



Instruments manufacturers, how do they work and how are they organized? Instruments and sensors design and expected new developments.

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Atmospheric measurements require reliable instruments. Instruments manufacturers work close together with science and research. How does this work in reality? Many companies used to operate independently, started as a spin off from a research activity at an university. Larger companies tried to dominate the market with their own standards. Organizations as WMO try to regulate this market allowing every partner to benefit. Today the industry is organized in an association, HMEI. HMEI developed a vision and mission for their members and organized links and knowledge exchange with other organizations as ISO on standardization. WMO is important for the industry and both organizations work close together.

Kipp & Zonen, founded in 1830, is an example of one the members. How does the process of instruments and sensors design look and what can we expect in the near future? A first design developed in the lab is not ready for manufacturing. Choice of materials for outdoor usage, design and testing are a few of the examples of the engineering work. Defining calibration standards and procedures are as important as instrument quality. After installation the instrument or sensor is expected to operate without any incidents. Maintenance and re-calibrations are important to maintain the quality of the initial investment and the quality of the delivered data.