyCAPP

## Professional flight execution app



Aibot skyCAPP improves the flying experience of the Leica Aibot and supports pilots by automating important flying functions and system configuration.

Leica Aibot skyCAPP is designed for optimal control of the Leica Aibot UAV professional platform during flight execution. Manage the mission and automatically capture data according to pre-set flight plans. Primary and secondary screen views allow pilots to switch between real-time streaming of two on-board cameras. Seamlessly pause and resume missions, manage battery life safely and easily switch between camera and video mode so you can focus on flying the UAV.



# Leica Infinity

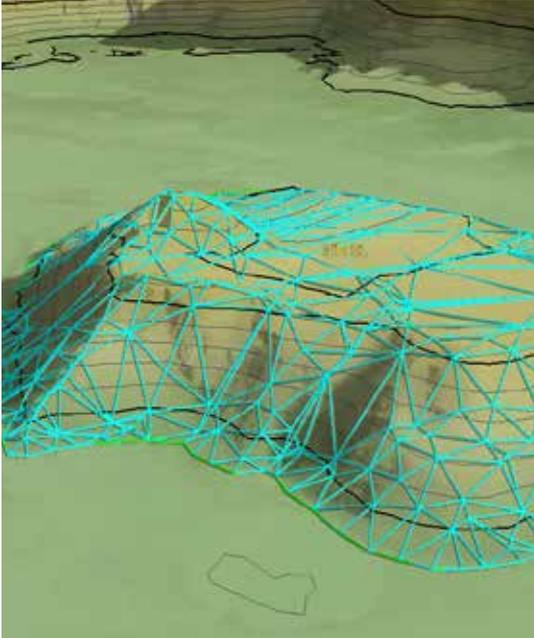
## Seamless data processing workflow



Infinity is the advanced processing software for aerial imagery to increase productivity and deliver accurate surveying and construction data.

Leica Infinity geospatial office software suite is designed to manage, process, analyse and quality check field survey data. The new processing tool for UAV aerial imagery enables surveyors to easily process and visualise aerial data to maximise productivity and speed-up data delivery. Infinity is the bridge between field and office providing the most accurate data deliverables and supporting users to share data and complete their projects efficiently.





## Leica Geosystems - when it has to be right

Revolutionising the world of measurement and survey for nearly 200 years, Leica Geosystems is the industry leader in measurement and information technologies. We create complete solutions for professionals across the planet. Known for innovative product and solution development, professionals in a diverse mix of industries, such as surveying and engineering, building and heavy construction, safety and security, and power and plant trust Leica Geosystems for all their geospatial needs. With precise and accurate instruments, sophisticated software, and trusted services, Leica Geosystems delivers value every day to those shaping the future of our world.

Leica Geosystems is part of Hexagon (Nasdaq Stockholm: HEXA B; hexagon.com), a leading global provider of information technology solutions that drive productivity and quality across geospatial and industrial landscapes.



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**Leica Aibot**  
 Intelligent aerial  
 reality capture



**Leica Infinity**  
 The bridge  
 between  
 field and office



**Leica  
 ScanStation P50**  
 Because every  
 detail matters



**Leica GS18T**  
 World's fastest  
 GNSS RTK rover