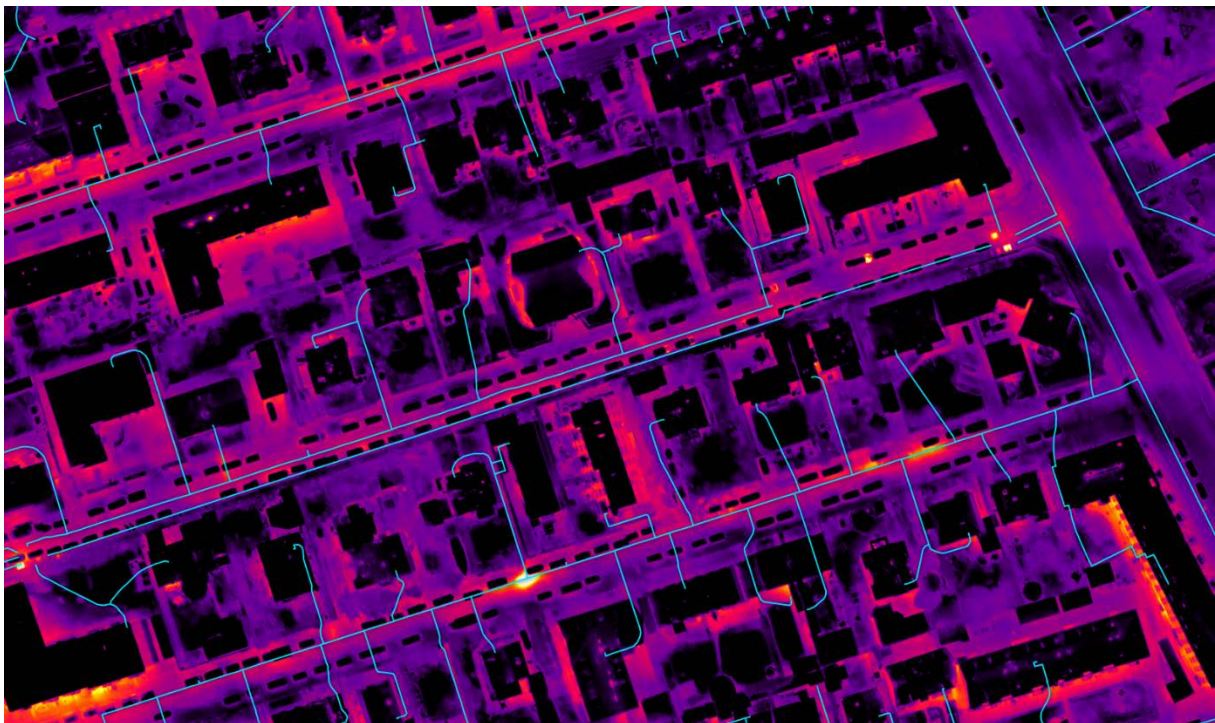


Topic	Inspection Of District Heating
Company	Drone Systems
TeAx Solutions	ThermalCapture Recorder 2.0 640 + ThermoViewer

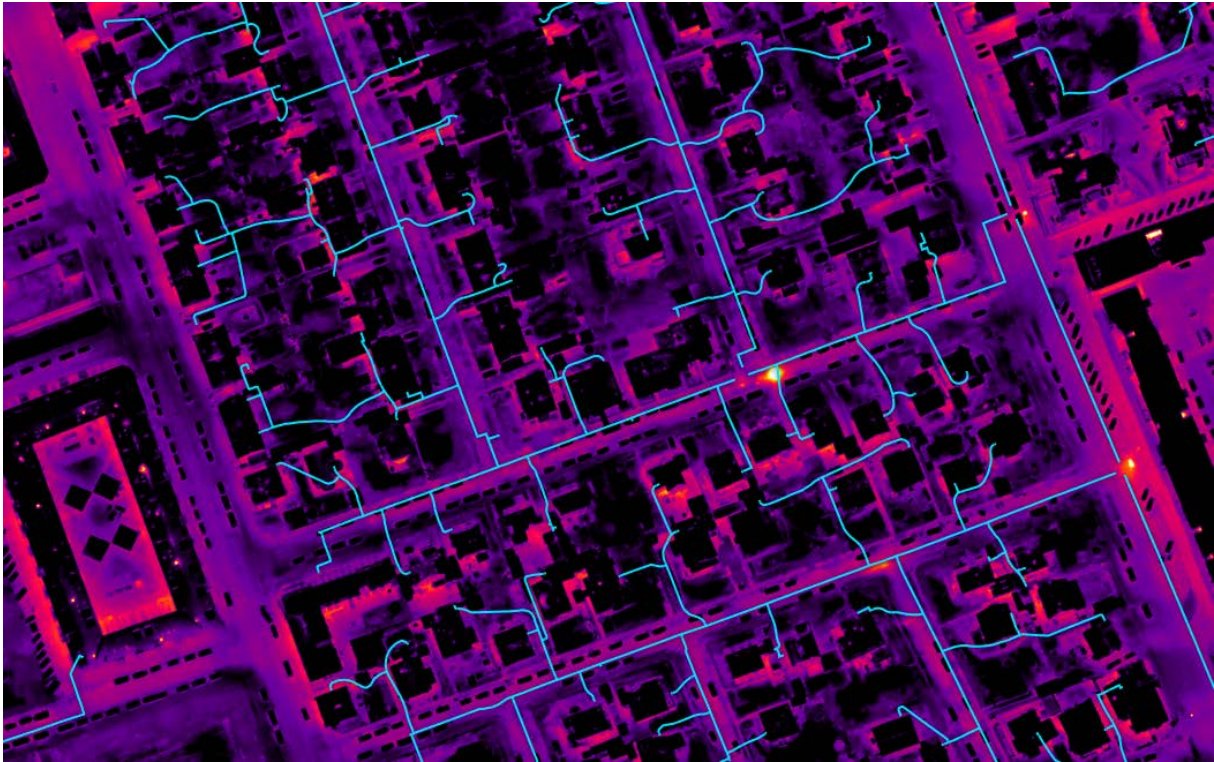
Case Study for Drone Systems – with ThermalCapture Recorder 2.0 640

Case #1: Inspection Of District Heating

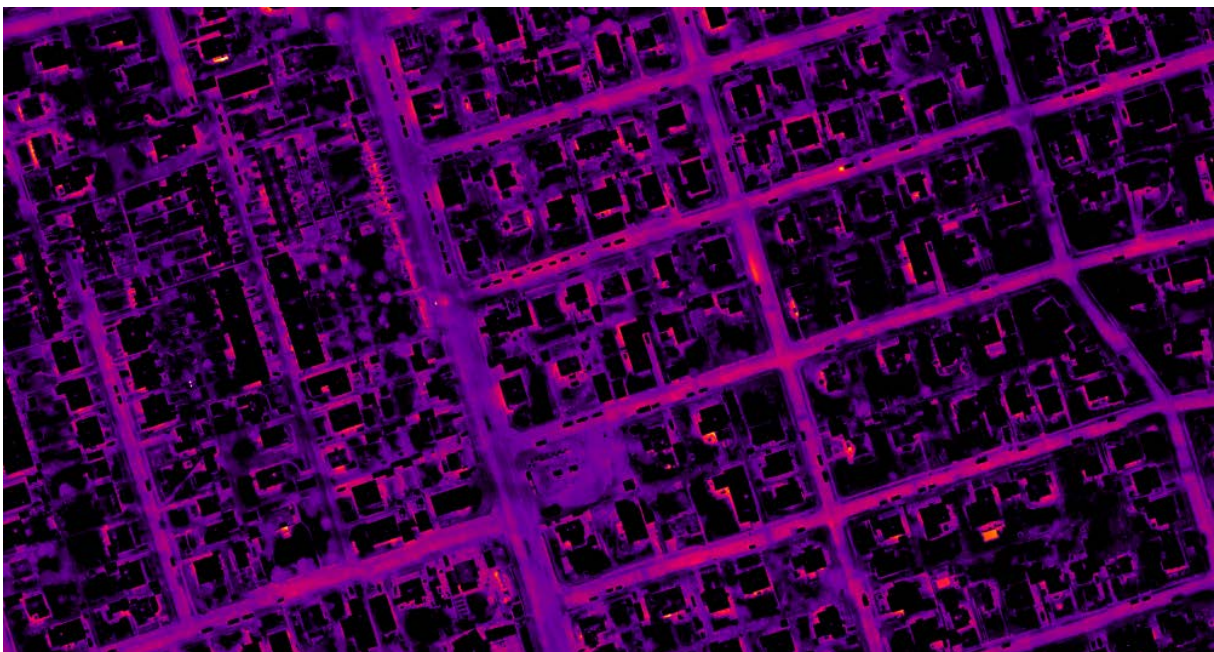


[In this image, the thermal mosaic has the grid registration as overlay, which in conjunction has enabled the identification of one very large leak, two moderate sized leaks and three hot components.]

The thermal mosaic from this case is part of a larger operation to map an urban area of 620 hectares in the southern part of Copenhagen, Denmark. To ensure optimal results the data collection is performed at night (00.00 – 06.00) during the winter. The district heating pipes are typically around 1 meter below the surface. In post-processing all the thermal data is composed to a thermal mosaic and points-of-interest are identified and categorized. The processed results are presented in Drone Systems' web platform, Teraplan.dk, which provides the district heating company with the toolset to utilize the results to locate and remedy both immediate and upcoming ruptures. On the long-term scale, the results can be used to perform strategic and prioritized renovation planning



[Similar to the first image, but a different area. Identification of one very large leak, one moderate sized leak and two hot components.]



[This image shows the thermal mosaic from a lower zoom level, thus providing a greater overview.]



[This image shows the complete thermal mosaic with iron palette. For illustrative purposes, the color-coding is slightly lighter than what we usually employ.]

Technical Adaptations by TeAx

The client is using a standard ThermalCapture Recorder 2.0 with a FLIR Tau 2 640 core. No further modifications done. However, together with the client special cable were provided as well as special features for the post-processing software ThermoViewer were developed on request.

Testimonial

We have been using TeAx Technology as our supplier for thermal drone solutions for the past two years, and we are very satisfied with their products. Our thermal data collection is performed in a cold and challenging environment. In that regard, TeAx Technology has been helpful and committed to providing targeted assistance and has in addition implemented custom measures to enhance our data collection quality.

We find that TeAx Technology are both professional, agile and innovative while maintaining a pragmatic solution approach. Today, we practically consider our relationship with TeAx Technology more like a partner than a supplier.

-Henrik Grosen, CEO, Drone Systems

Keywords for this case study

Inspection District Heating, Thermal radiometric mapping

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