

# Low-Cost Sensing and Data Management in SmartAQnet

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Continuously integrating data from heterogeneous sensors and other sources in one data management system is an intricate task. Besides appropriate modelling and data storage, solutions for data input and output and data processing are required. In the SmartAQnet project [1], we adopt the OGC SensorThings standard and API [2] for data management. We present the status of our integration efforts and the current input and output interfaces and processing capabilities of our system. This includes different possibilities for data visualization.

As a practical end-to-end example, we present our low-cost sensing activities in the SmartAQnet project. We introduce the employed sensor nodes, smartphone application and sample visualizations from measurements conducted in the recent intensive operation periods (IOPs) of the project. Further results on the topic of low-cost sensing that were achieved in the SmartAQnet project include the characterization of cheap laser-scattering sensors [3] and empirical research concerning the effects of laymen on data quality in measurements with low-cost sensors and mobile sensing technology [4].

## References

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