



**AN EXTRA PAIR OF  
EYES ON EVERY SITE**

avisec and Canon help construction teams move from multi-day analysis to results within two hours

**Canon**



Construction doesn't pause when key stakeholders can't be on site. Decisions still need to be made, issues need to be caught early and project teams need a clear record of what's happening, without relying on interpretation alone.

avisec provides cloud-connected construction camera solutions that automate site monitoring, timelapse and high-precision photogrammetry, often from the tip of a crane. To make this possible at scale, avisec needed consistent image quality, reliable performance in harsh outdoor environments and a way to control multiple camera models through a single interface. With Canon EOS cameras and Canon's Software Development Kit (SDK), avisec created an automated workflow that delivers centimetre-level accuracy, fewer site visits and clearer decision-making.

avisec's systems are installed on-site and operated as cloud-connected IoT devices, delivering automated documentation, 3D datasets and birds-eye-view images directly from the crane, helping teams monitor progress and detect issues early. The company currently has around 1350 cameras deployed on 800-900 sites at any one time in 17 countries.

**Company Name:** avisec

**Industry:** Construction

**Founded:** 2009

**Location:** Switzerland

**Use case:** Construction monitoring, timelapse and photogrammetry

**Website:** [www.avisec.com](http://www.avisec.com)

“THE CAMERA GIVES YOU AN EXTRA PAIR OF EYES ON THE CONSTRUCTION SITE, WHICH ALLOWS YOU TO DO MULTIPLE PROJECTS IN PARALLEL.”

– Daniel Bärtschi, Founder & Co-owner of avisec.

## THE CHALLENGE

Construction projects involve multiple trades working in parallel, where small positioning errors can lead to expensive rework later. Teams need a consistent record of what happened, when and where, with enough detail to support decisions while work is still in progress. As Bärtschi puts it, “You want to have a single point of proof, which is what an image can provide.”

To deliver that accuracy, avisec requires consistent image quality over long deployments – sometimes up to five years – plus dependable triggering and robust operation in outdoor conditions, including extreme temperatures and remote locations where site visits are costly.

At the same time, avisec needed to scale across different camera models and use cases – fixed mounts, rotating systems and crane-mounted cameras – without rewriting control software each time.

“**RELIABILITY IS  
EXTREMELY IMPORTANT.  
OUR CAMERAS  
ARE REMOTE AND  
TRAVELLING TO A SITE  
JUST TO FIX AN ISSUE  
CAN BE A NIGHTMARE.**”

– Daniel Bärtschi, Founder & Co-owner of avisec.



Service Technician Simon Fenner fits weatherproof housing over the Construction Camera Pro

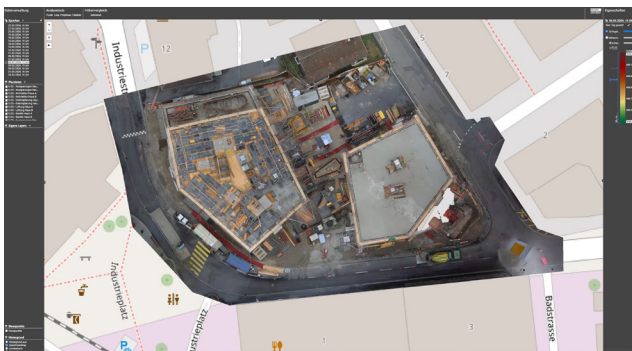
## THE SOLUTION

Canon's SDK immediately stood out to the avisec team. "The Canon SDK lets us control every model in the same way," says Bärtschi, "from focus and capture to image-quality adjustments."

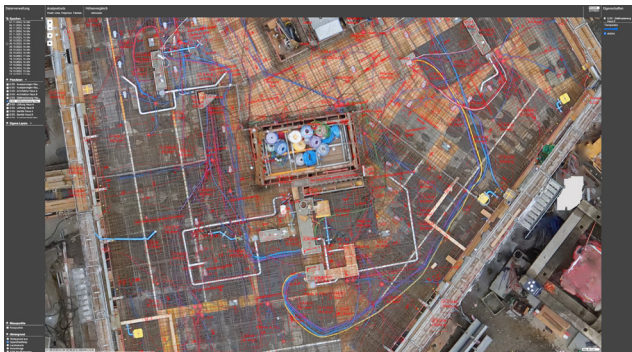
And because image quality sits at the heart of avisec's proposition, resolution matters. "Canon gives us a much better resolution than any surveillance camera," says Bärtschi, "and with the lens and the sensors, there is a much, much higher image quality than other cameras." That means customers can rely on the images both as evidence and as input for analysis.

### Ultimately, their decision came down to the fact that:

- A unified SDK reduces developer overheads when scaling across camera models
- Higher sensor resolution enables photogrammetry-level outputs that go beyond monitoring
- The Canon lens ecosystem supports precision alignment and centimetre-level accuracy



Consistent imagery enables clients to track progress over time



Centimetre-level accuracy means orthophotos can be produced in just hours



Analysing site images from a crane camera

avisec has used Canon cameras since 2020 and now integrates multiple models across its deployments, including the Canon EOS R10 and Canon EOS R7, both with the Canon RF-S 10-18mm F4.5-6.3 IS STM lens. Customers manage cameras and projects through the web-based avisec cockpit, controlling capture and settings remotely. "The way our integration works allows our customers to control the camera from a web browser," says Bärtschi, "as if they had the camera in their own hands."

These cameras are put through their paces, tested in extreme temperatures, both hot and cold, and deployed for years at a time. One of avisec's cameras has been onsite for five years now without issue.

A key innovation is the avisec Construction Crane Camera, turning a crane into a precise imaging platform. The system has been in full production since 2024, capturing imagery that can be used for automated documentation, orthophotos<sup>1</sup> and 3D datasets directly from the crane. And compared to drones, the crane camera fits the realities of a live site: "It's always there – you don't need someone to go and take pictures every time," says Simon Fenner, Service Technician. "It's installed once, and then every day you have 200 pictures of the construction site."

<sup>1</sup> Orthophotos are aerial photographs or satellite imagery geometrically corrected

## THE RESULTS

With Canon cameras integrated into avisec's automated workflow, construction teams can move from manual capture and post-processing to faster, repeatable site documentation. Where orthophotos could previously require multi-day, manual capture and processing, they are now available within around two hours of capture.

By reducing site visits and shortening control cycles from days to hours, avisec provides earlier visibility on deviations – helping teams limit the maintenance and corrective work that can account for up to 10% of project investment.

The combination of high-resolution imaging and consistent control has also supported business growth. “By using Canon, we differentiate ourselves from companies that only provide surveillance cameras,” says Bärtschi. “We can deliver high-resolution, high-quality imaging.” This has enabled avisec to expand beyond construction into working with marketing agencies and scientists researching natural phenomena such as avalanches.

With Canon as a technology partner, avisec reports double-digit year-on-year growth, including a 20% increase last year. It has now become the largest provider of image-based construction site monitoring in the DACH region. Working with Canon has enabled the avisec team to scale across camera models, automate high-precision crane-based capture and maintain long-term reliability in demanding environments – all supported by Canon's unified SDK and imaging performance.

And the Canon team is always on hand, from helping to test the durability of new camera models to workflow-critical configuration guidance and reliable procurement as deployments scale. When you're processing 300,000 images a day, as avisec does, it pays to have a partner who's there when you need them.

- **Orthophotos delivered in ~2 hours**  
(vs. multi-day)
- **Control cycles reduced from days to hours**
- **20% growth last year** (double-digit YoY)
- **~300,000 images processed daily**



Cameras are deployed for years at a time so consistency and reliability are key



## THE CANON SOLUTION

- Canon EOS R10
- Canon EOS R7
- RF-S 10-18mm F4.5-6.3 IS STM
- RF 14-35mm F4L IS USM
- EOS Digital Software Development Kit (EDSDK)





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